

GUIDE TO PORT ENTRY

PORT PLANS
AND MOORING DIAGRAMS

*Produced by
Colin Pielow*

SHIPPING GUIDES LTD.

GUIDE TO PORT ENTRY

1981-82

PORT PLANS

AND

MOORING DIAGRAMS



SHIPPING GUIDES LTD
NAUTICAL ADVISERS AND PUBLISHERS

SHIPPING GUIDES HOUSE, 75, BELL STREET, REIGATE, SURREY, ENGLAND
Cables: SHIPGUIDE REIGATE Tel: Reigate 42255/6/7 Telex: 944422

WARNING

Every effort has been made to ensure that the information contained in this *Guide* is correct. However, it will be clearly understood that this book is intended as a guide only, that the information cannot be *Guaranteed* correct and that final responsibility must (as always) rest with the Shipmaster.

At certain ports, items of navigational routeings and aids have been included as a means of general guidance only. Shipmasters should have in mind that full and due reference MUST ALWAYS be made to corrected charts of the area, to the appropriate Notices to Mariners, and all or any other navigational notices, warnings or amendments issued by proper Authorities and/or navigational aid services.

The sketch maps are for general assistance and must not be used for navigational purposes. In particular, the shapes of buoys should be disregarded since these are indicated by varying symbols which may be consequent upon local usage and without resemblance to internationally applied symbols.

PLANS

All plans, unless otherwise stated, are reproduced by kind permission of the Port Authority.

The entire contents of the *Guide to Port Entry* as issued are the copyright of the publishers, namely Shipping Guides Limited.

Any person wishing to make use of this *Guide* must first seek prior permission in writing from Shipping Guides Ltd. Proceedings will be taken against any person reproducing or copying any part of the contents of the *Guide* without permission.

© Shipping Guides Limited, 1981.

Photoset by Wilkinson Bros. Ltd., London

Printed in Great Britain by

Billing & Sons Limited, Guildford and London

Shipmasters, Shipowners or Managers, Port Authorities, Administrators and Agents, are earnestly requested to assist our work in up-dating the Guide by providing written comment, amendments or corrections, plus additional plans of any ports or terminals, to the following address:

SHIPPING GUIDES LIMITED,
75 BELL STREET,
REIGATE,
SURREY,
ENGLAND.

All communications will be acknowledged and will be most useful, since it is only by this means that the *Guide* will remain of great value to the user, and will be up to date and thoroughly professional in content.

PLANS, DIAGRAMS, DRAWINGS AND SKETCHES: As you will note, this 1981/82 edition of "Guide to Port Entry" contains over one thousand six hundred port plans and mooring diagrams that have been reproduced from plans and drawings very kindly sent to us by numerous Port Authorities, Agents and shipboard personnel. We hope this plan volume will prove interesting and useful.

Presently however, the plan volume is to an extent incomplete, since there are ports and mooring facilities for which we have not yet received the necessary plans for reproduction purposes. We are anxious to secure plans, diagrams, drawings or sketches of ports and facilities not presently shown in this plan volume, and therefore request that Port Authorities and/or Agents at the places concerned be kind enough to pass us this data together with the necessary permission for reproduction. We would also be very grateful if ship's officers calling at ports not already covered in this plan volume could find it possible to provide us with diagrams or sketches of the facilities which would be suitable for reproduction in our later editions and/or which might be re-drawn as required by our own art department prior to reproduction.

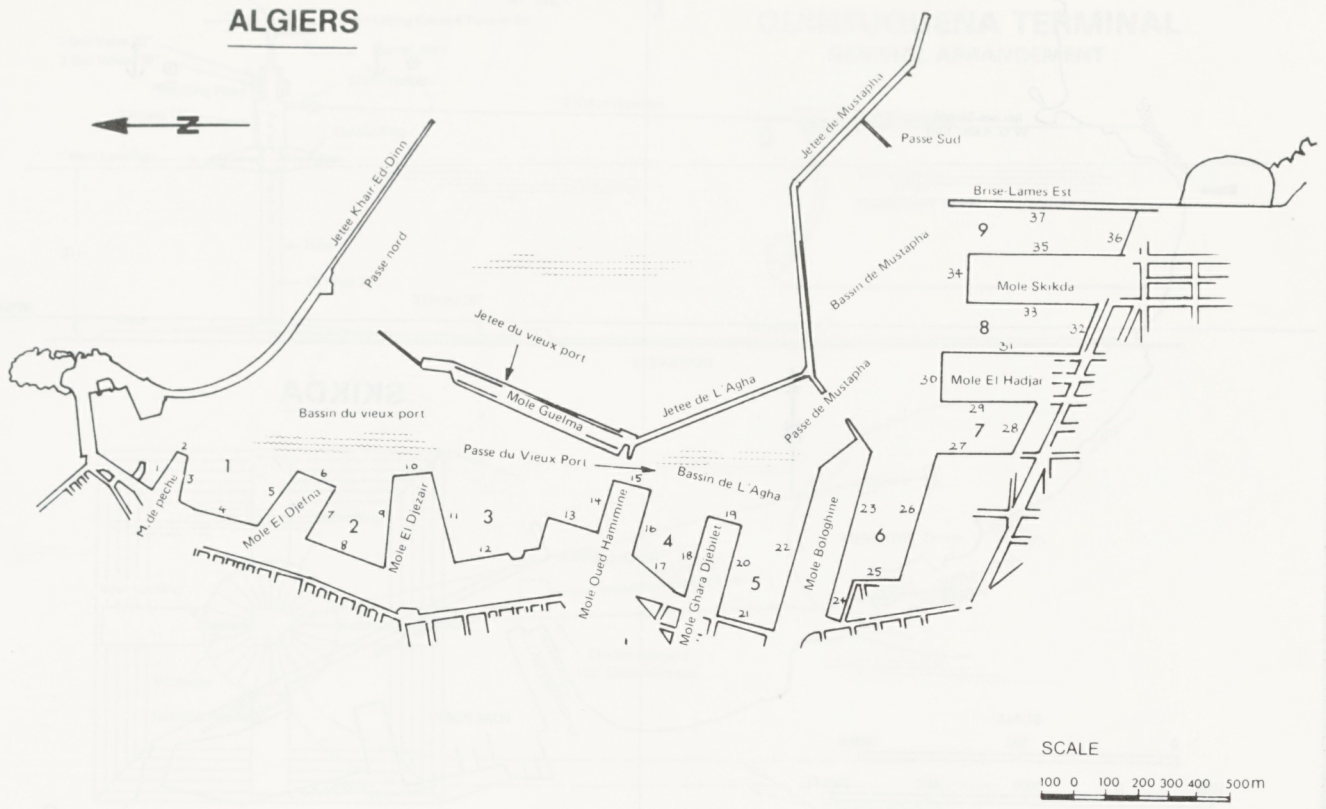
CONTENTS

WARNING NOTICE.....	Page iii
PLANS (The plans have been arranged alphabetically by Countries and also by Ports within the Countries).....	P1 – P797
PLAN INDEX.....(Tinted Section)	P803 – P810
LATE PLANS	LP1 – LP 22

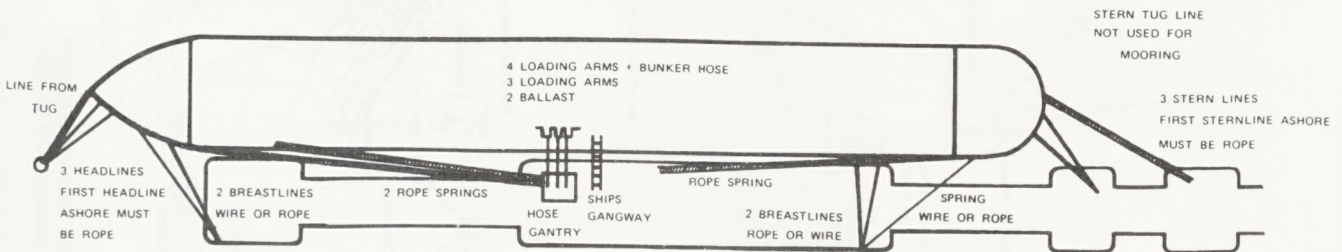
LATE PLANS

BRAZIL	Rio de Janeiro Sepetiba	GERMANY (FED. REP.)	Elbe (Helicopter Pilotage) Brunsbuttel
CUBA	Antilla Baracoa Cardenas Cienfuegos Guantanamo Havana Isabela de Sagua Manzanillo Mariel Matanzas Nueva Gerona Nuevitas Puerto Padre Santa Cruz del Sur Santiago de Cuba Tanamo Vita	JAPAN KOREA (NORTH) MALAYSIA MOROCCO NORWAY PHILIPPINES U.S.S.R.	Hibikinada Chungjin Tapis Agadir Narvik Villanueva Ilichevsk

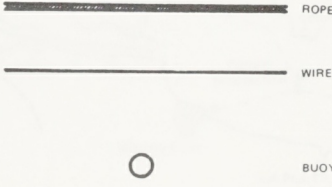
ALGIERS

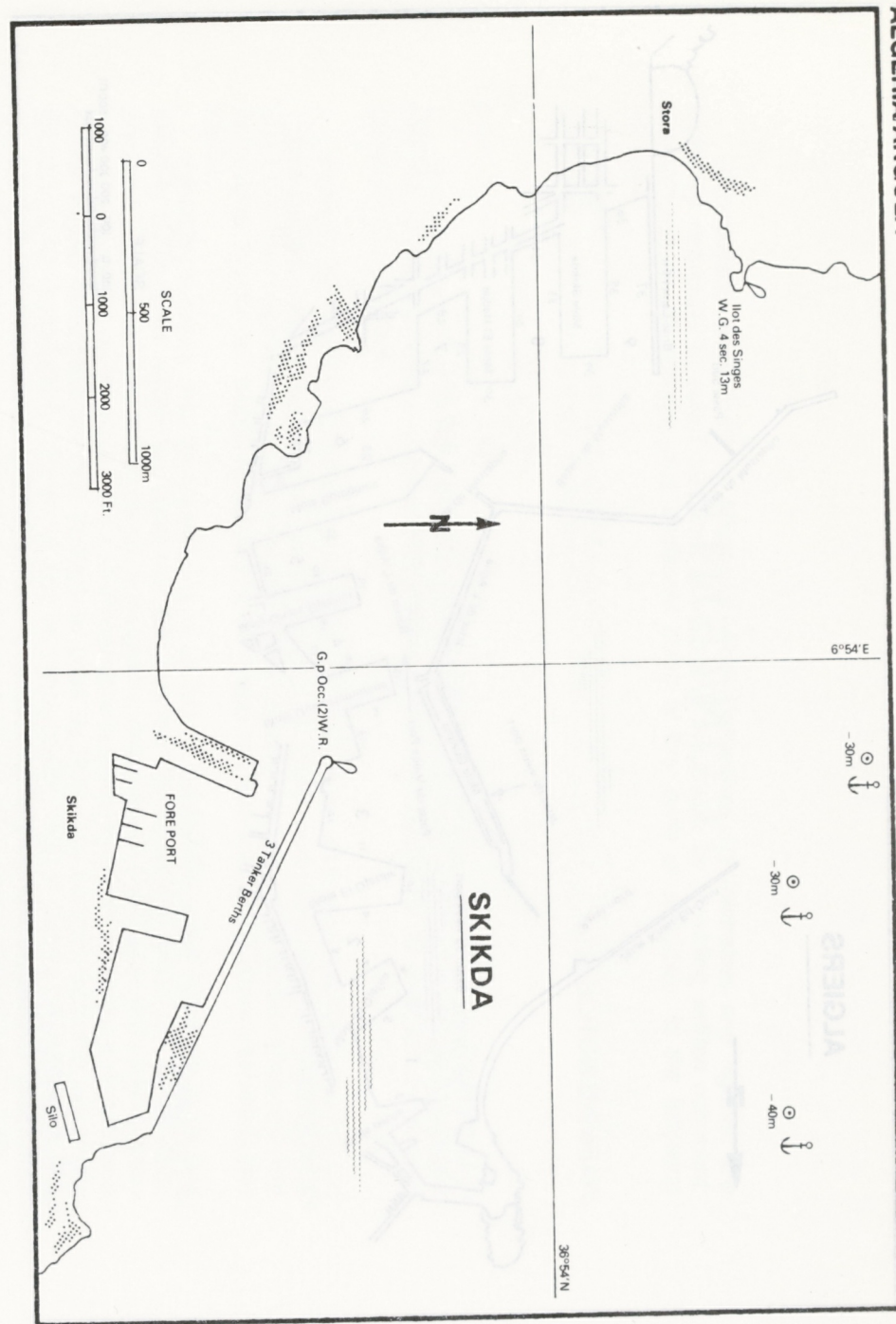


MOORING ARRANGEMENT BOUGIE

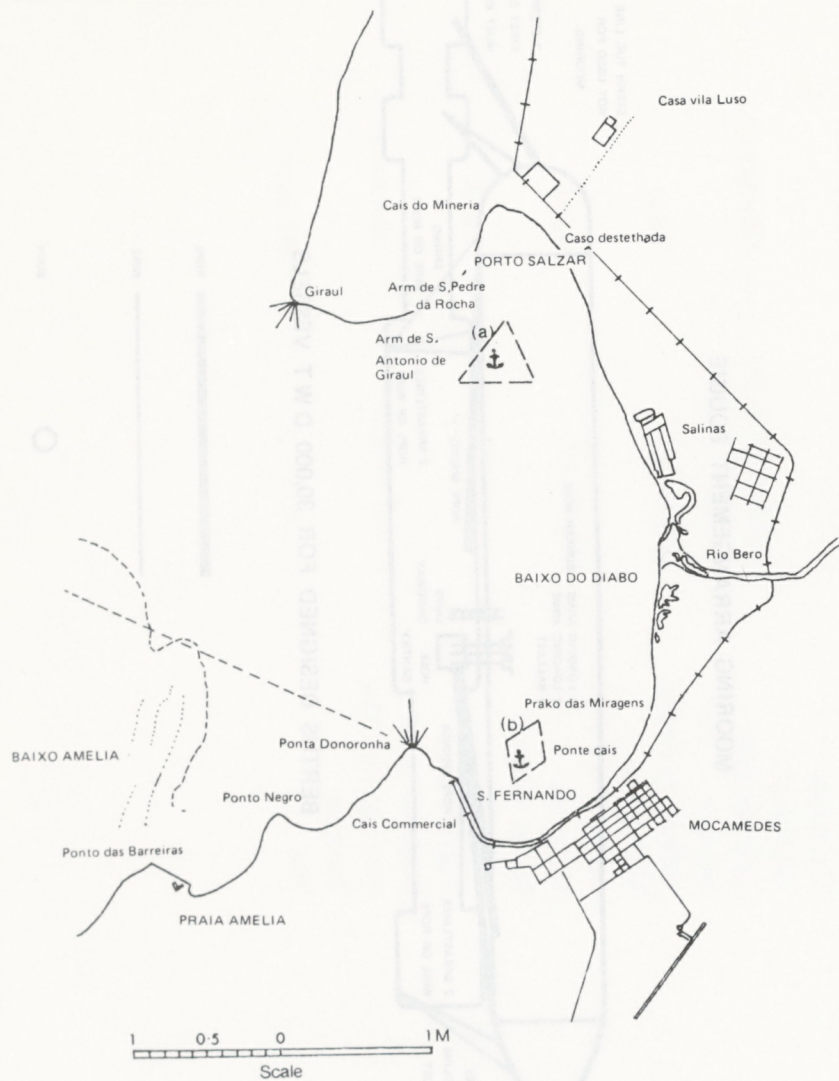


BERTHS DESIGNED FOR 30,000 DWT VESSELS



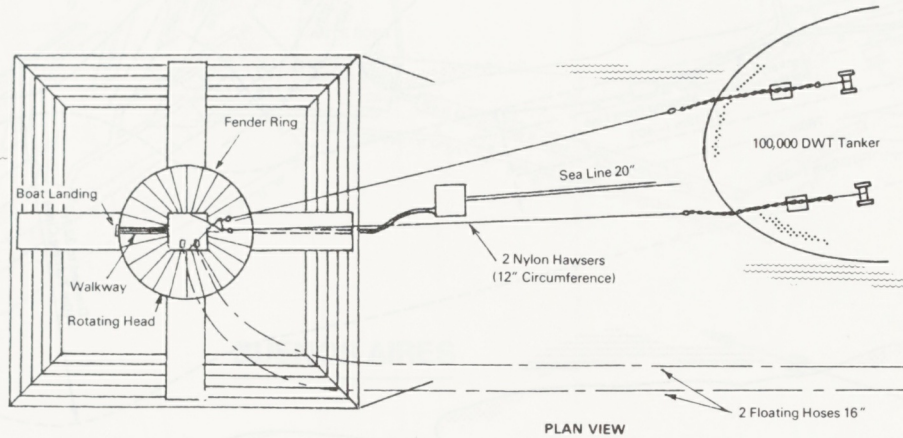
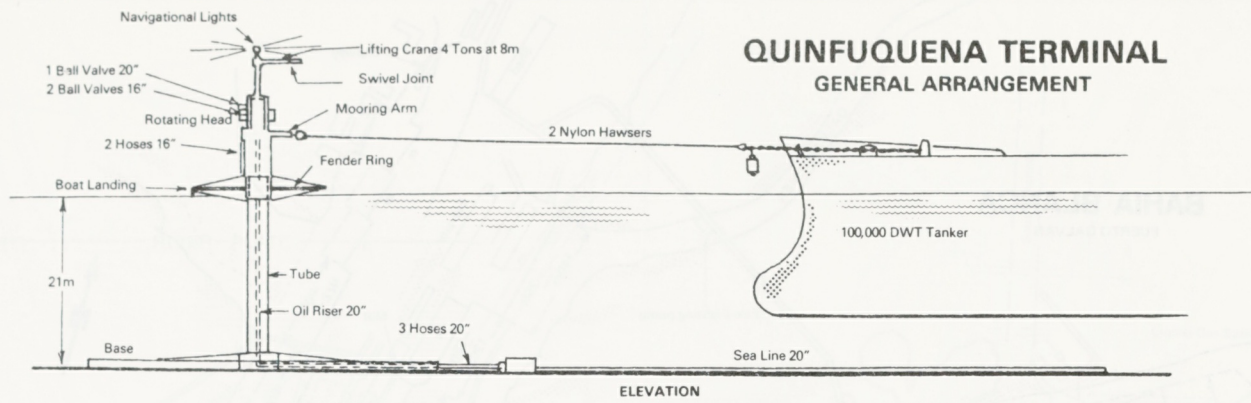


MOCAMEDES

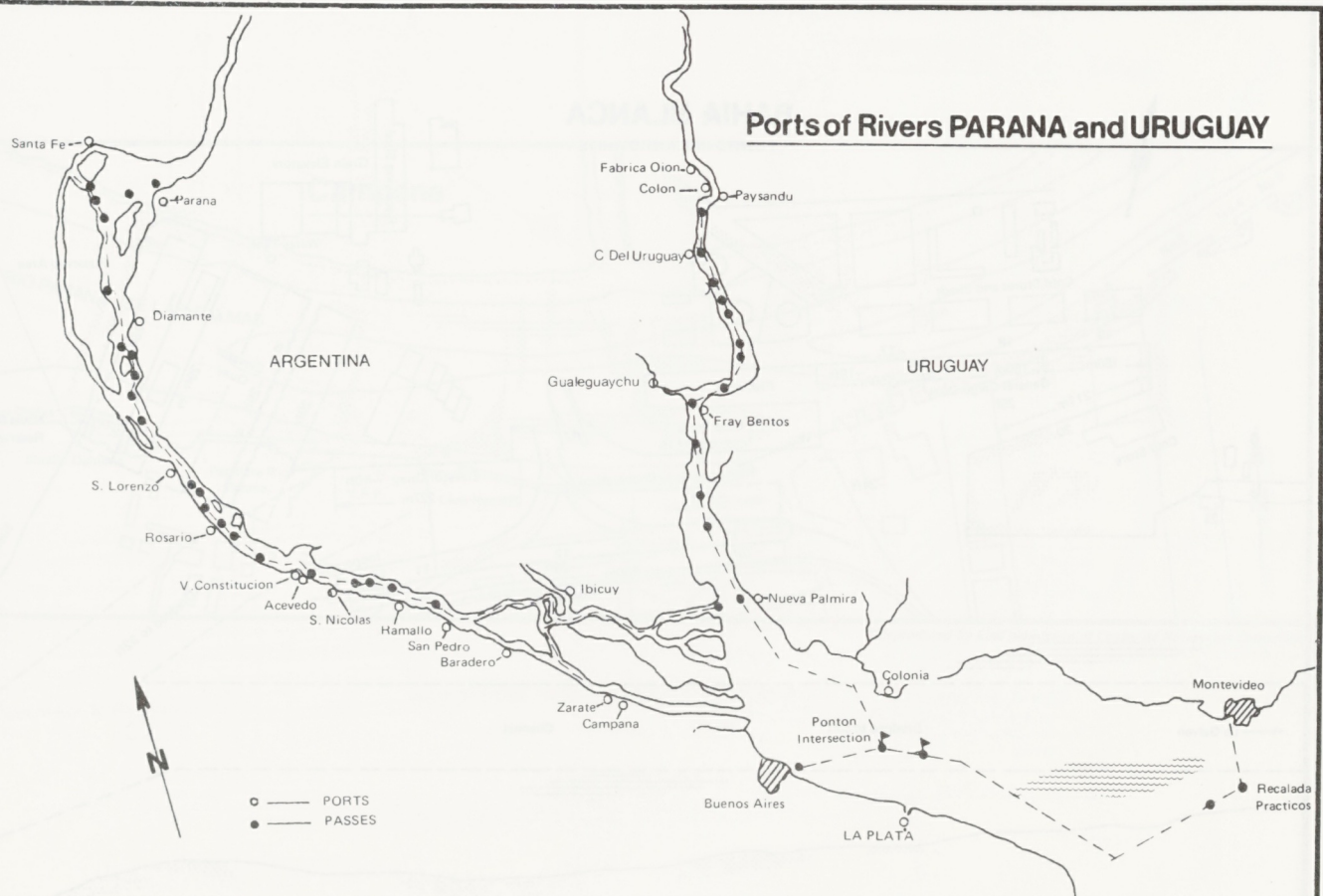


- (a) ANCHORAGE FOR OIL TANKERS AND IRON ORE SHIPS
- (b) ANCHORAGE FOR GENERAL CARGOES AND OTHERS

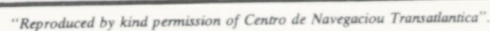
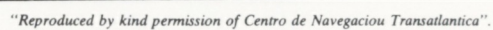
QUINFUQUENA TERMINAL GENERAL ARRANGEMENT

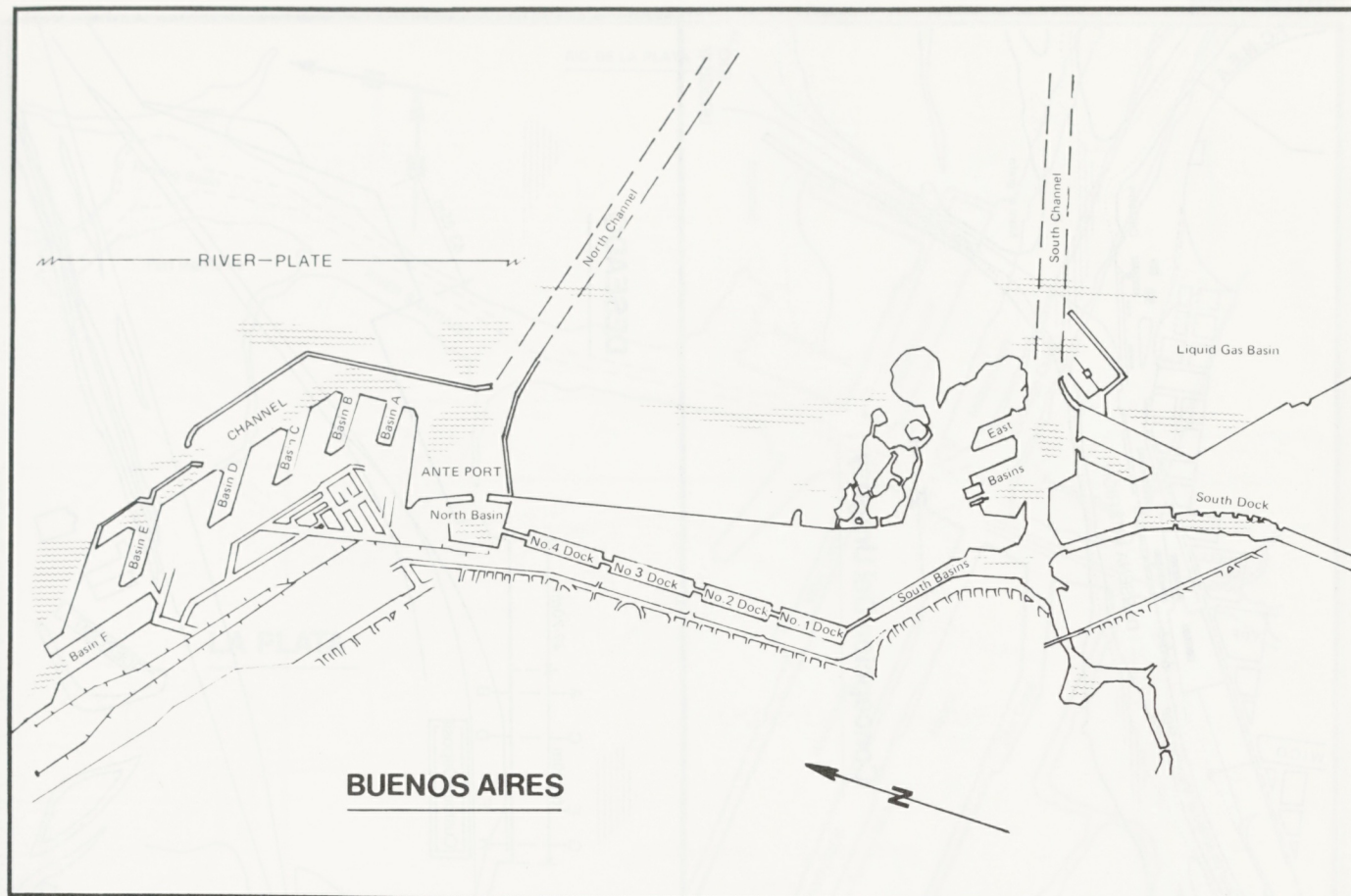


Ports of Rivers PARANA and URUGUAY

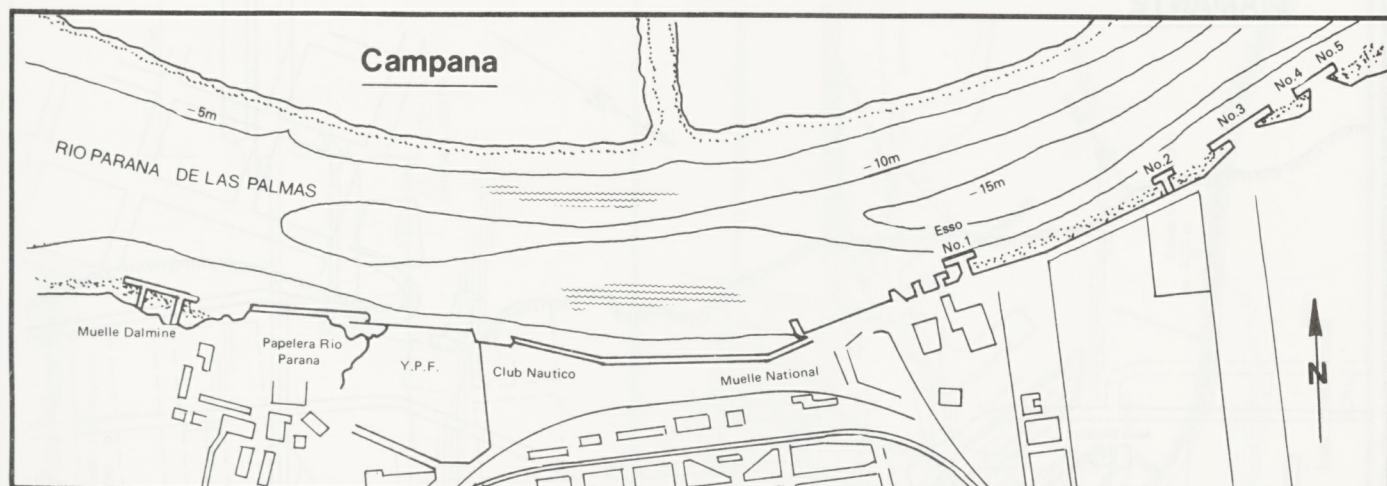


"Reproduced by kind permission of Centro de Navegacion Transatlantica".

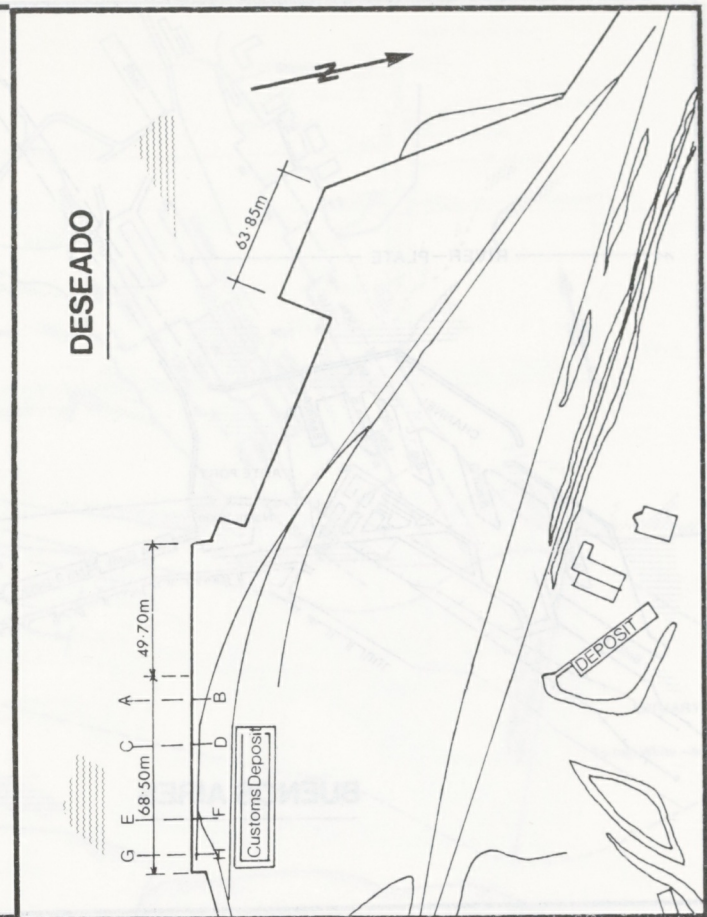
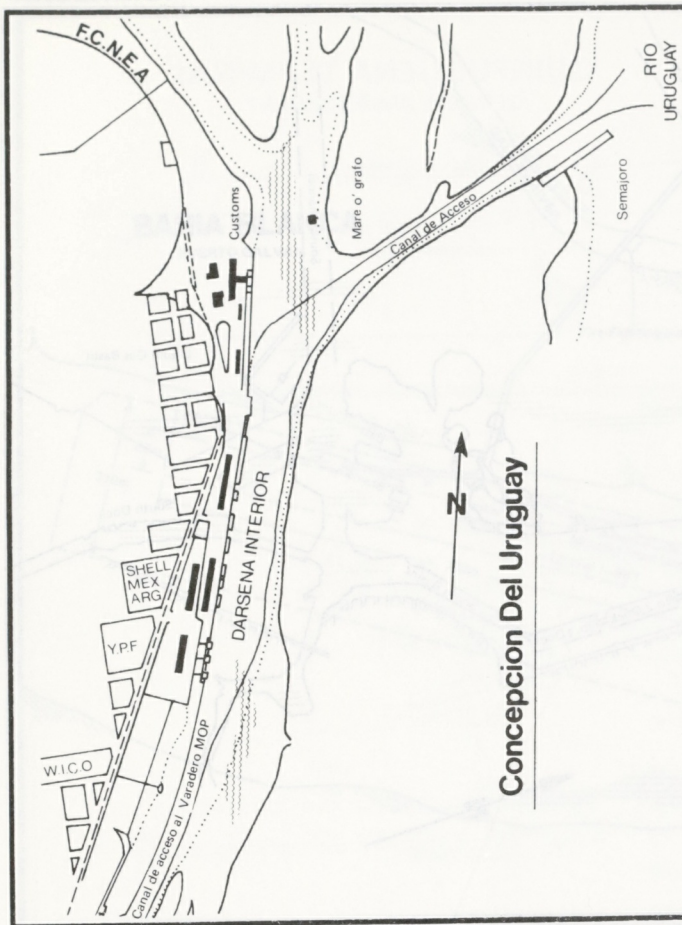




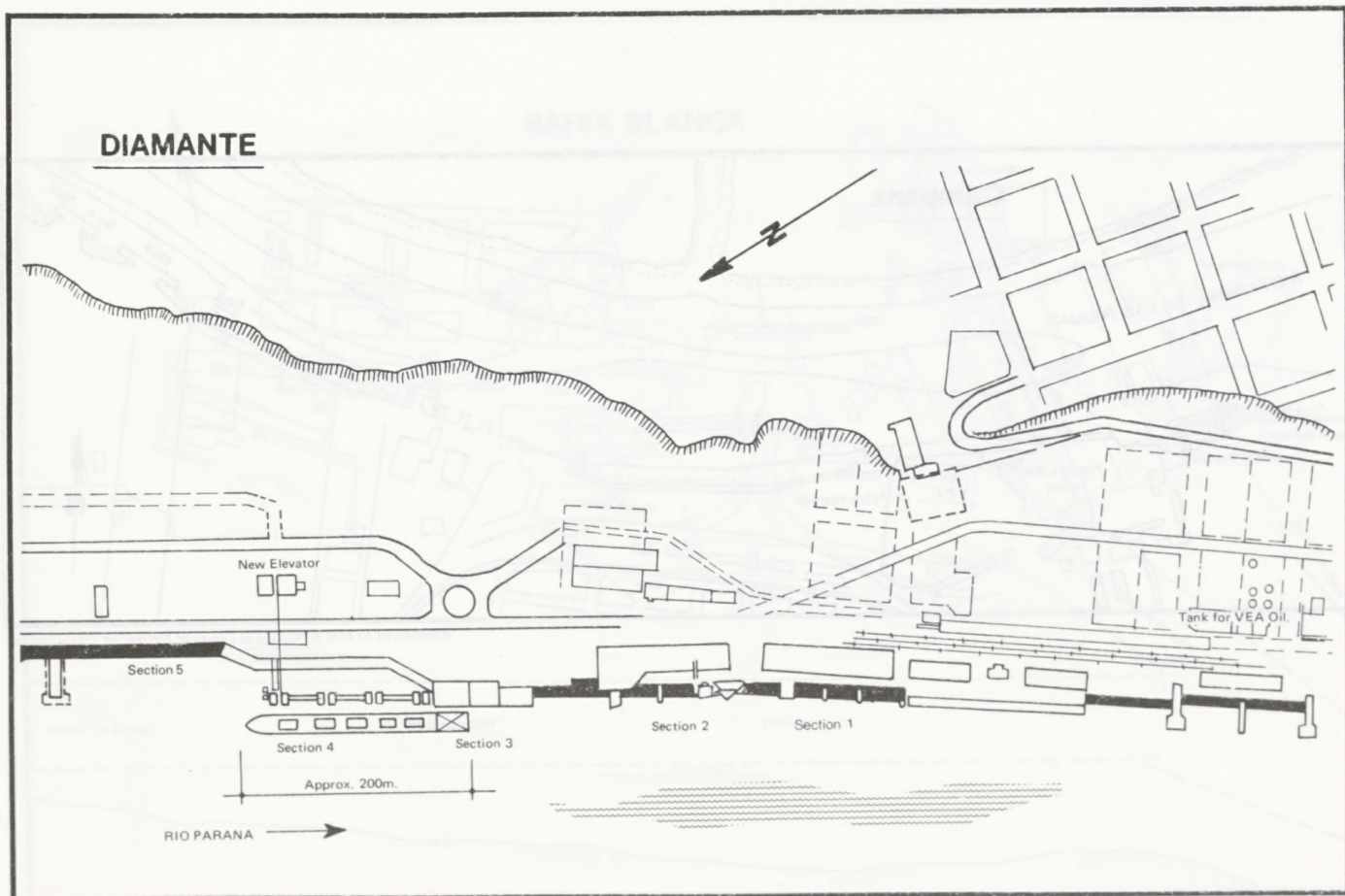
"Reproduced by kind permission of Centro de Navegacion Transatlantica".



"Reproduced by kind permission of Centro de Navegacion Transatlantica".



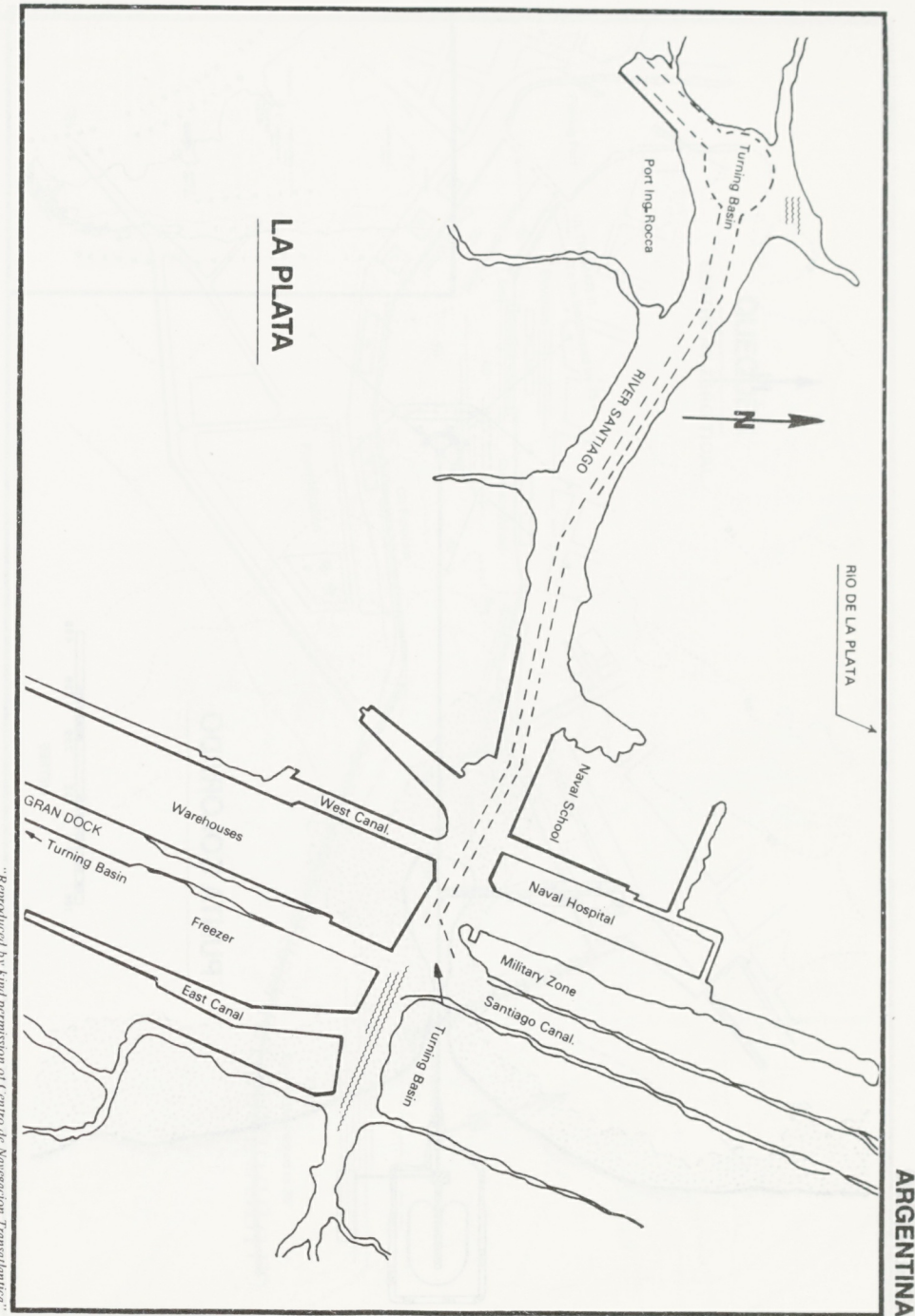
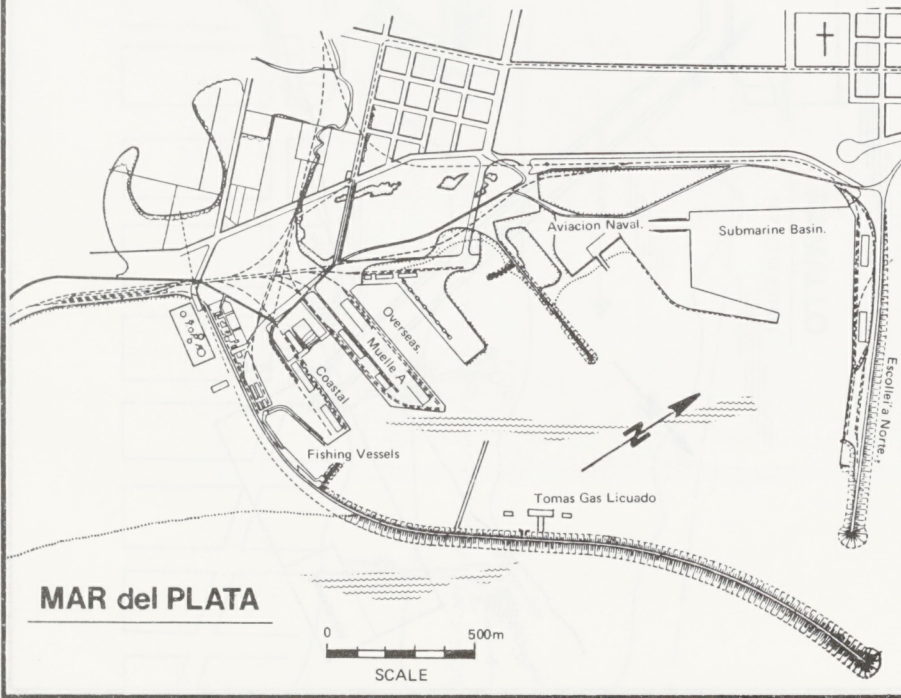
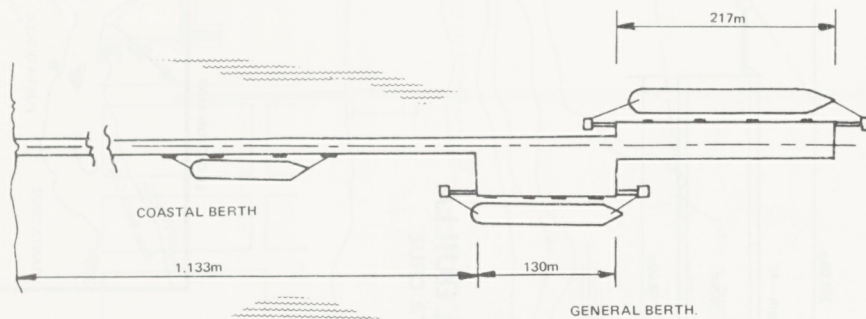
"Reproduced by kind permission of Centro de Navegacion Transatlantica".



"Reproduced by kind permission of Centro de Navegacion Transatlantica".

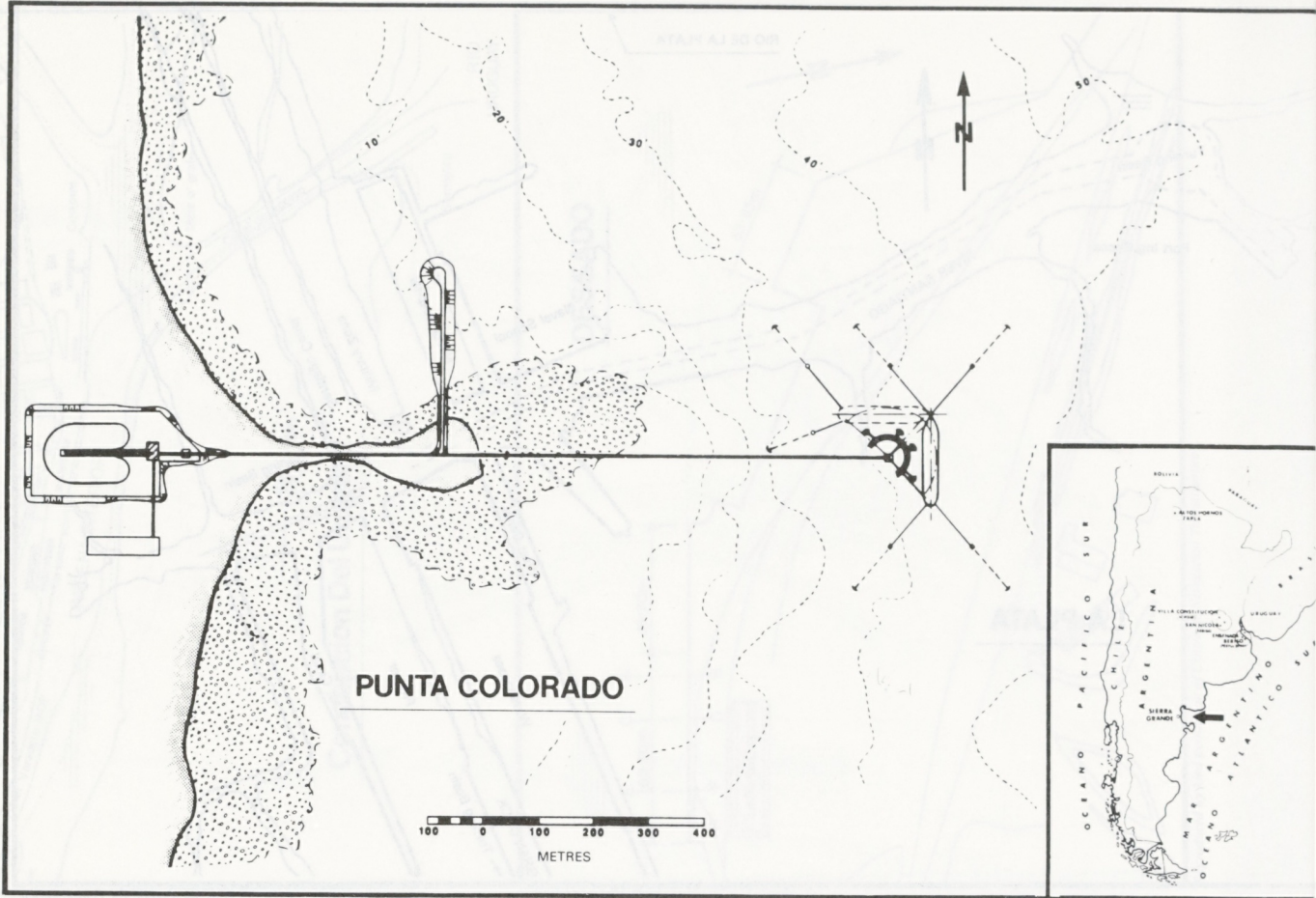
MADRYN (New Mole)

2500 m. North of existing mole.

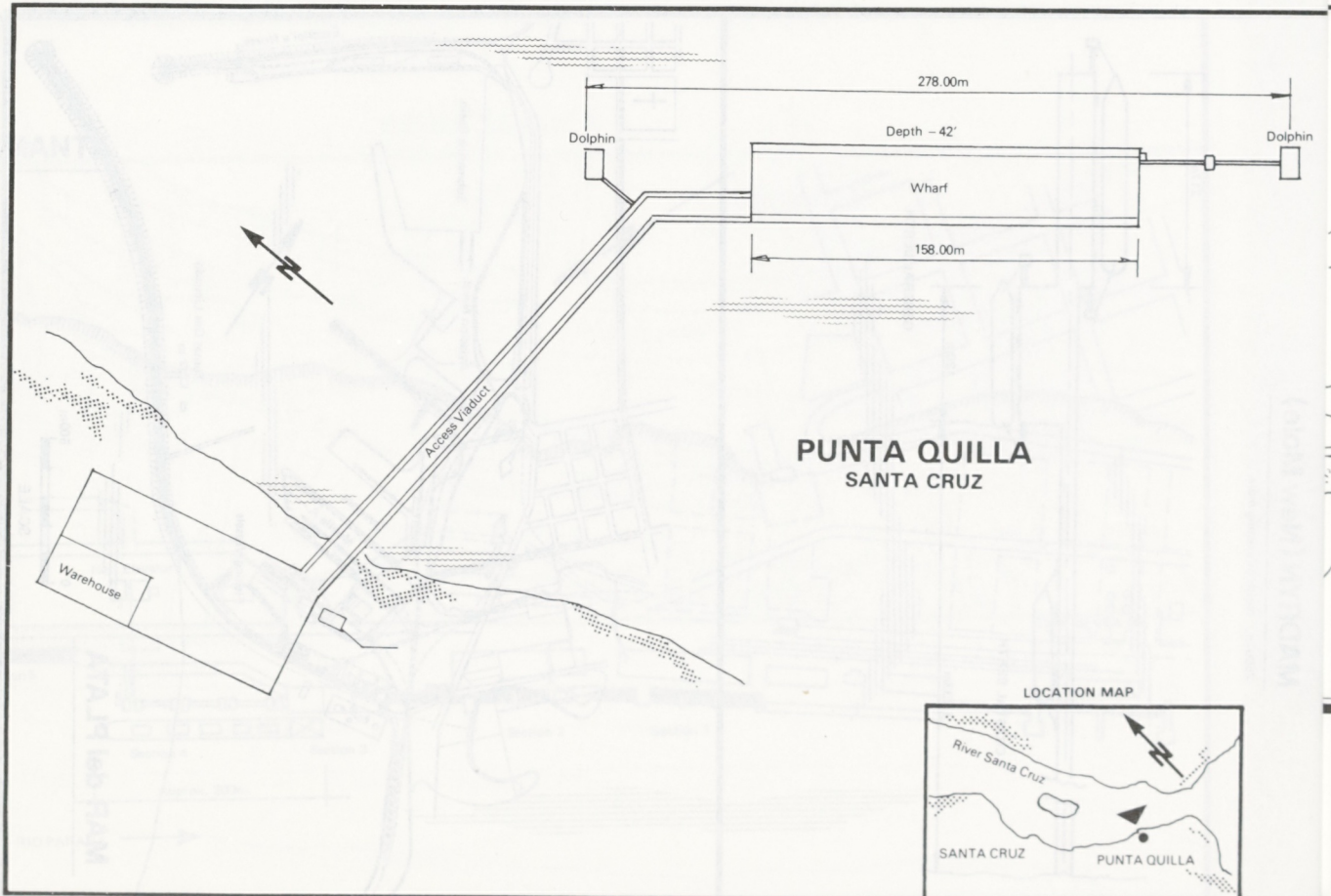


"Reproduced by kind permission of Centro de Navegacion Transatlantica".

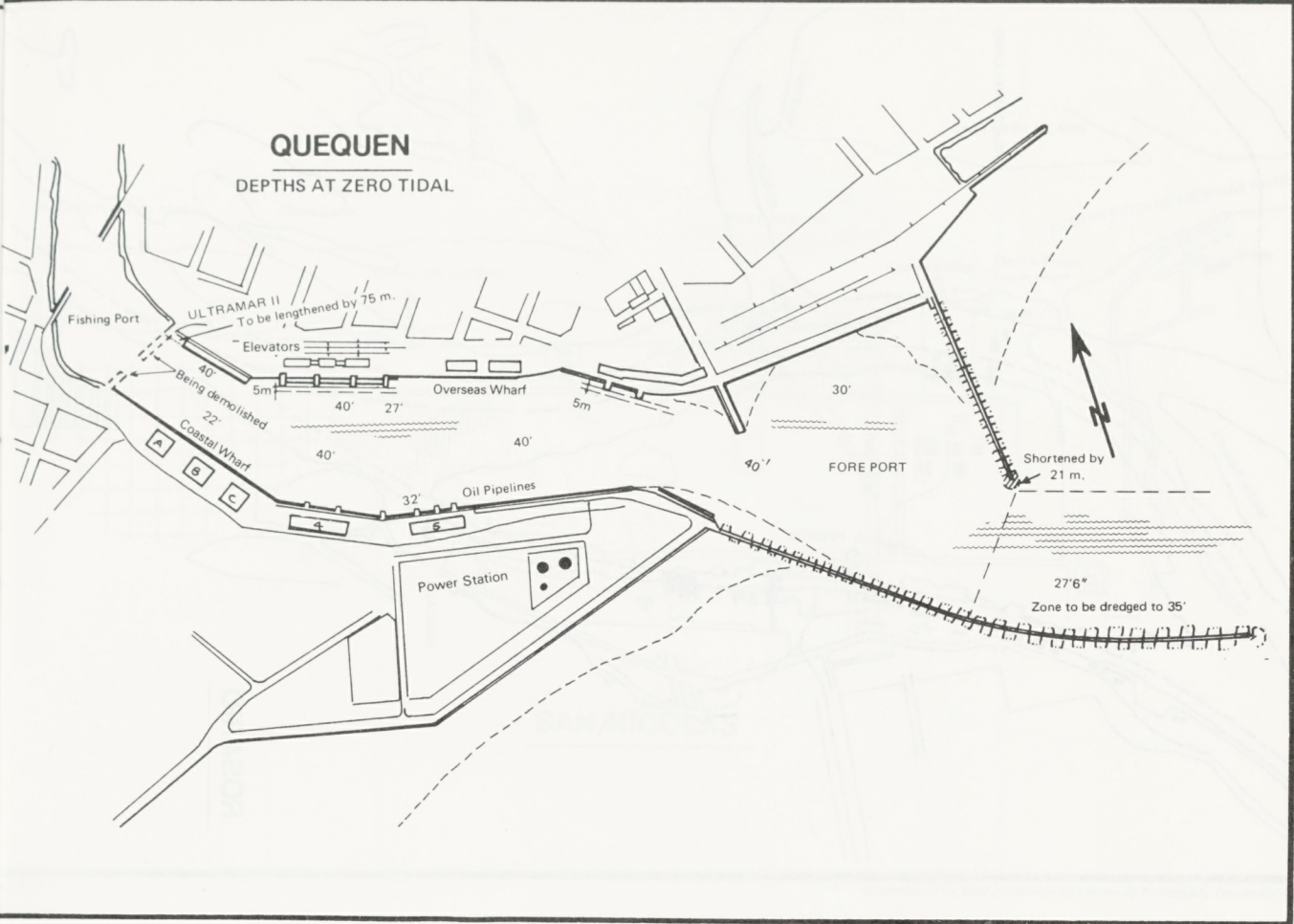
"Reproduced by kind permission of Centro de Navegacion Transatlantica".



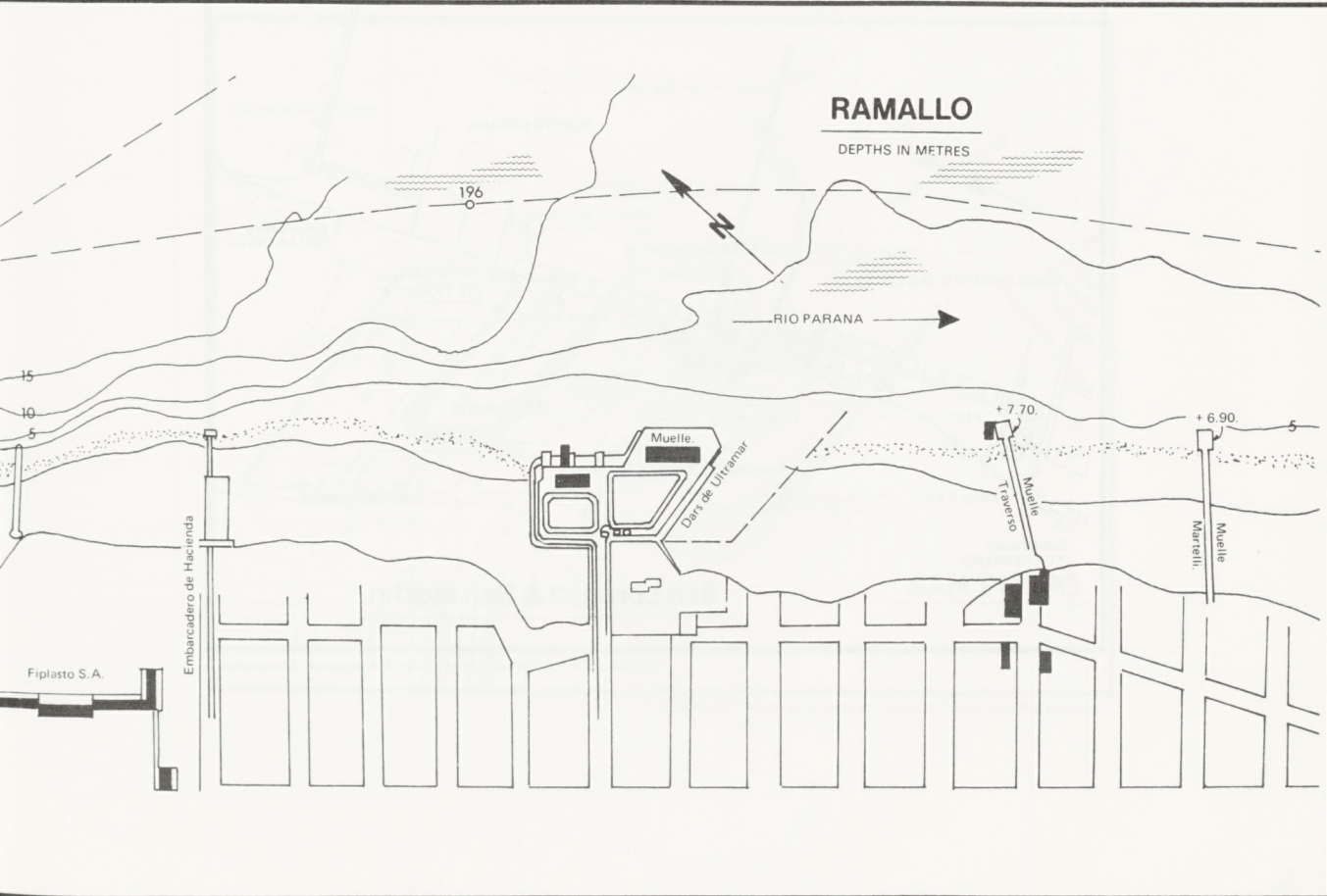
"Reproduced by kind permission of Centro de Navegaciou Transatlanti



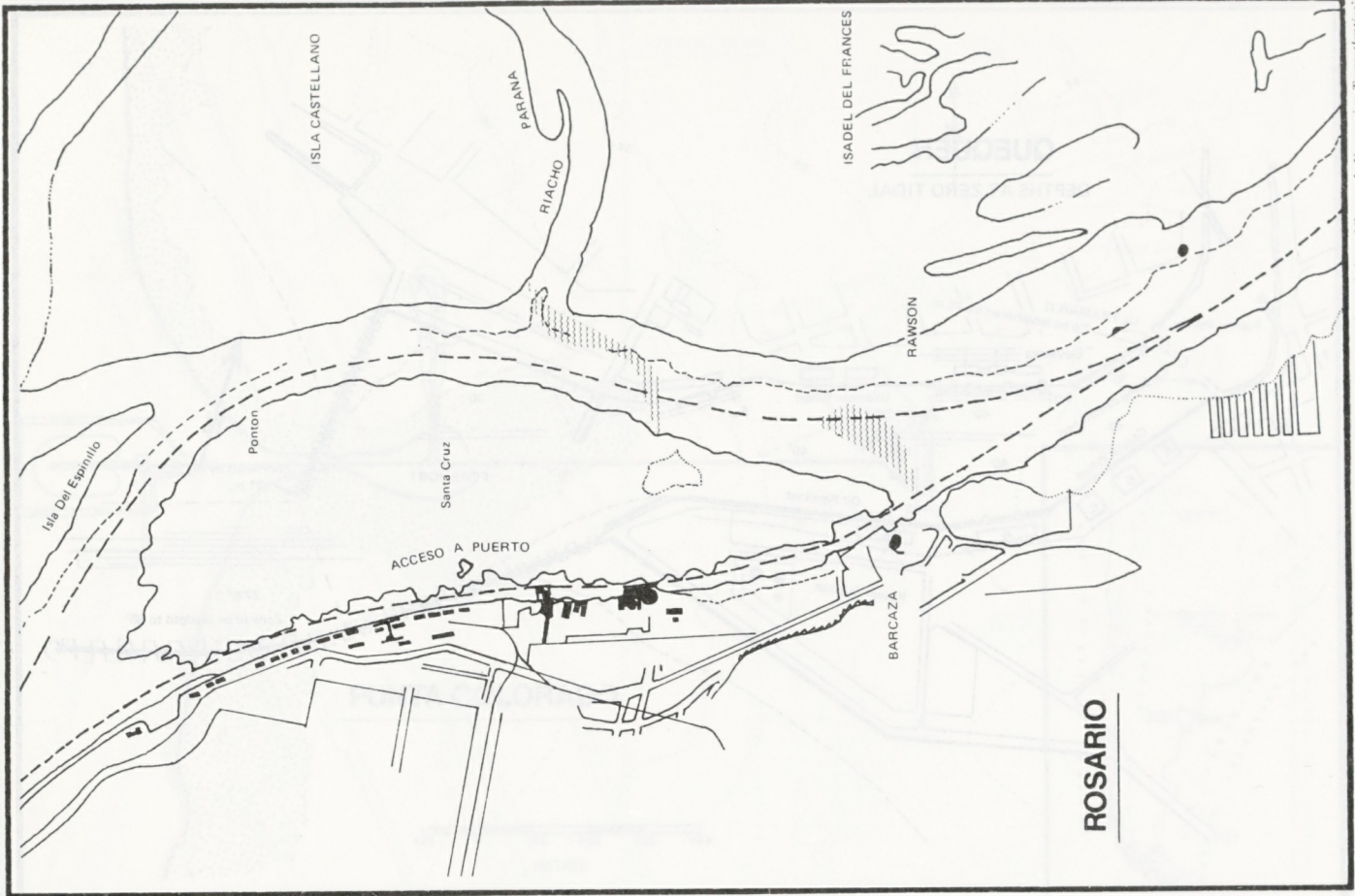
"Reproduced by kind permission of Centro de Navegaciou Transatlantica



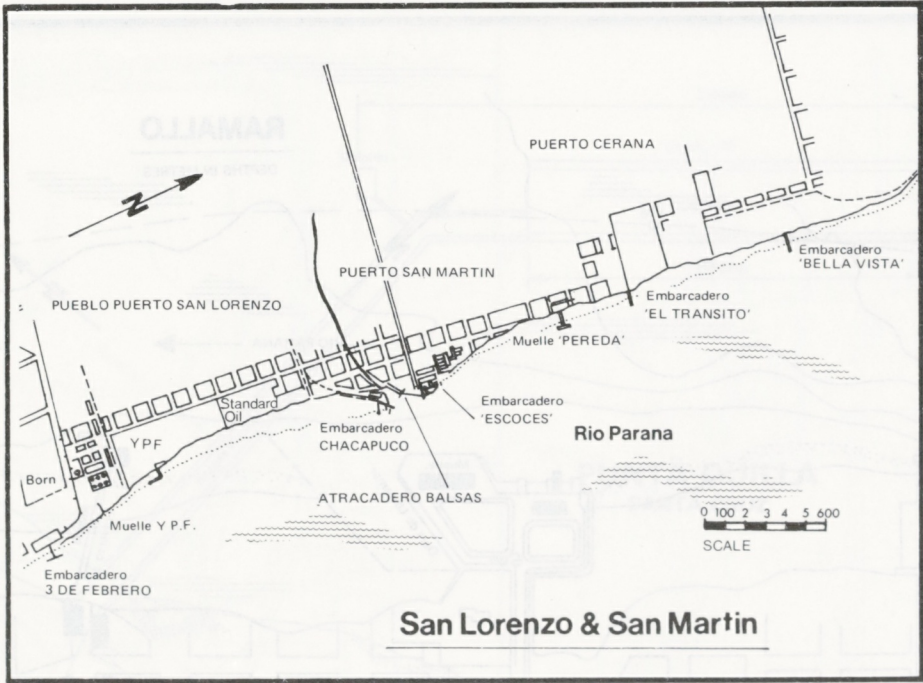
"Reproduced by kind permission of Centro de Navegacion Transatlantica".



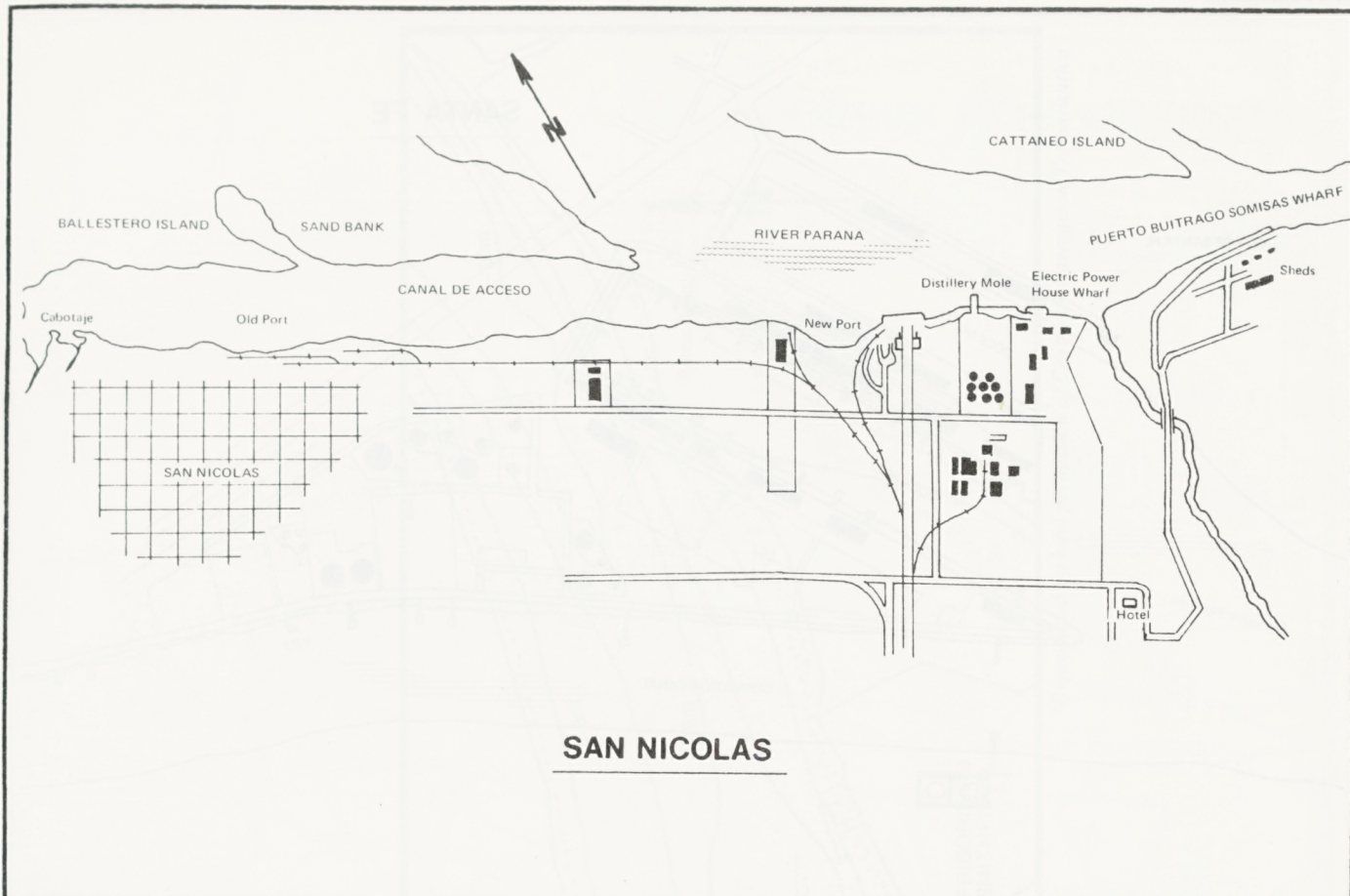
"Reproduced by kind permission of Centro de Navegacion Transatlantica".



Reproduced by kind permission of Centro de Navegacion Transatlantica

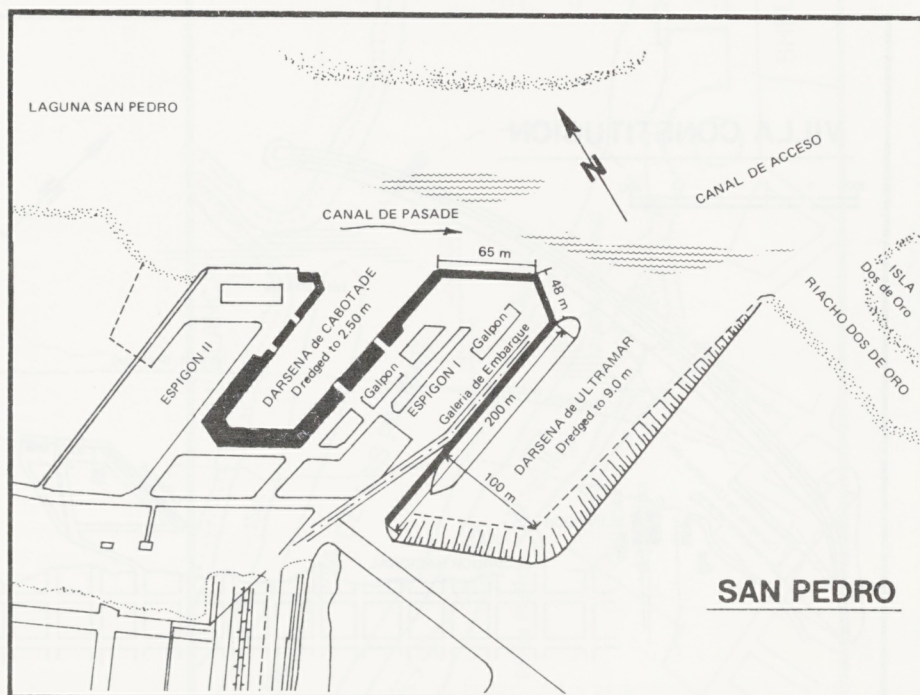


Reproduced by kind permission of Centro de Navegacion Transatlantica



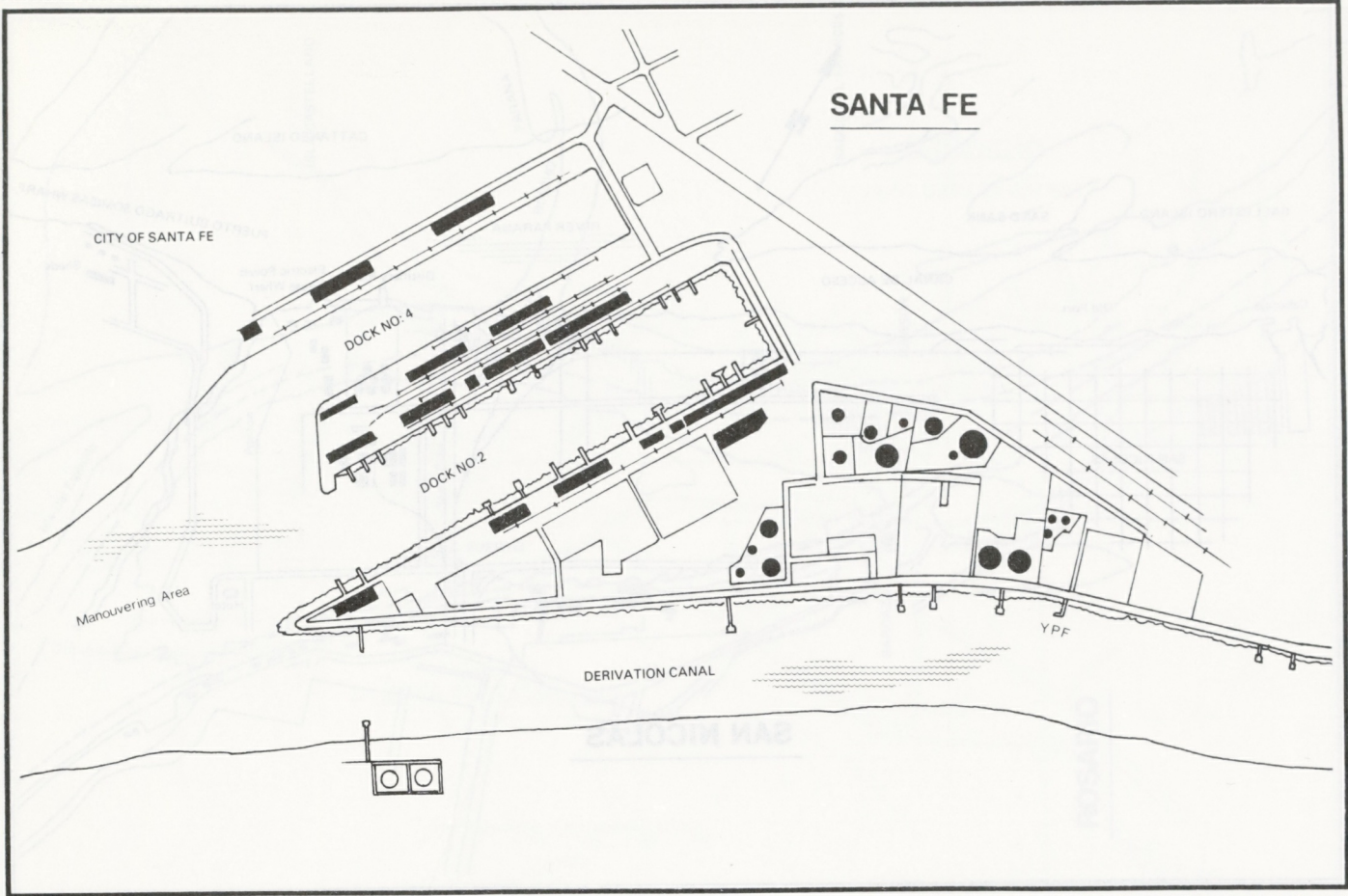
SAN NICOLAS

"Reproduced by kind permission of Centro de Navegacion Transatlantica".

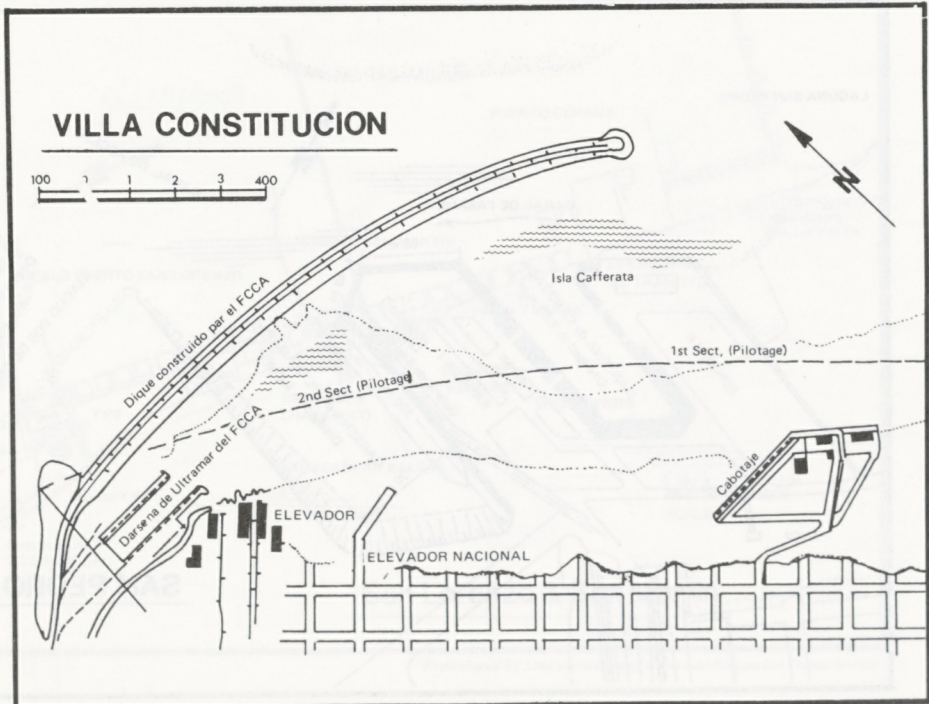


SAN PEDRO

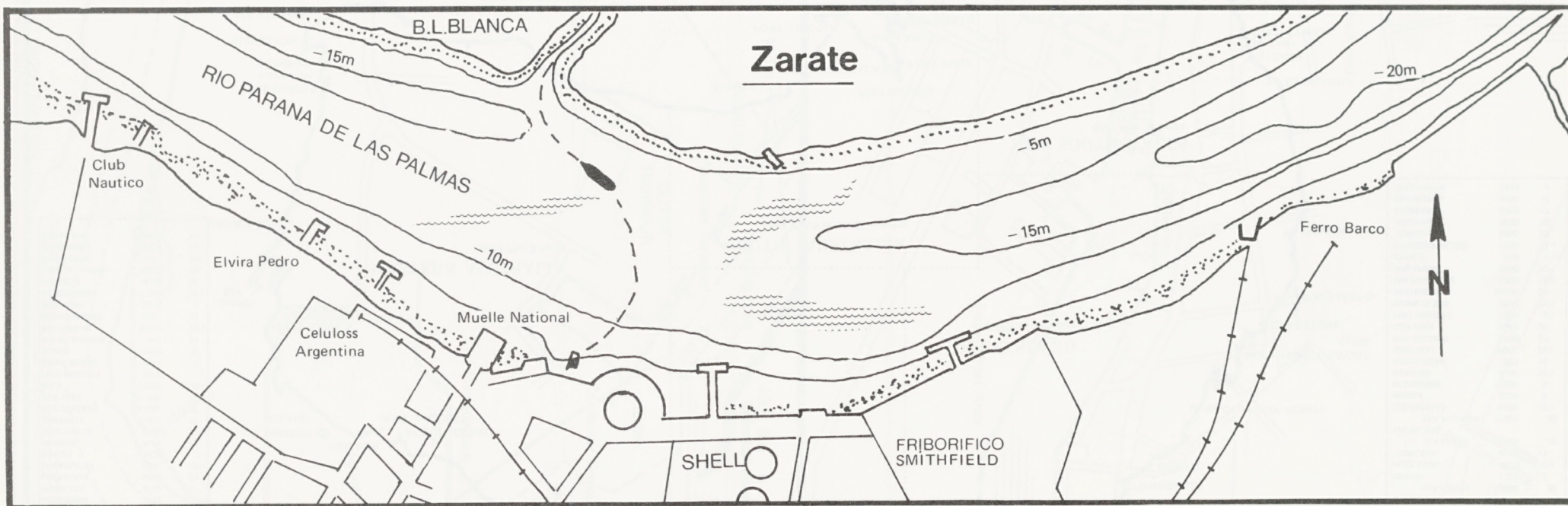
"Reproduced by kind permission of Centro de Navegacion Transatlantica".



"Reproduced by kind permission of Centro de Navegacion Transatlantica"



"Reproduced by kind permission of Centro de Navegacion Transatlantica"



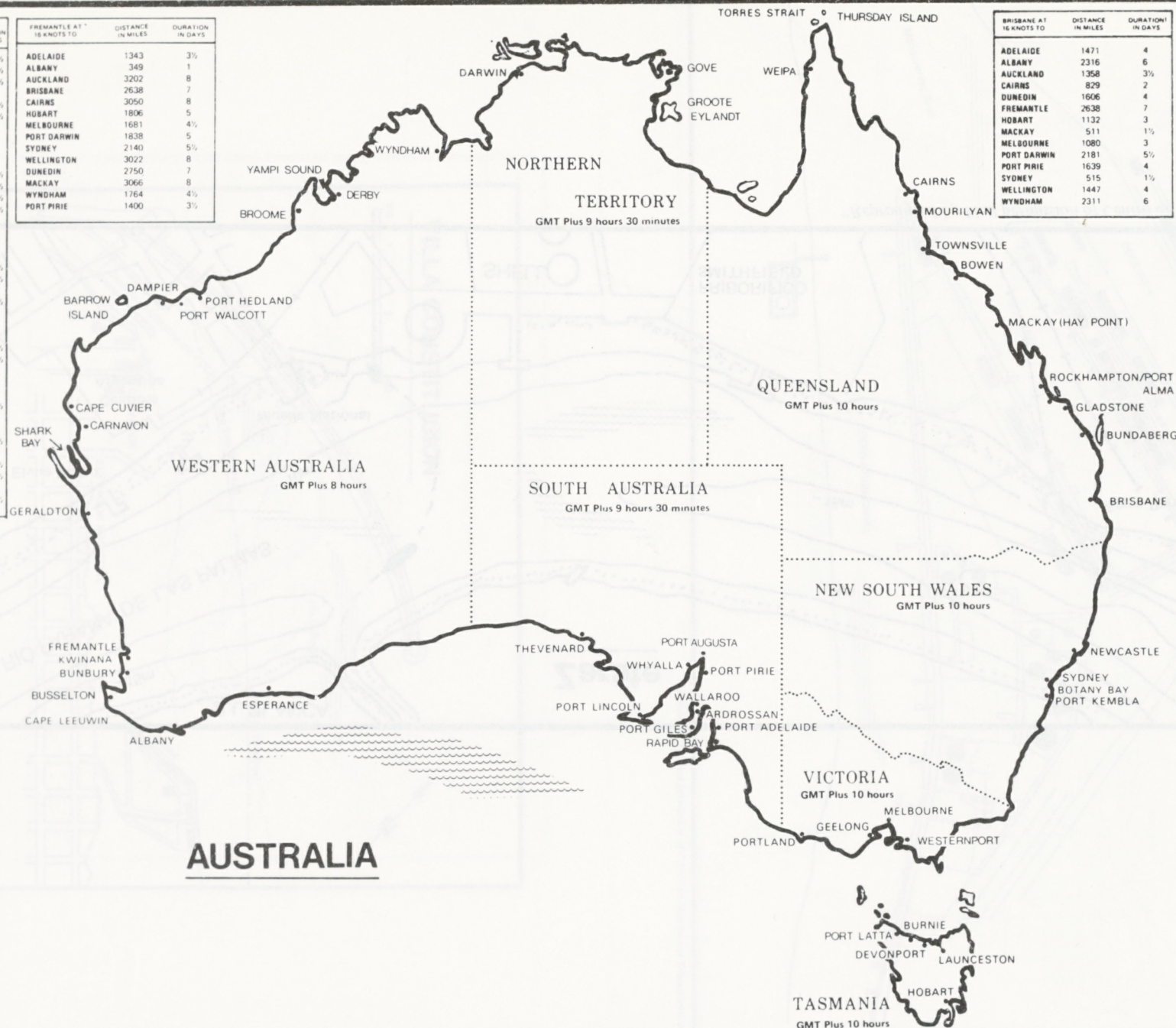
"Reproduced by kind permission of Centro de Navegacion Transatlantica".

FREMANTLE (VIA CAPE) AT 16 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
ALEXANDRIA	11654	30%
AUGUSTA - SICILY	10891	28%
BALBOA	9357	24%
BANGKOK	3000	8
BOMBAY	3982	10%
CALCUTTA	3684	9%
CALLAO	8500	22
CAPE GOOD HOPE	4672	12
COLOMBO	3121	8
CRISTOBAL	11111	29
DAIREN	4400	11%
DAKAR	8300	21%
DJAKARTA	1761	4%
DURBAN	4241	11%
GIBRALTAR	9856	26
HONG KONG	3442	9
HONOLULU	6503	17
LAS PALMAS	9156	24
LOS ANGELES	8565	22%
MANILA	2925	7%
MOMBASA	4564	12
MONTEVIDEO	8266	21%
MONTREAL	11824	31
NEW ORLEANS	11980	31
NEW YORK	11482	30
OSLO	11361	29%
PORT MORESBY	2878	7%
QUIN ISLAND	4877	13
RJKA	11464	30
RIO DE JANEIRO	7943	21
ROTTERDAM	10862	28%
SAN FRANCISCO	8501	22
SINGAPORE	2220	6
SKANAMANGA	11346	29%
TRINIDAD	10000	26
TRIPOLI - LIBYA	10931	28%
VALPARAISO	7827	20%
VANCOUVER	8424	22
YOKOHAMA	4460	11%

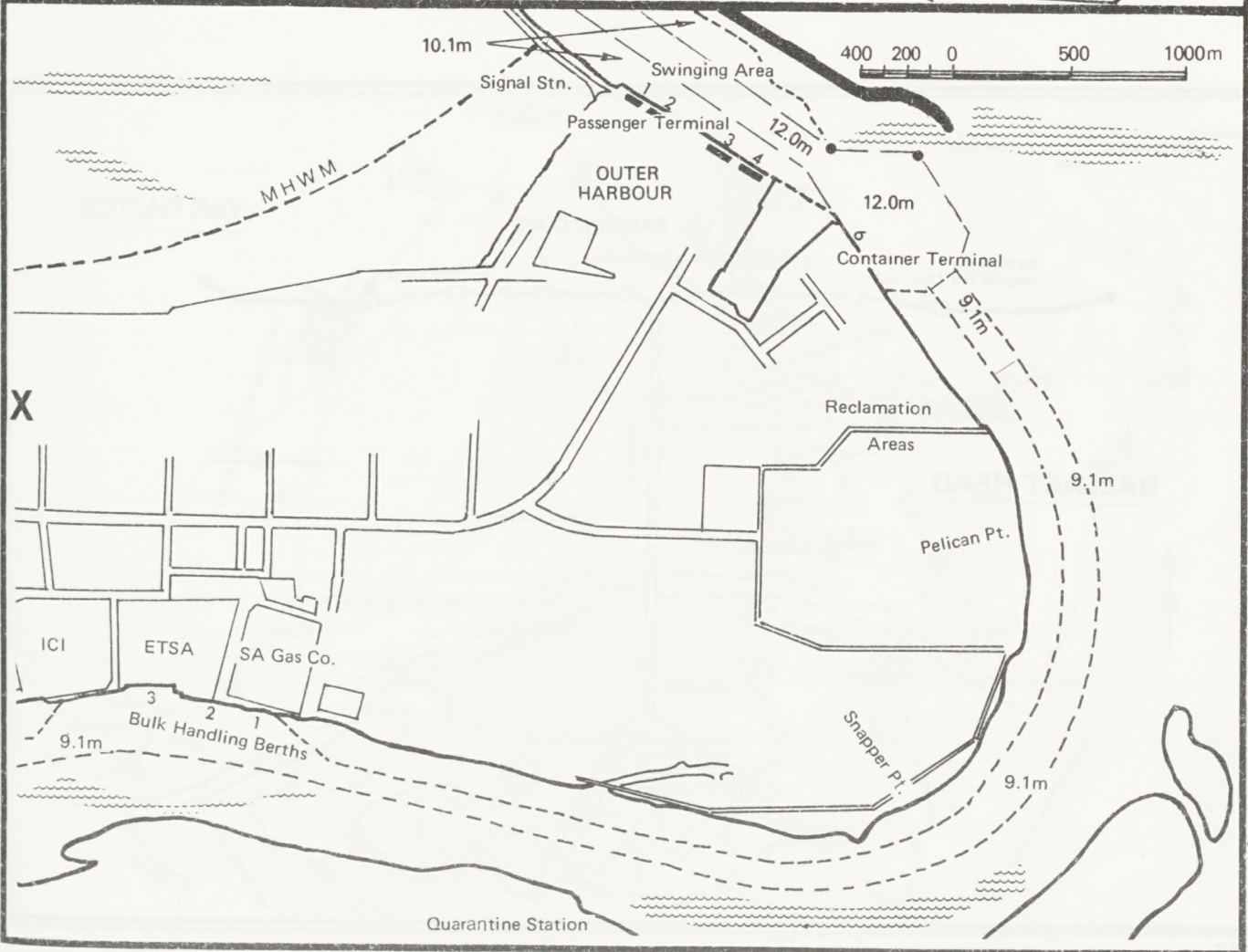
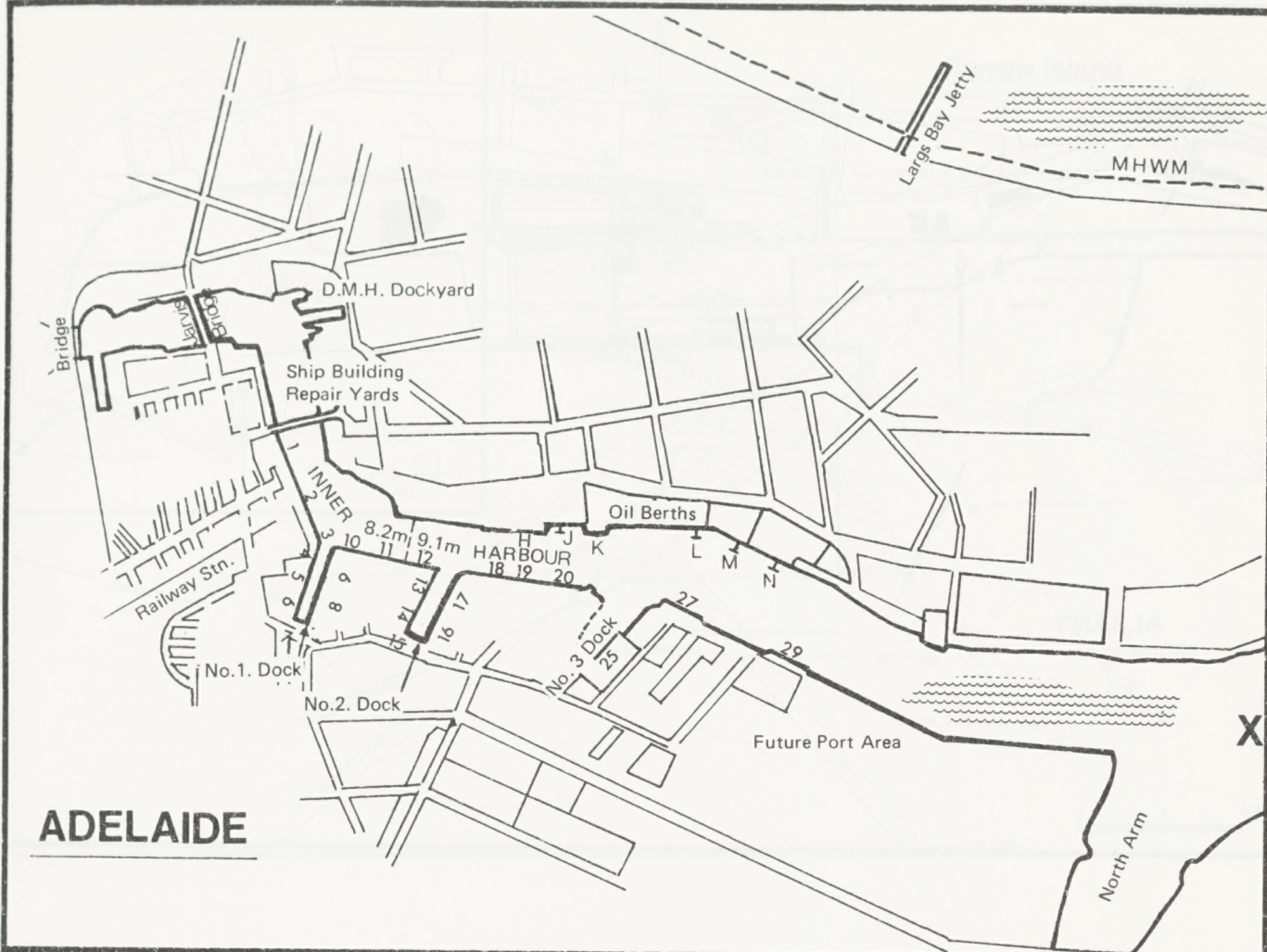
FREMANTLE AT 16 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
ADELAIDE	1343	3%
ALBANY	349	1
AUCKLAND	3202	8
BRISBANE	2638	7
CAIRNS	3050	8
HOBART	1806	5
MELBOURNE	1681	4%
PORT DARWIN	1838	5
SYDNEY	2140	5%
WELLINGTON	3022	8
DUNEDIN	2750	7
MACKAY	3066	8
WYNDHAM	1764	4%
PORT PIKE	1400	3%

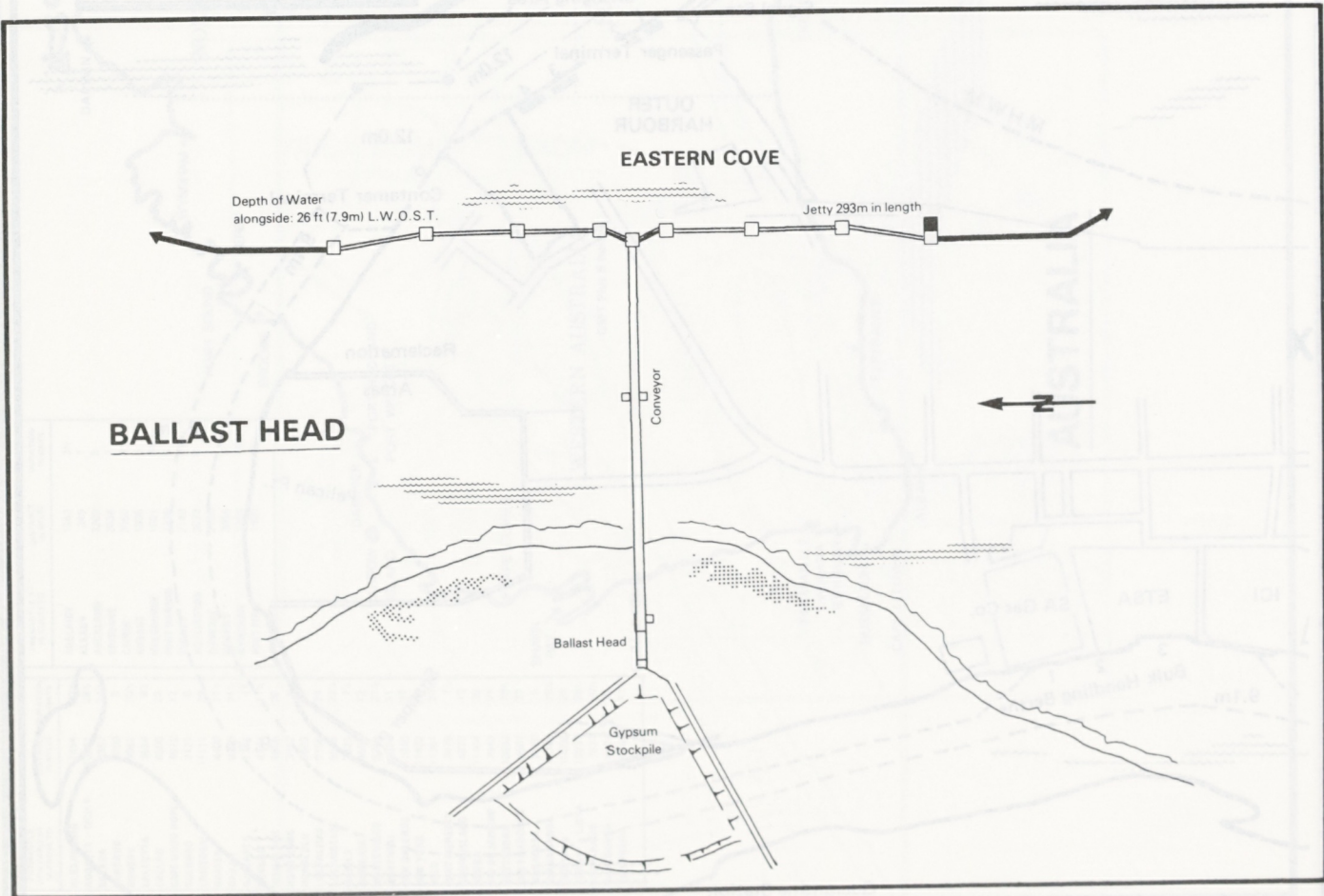
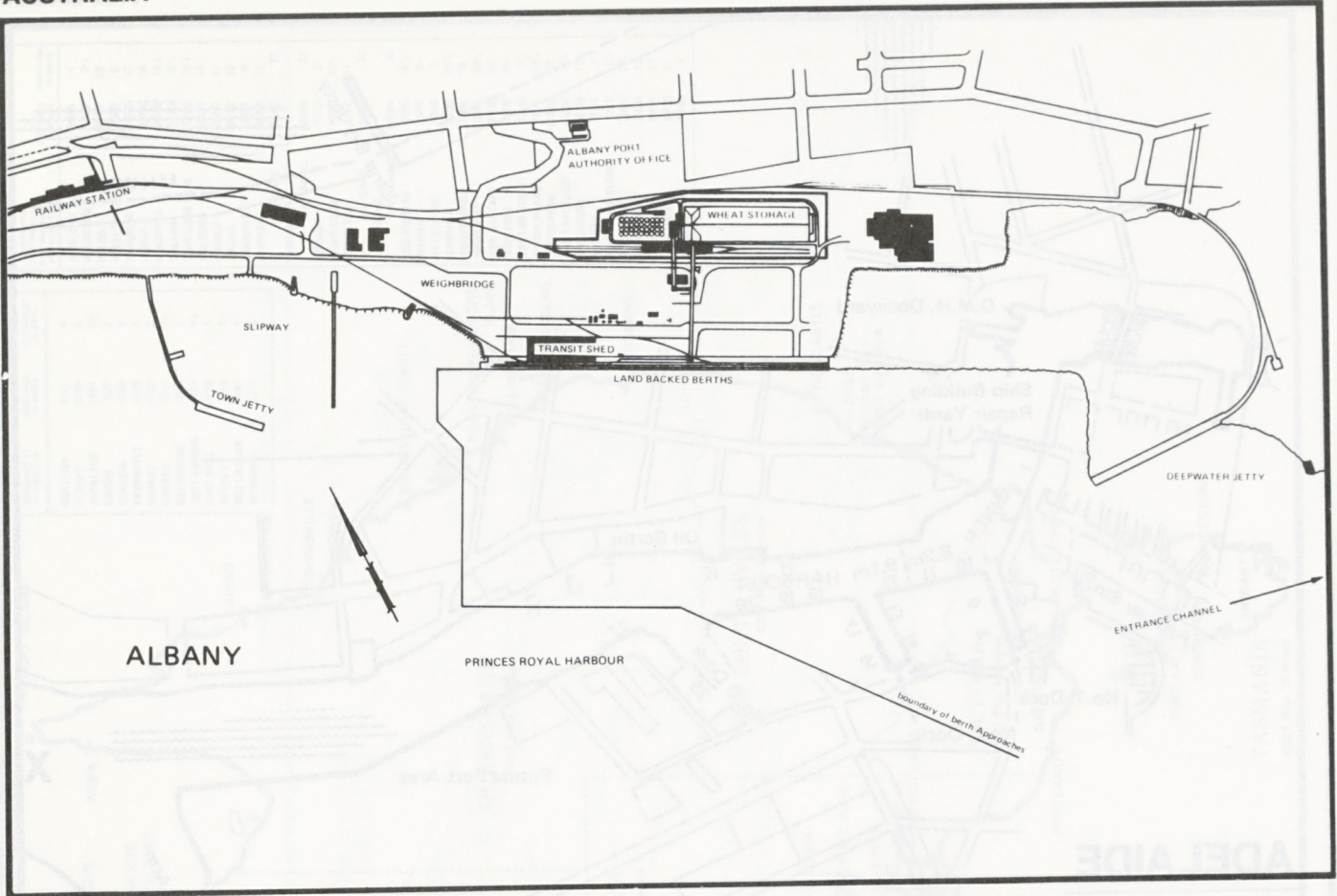
BRISBANE AT 16 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
ADELAIDE	1471	4
ALBANY	2316	6
AUCKLAND	1358	3%
CAIRNS	829	2
DUNEDIN	1606	4
FREMANTLE	2638	7
HOBART	1132	3
MACKAY	511	1%
MELBOURNE	1080	3
PORT DARWIN	2181	5%
PORT PIKE	1639	4
SYDNEY	515	1%
WELLINGTON	1447	4
WYNDHAM	2311	6

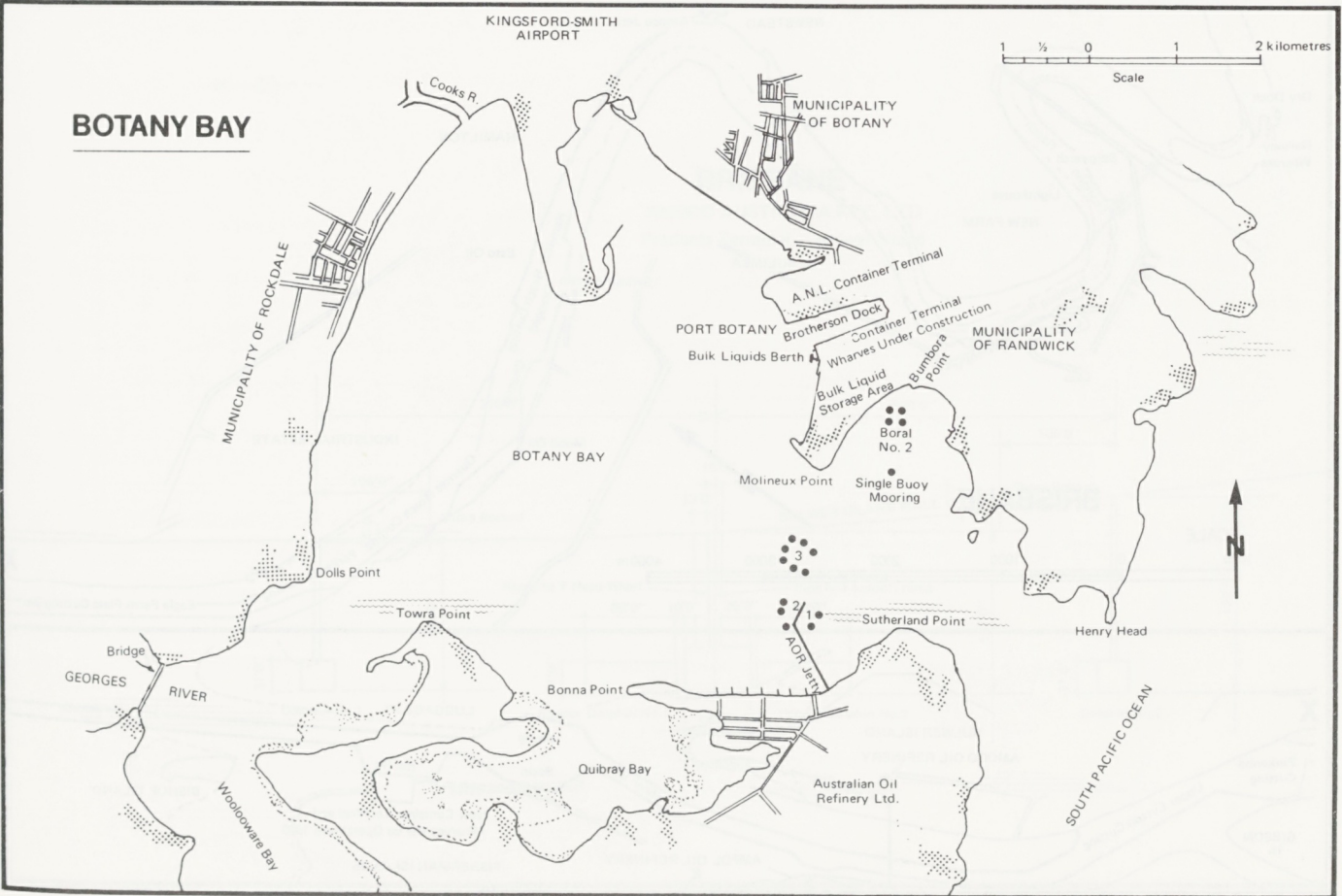
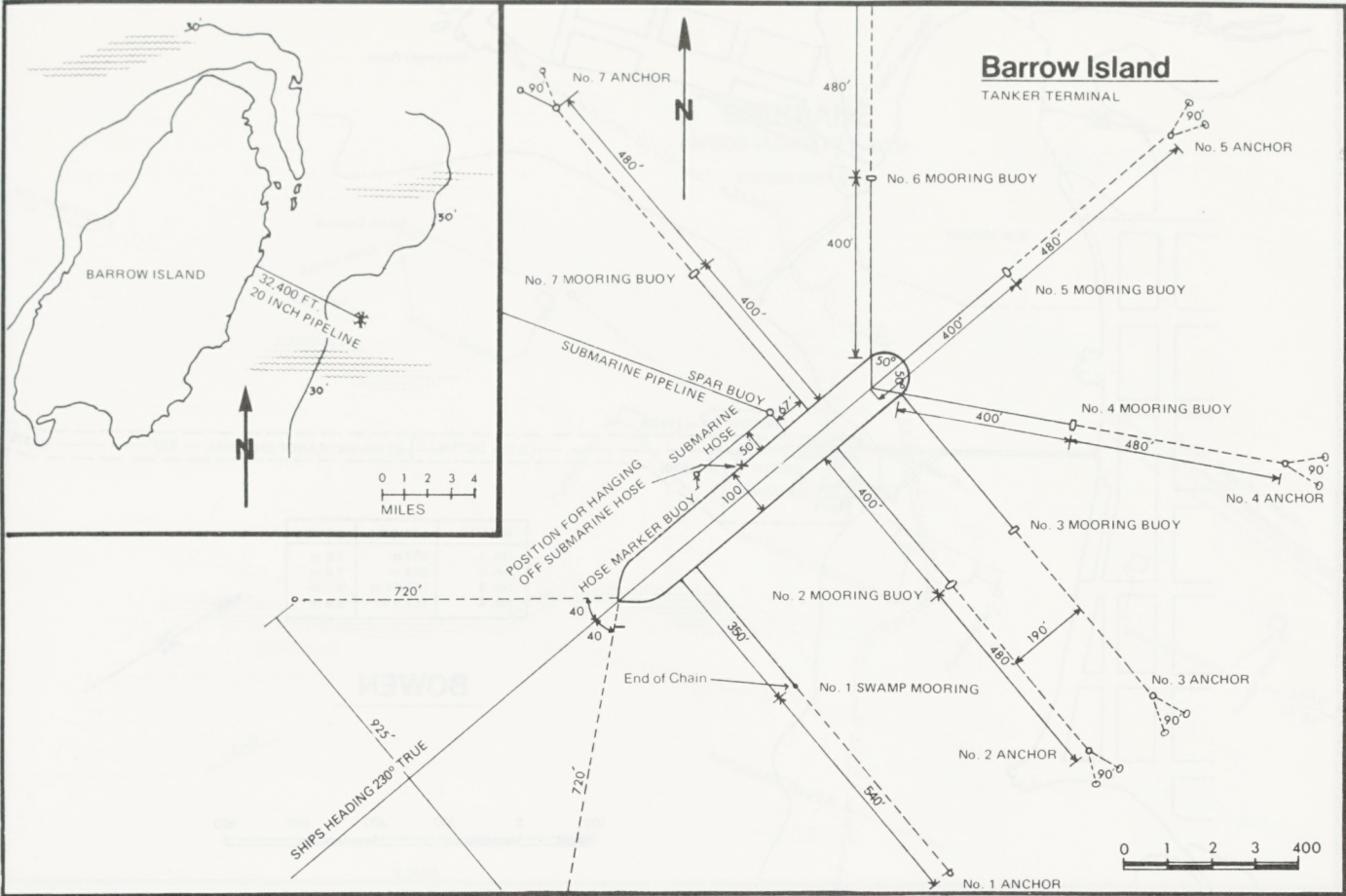
BRISBANE (VIA PANAMA) (VIA MAGELLAN) AT 16 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
ADELAIDE	1475	4
AUCKLAND	1358	3 1/2
BALBOA	7714	20
BALIK PAPAN	3008	8
BANGKOK	4600	12
BOMBAY	6196	16
CALCUTTA	5510	14 1/2
CALLAO	7103	18 1/2
CAPE GOOD HOPE	7100	18 1/2
COLOMBO	5325	14
DAIREN	4500	12
DAKAR	10728	28
DJAKARTA	3485	9
DURBAN	6608	17
VIA CAPE	12140	32
GIBRALTAR		
VIA CANAL	12090	32
HOBART	1132	3
HONG KONG	4070	10 1/2
HONOLULU	4118	11
VIA CAPE	11469	30
LAS PALMAS		
VIA PANAMA	11564	30
LOS ANGELES	6285	16 1/2
MANILA	3520	9
MELBOURNE	1080	3
MOMBASA	7000	18 1/2
MONTEVIDEO	7300	19
MONTREAL	10950	28 1/2
NEW ORLEANS	9100	24
NEW YORK	9890	26
PORT MORESBY	1390	3 1/2
QUIN ISLAND	7070	18 1/2
ROTTERDAM	12600	33
SAN FRANCISCO	6200	16 1/2
SINGAPORE	3850	10
SYDNEY	515	1 1/2
THURSDAY ISLAND	1320	3 1/2
TRINIDAD	8900	23
YOKOHAMA	3930	10
VALPARAISO	6450	17
VANCOUVER	6490	17
WELLINGTON	1446	4

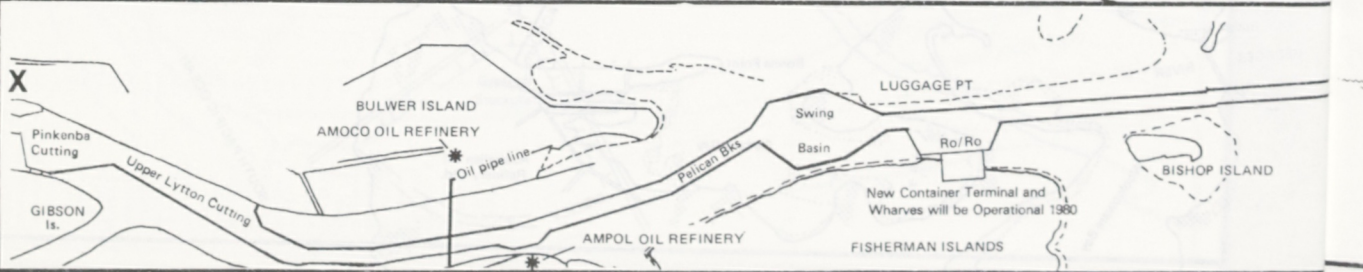
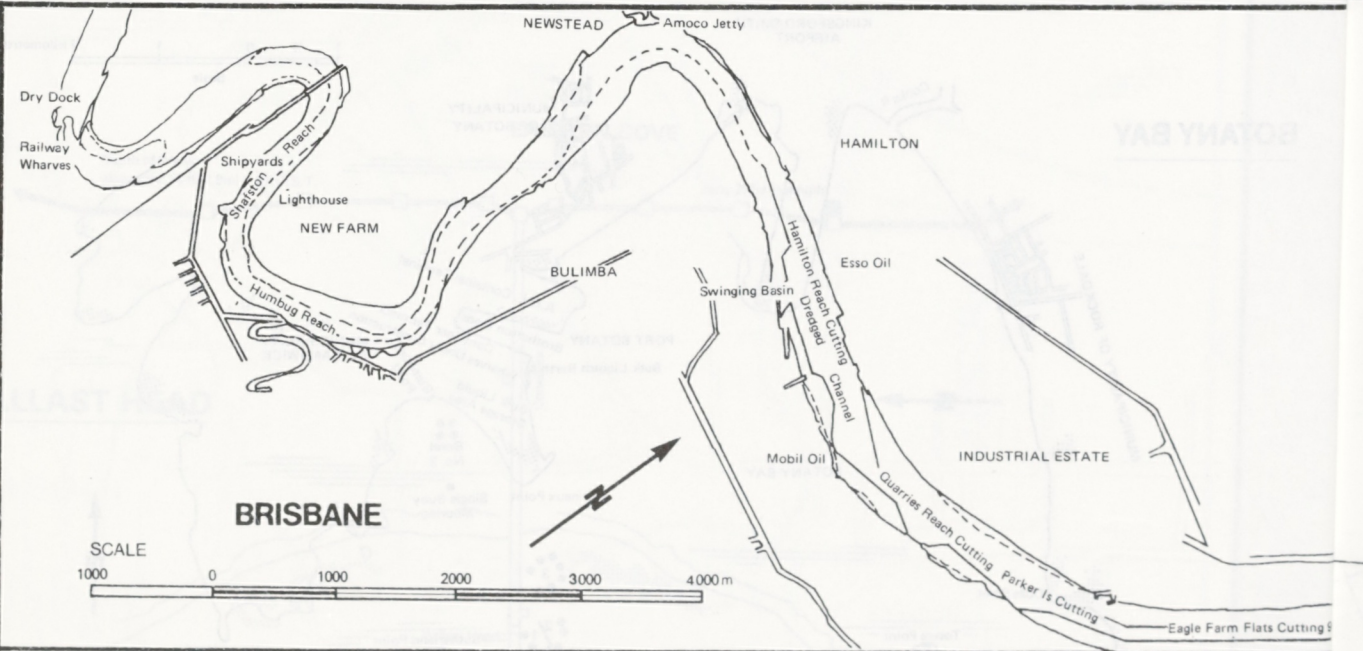
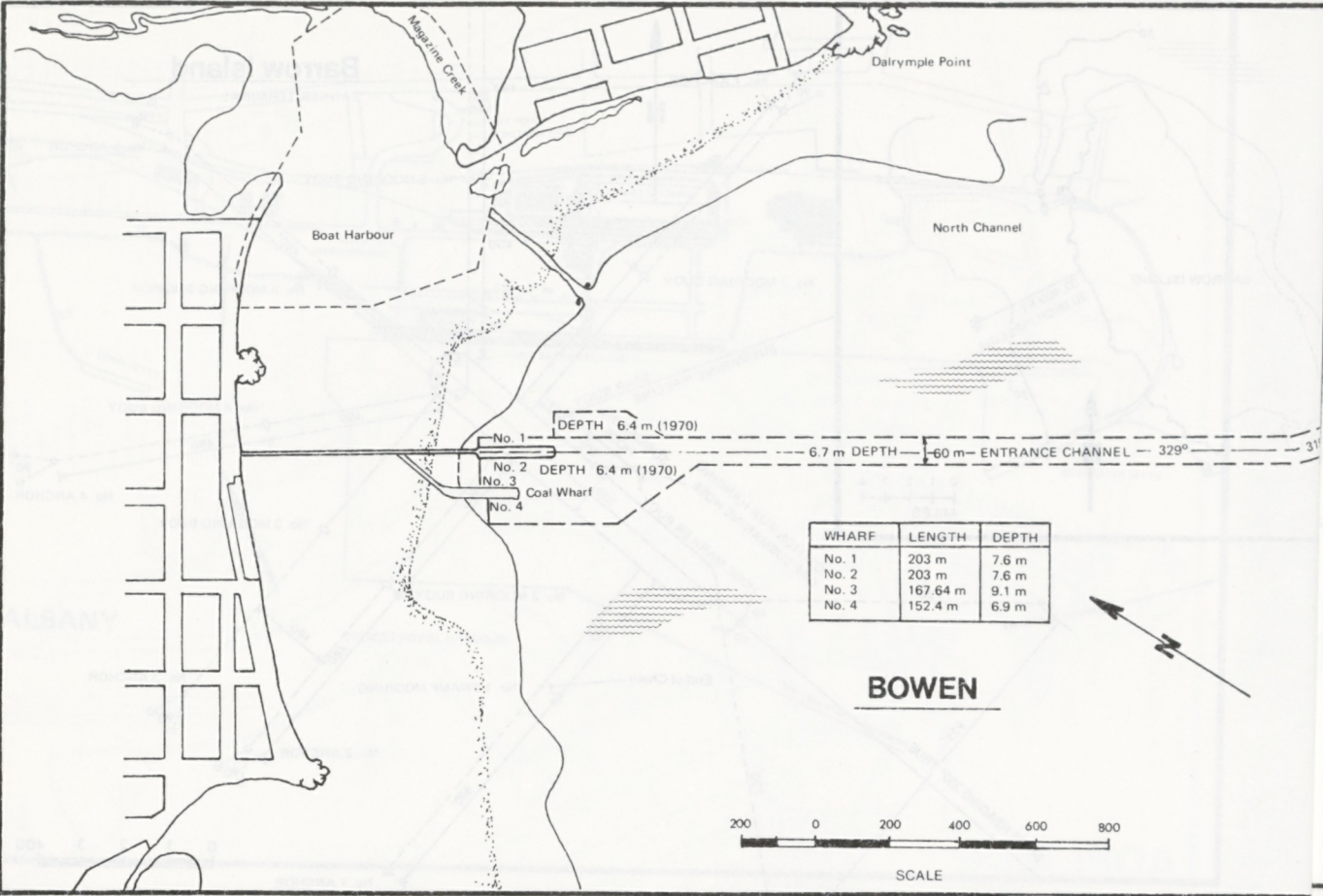


AUSTRALIA

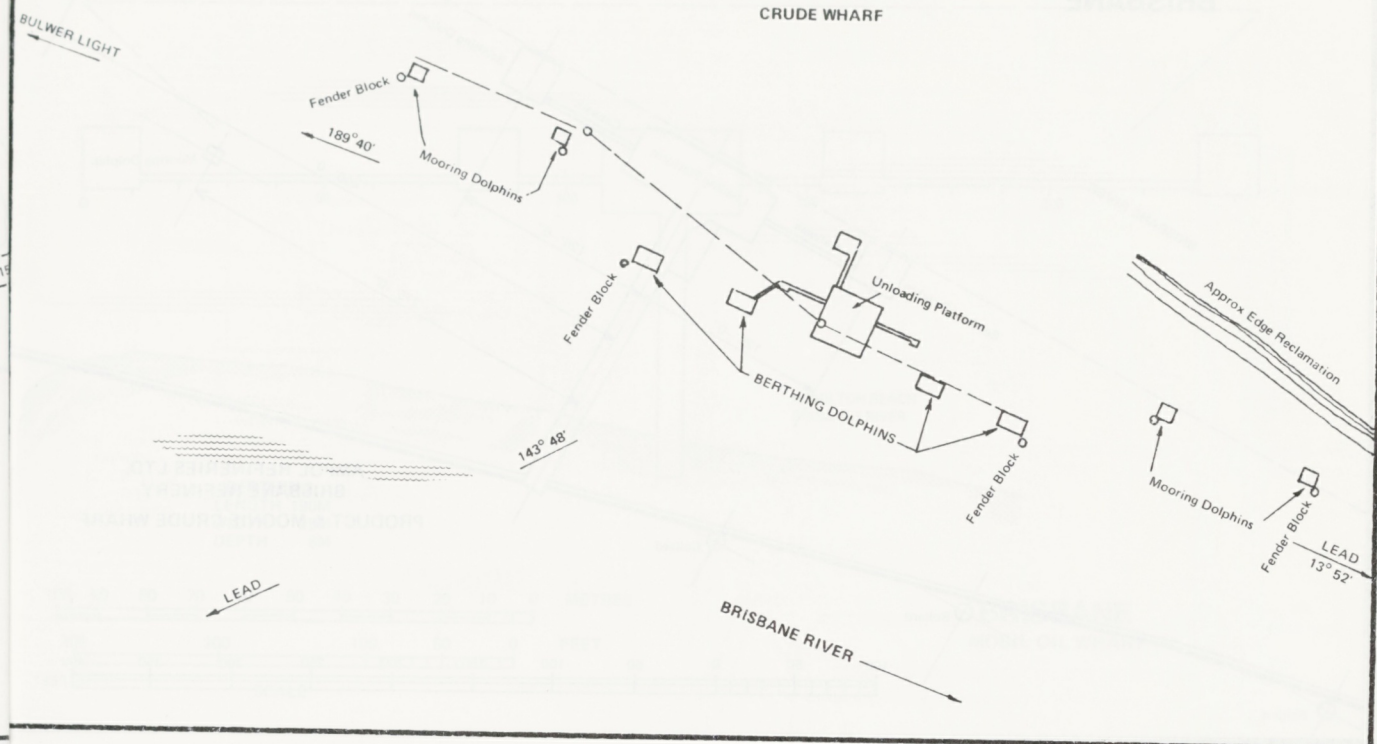




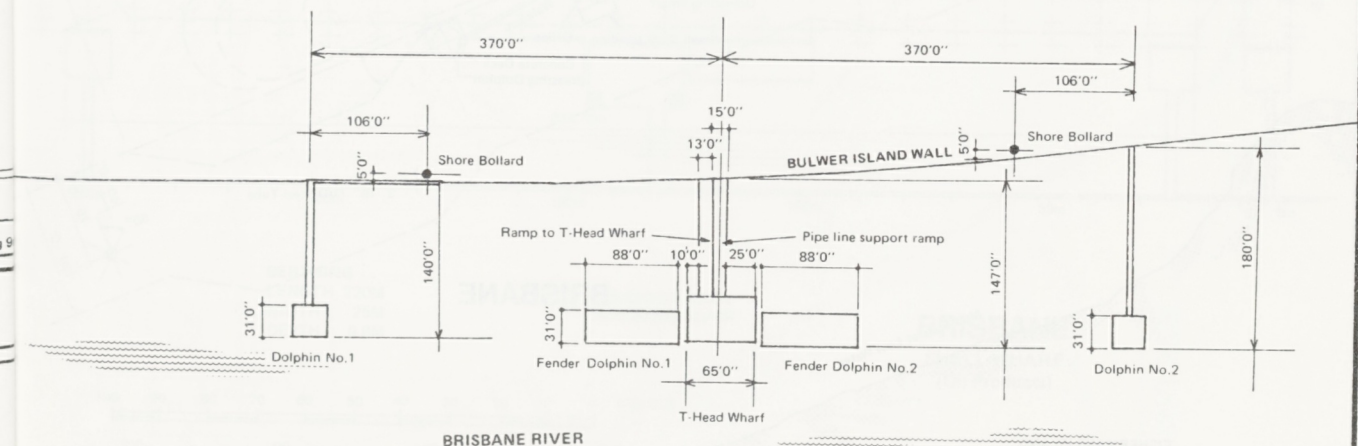


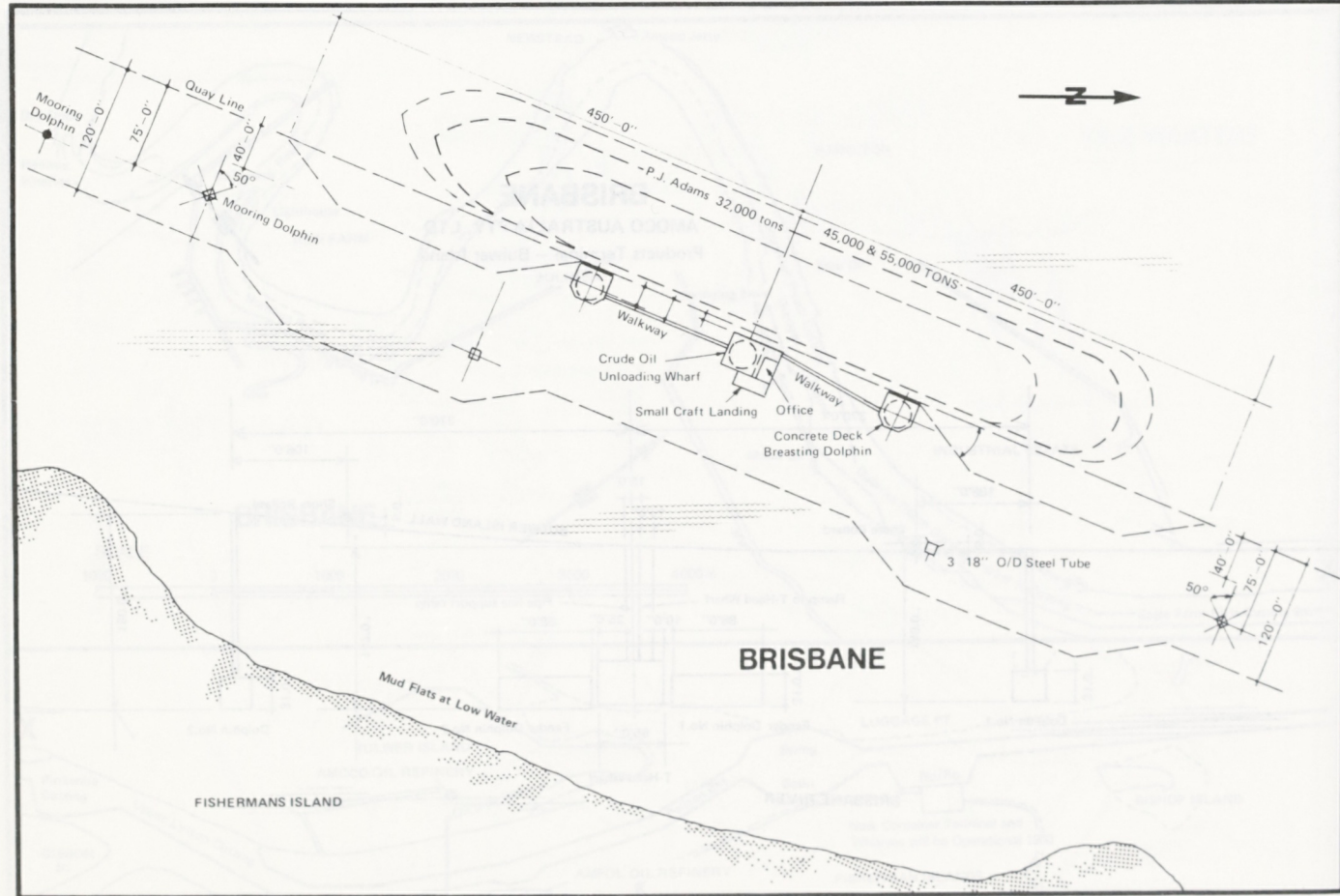
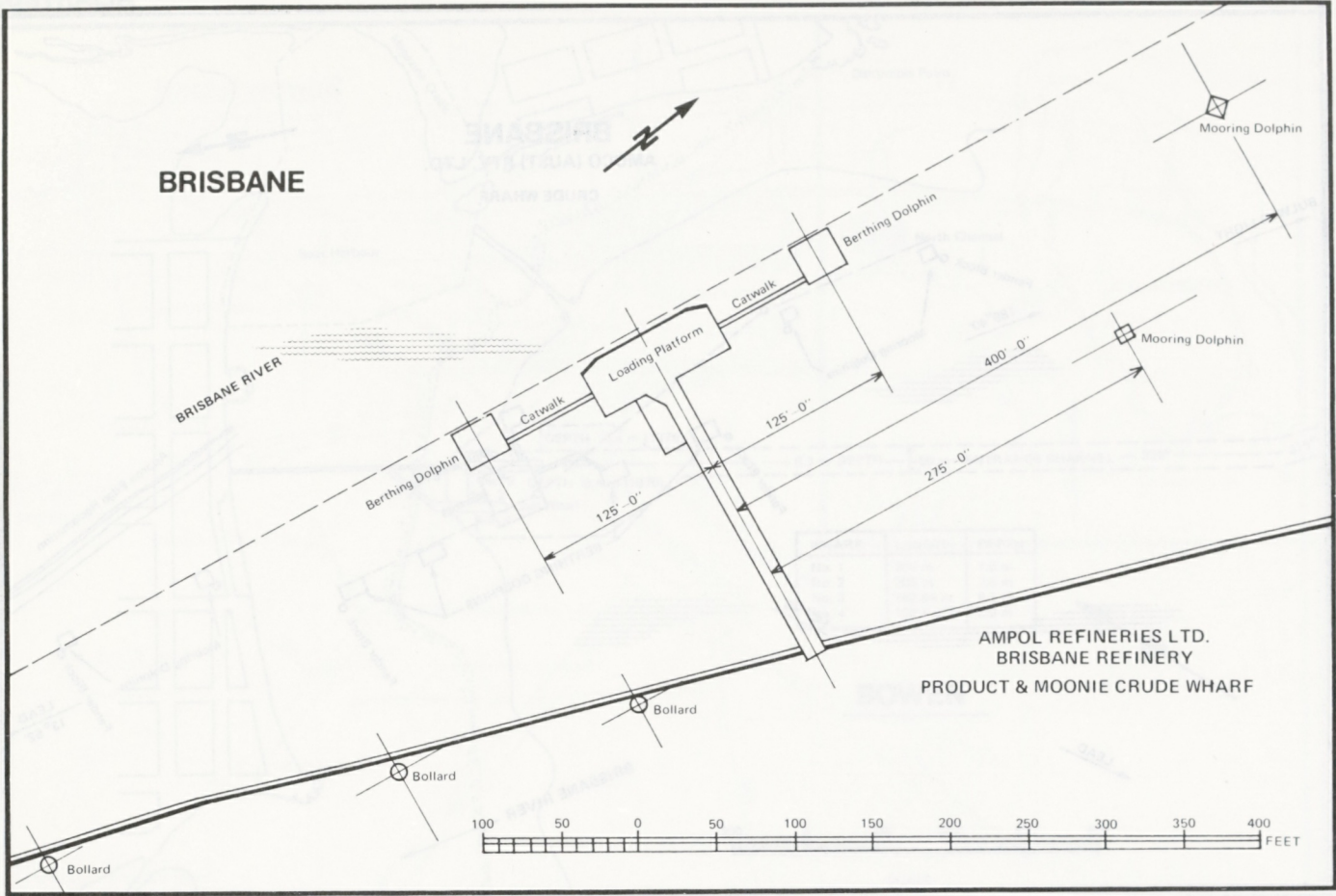


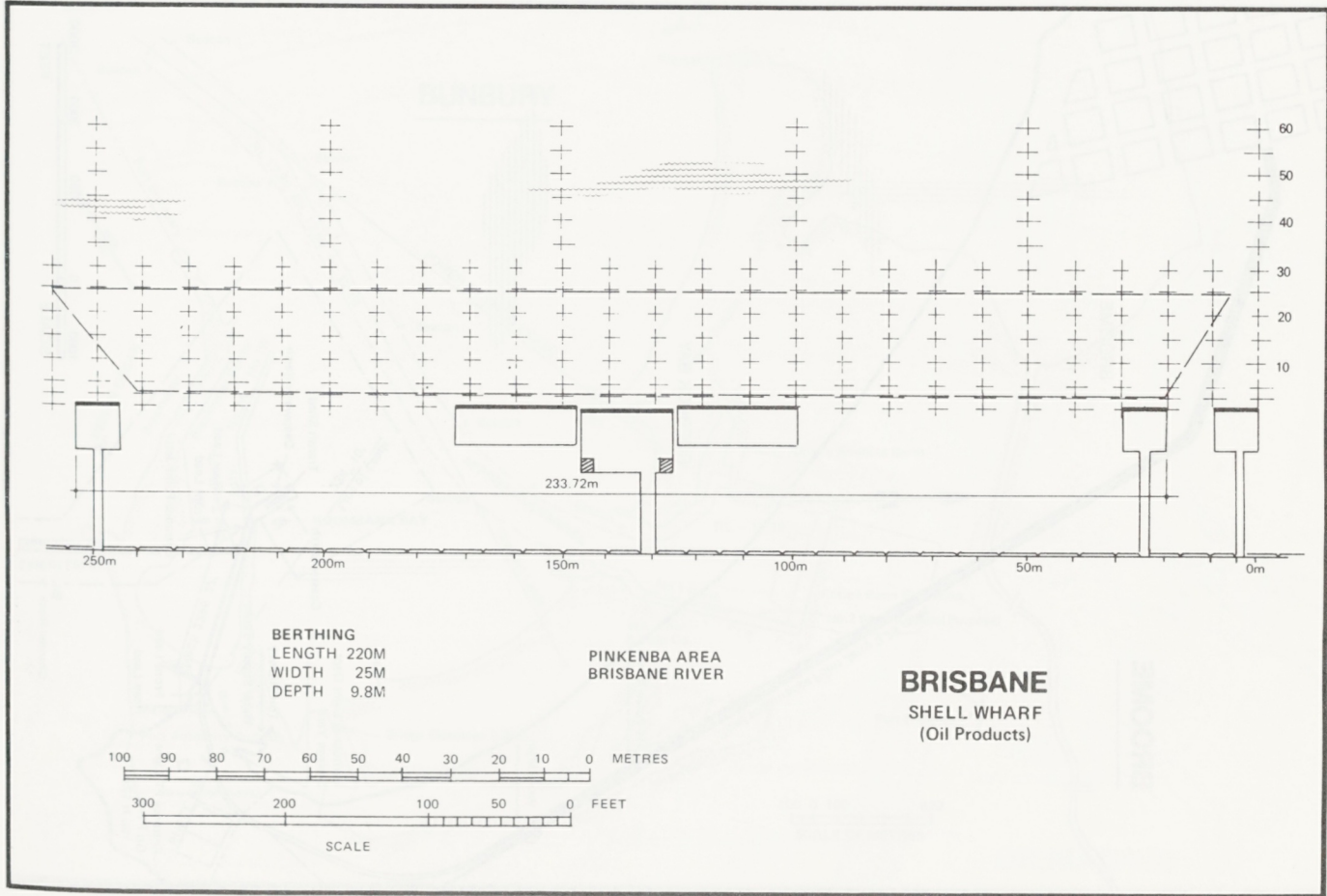
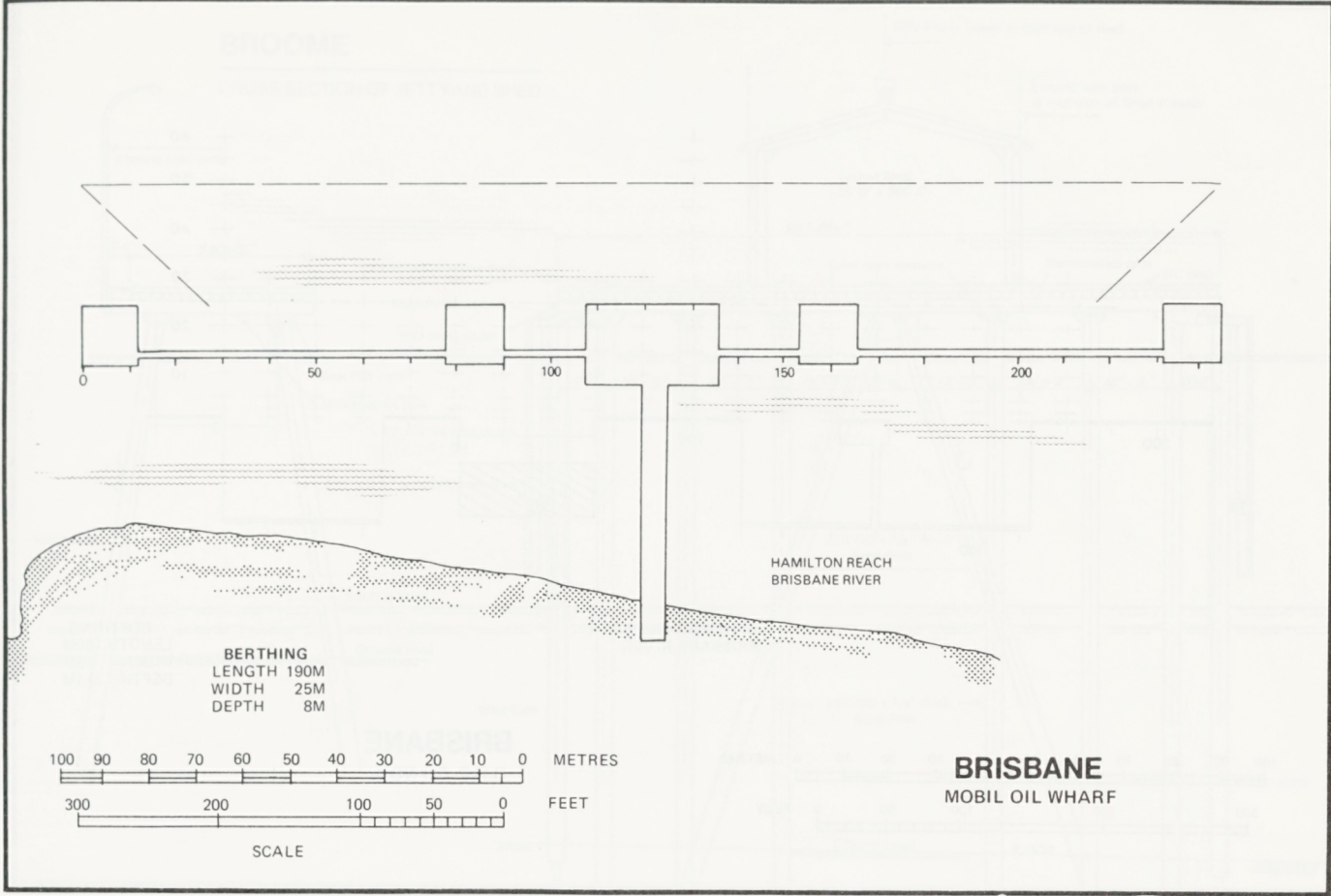
BRISBANE
AMOCO (AUST) PTY. LTD.
CRUDE WHARF

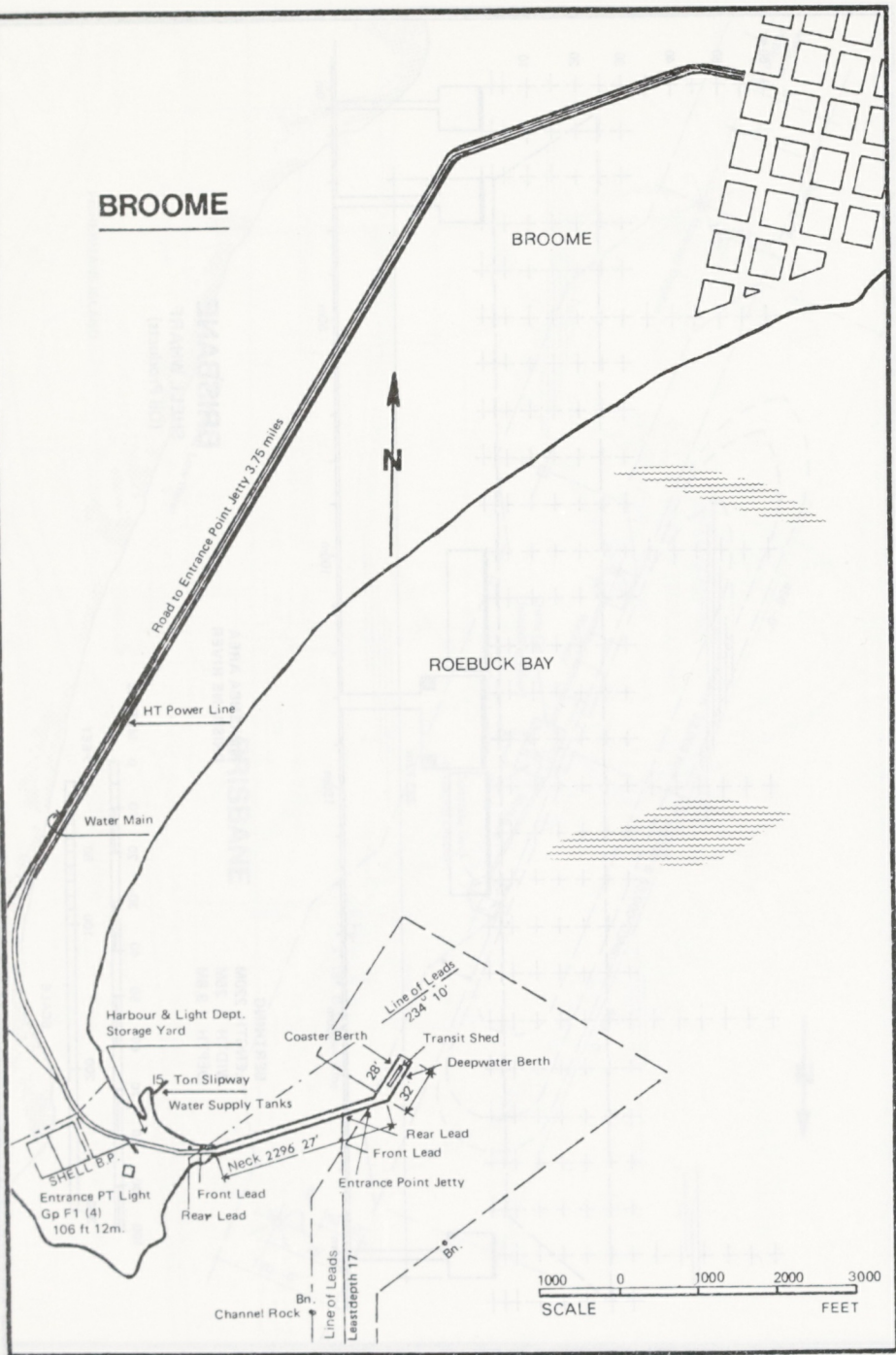
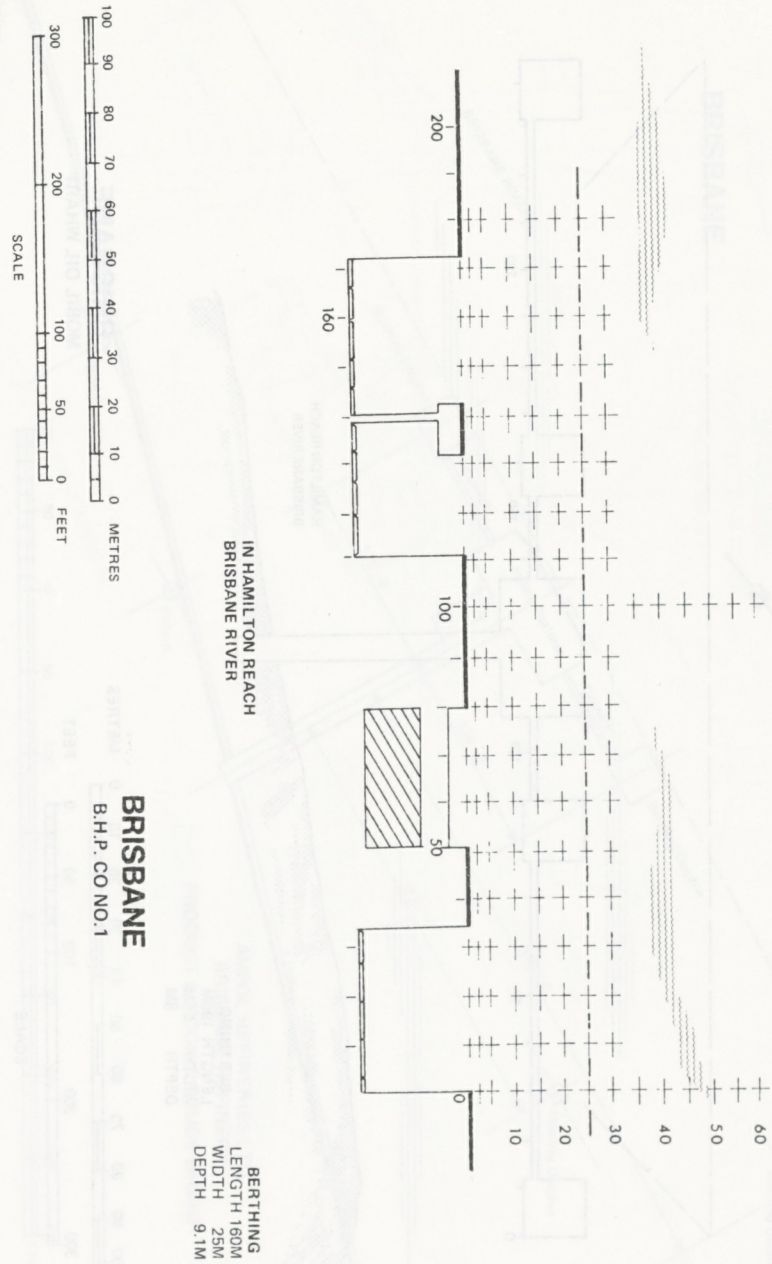


BRISBANE
AMOCO AUSTRALIA PTY. LTD
Products Terminal – Bulwer Island



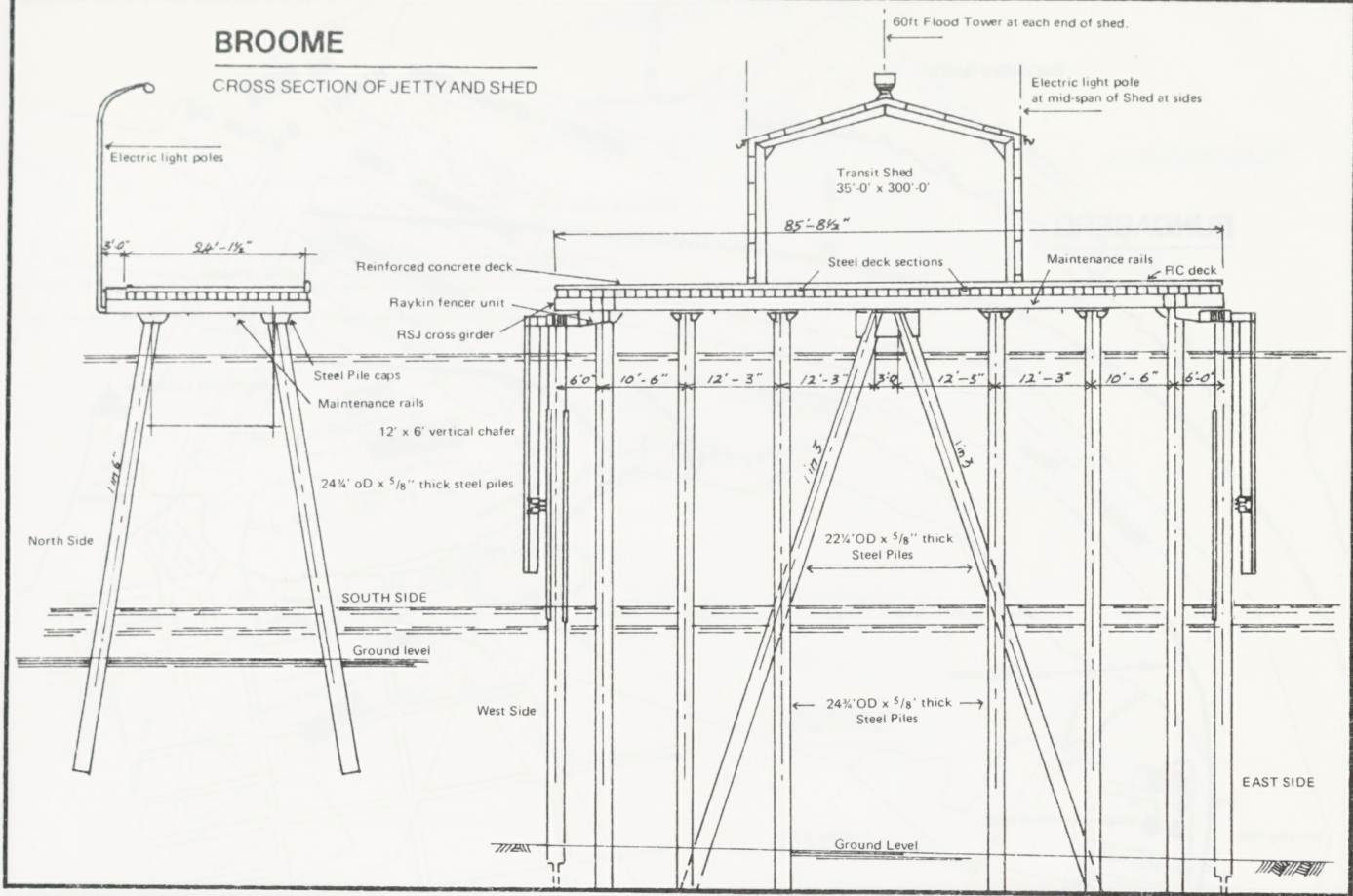




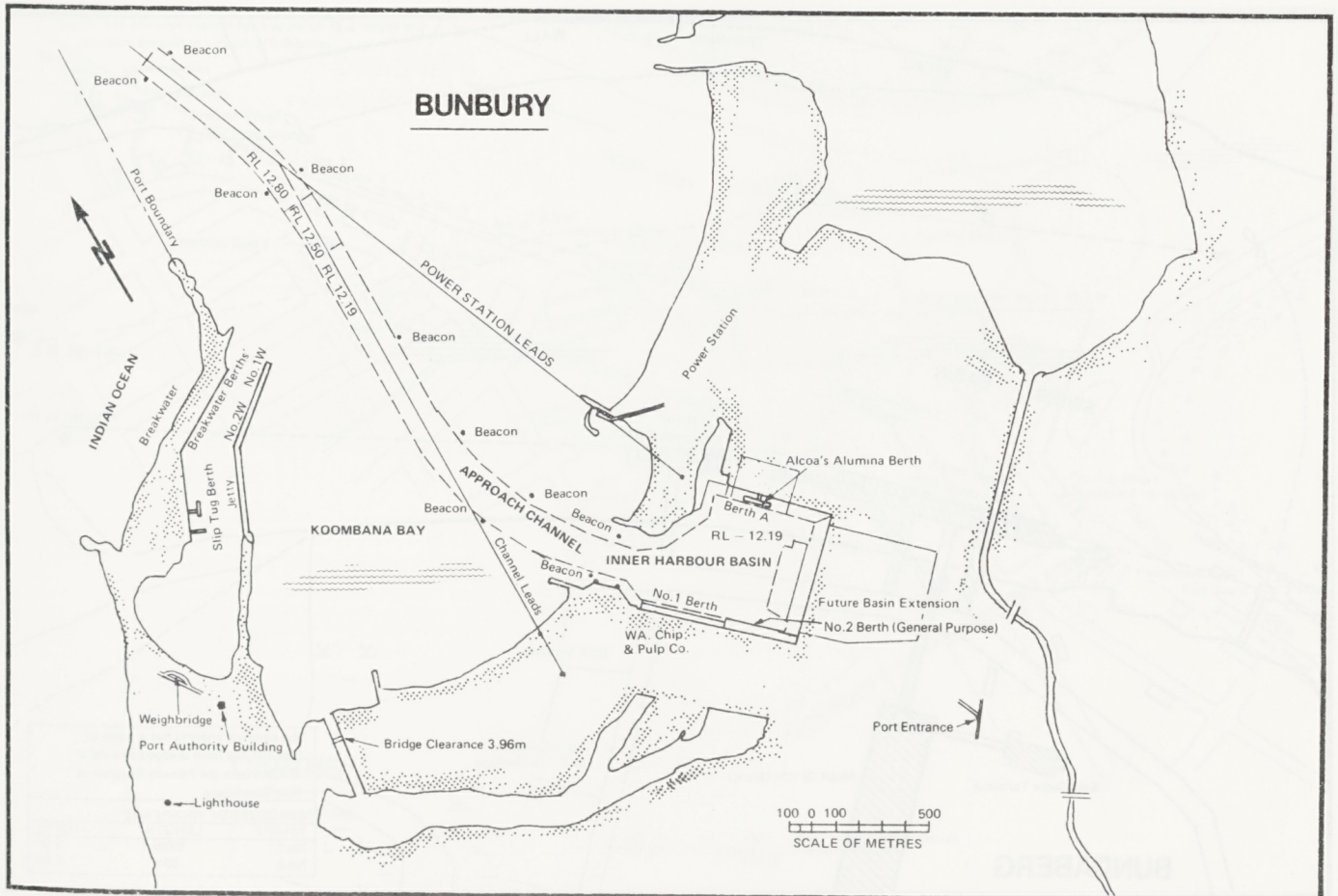


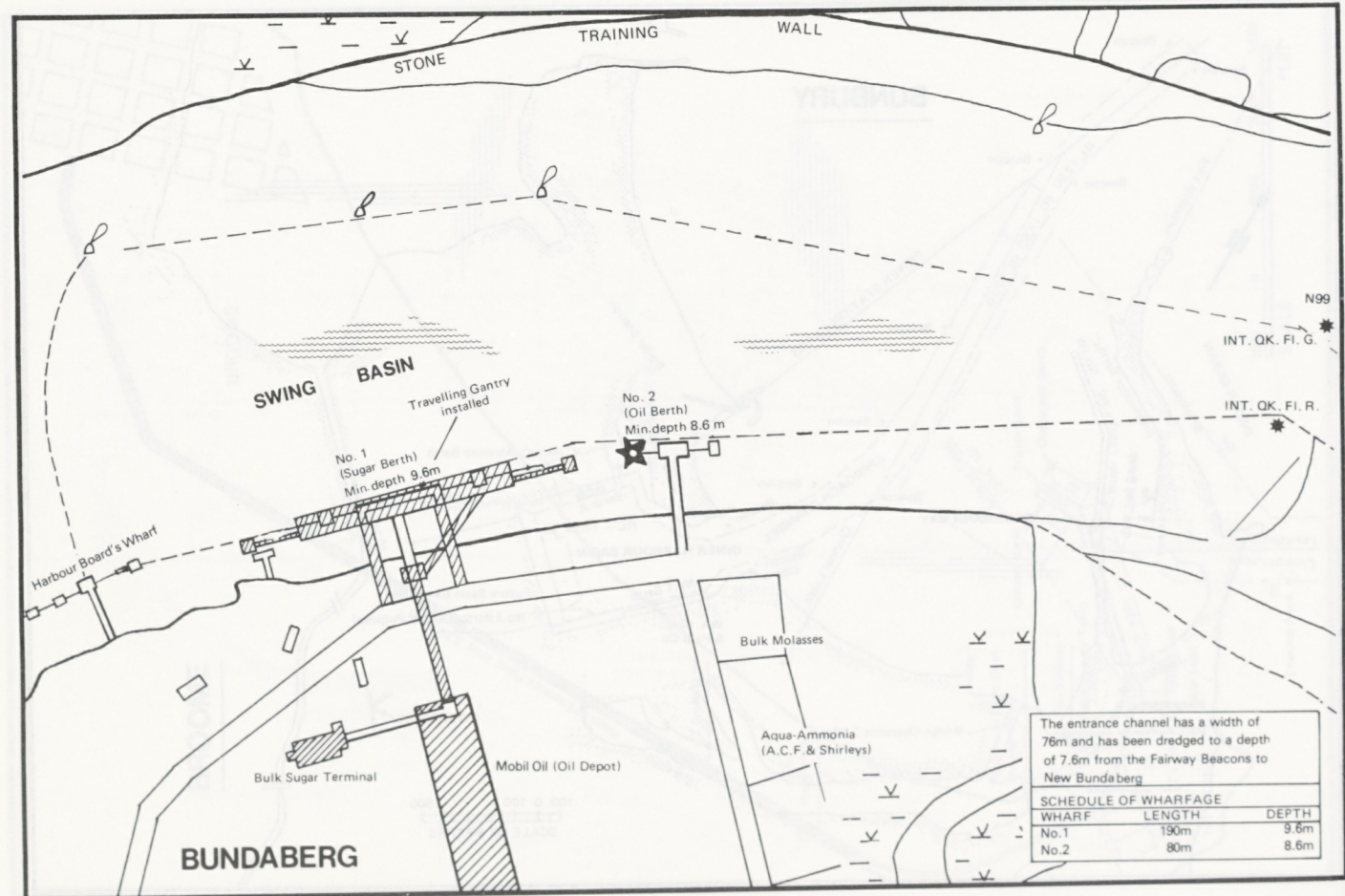
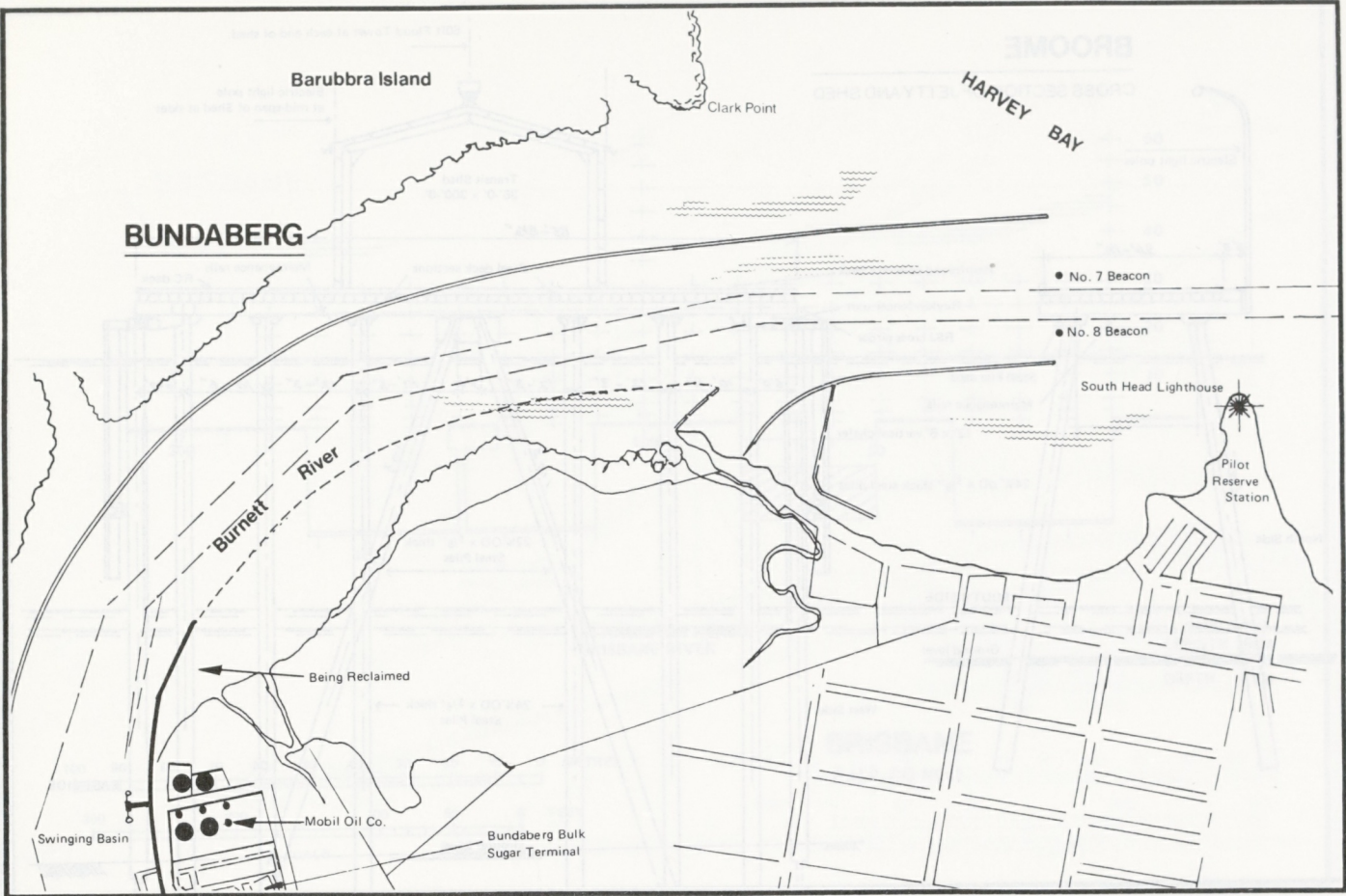
BROOME

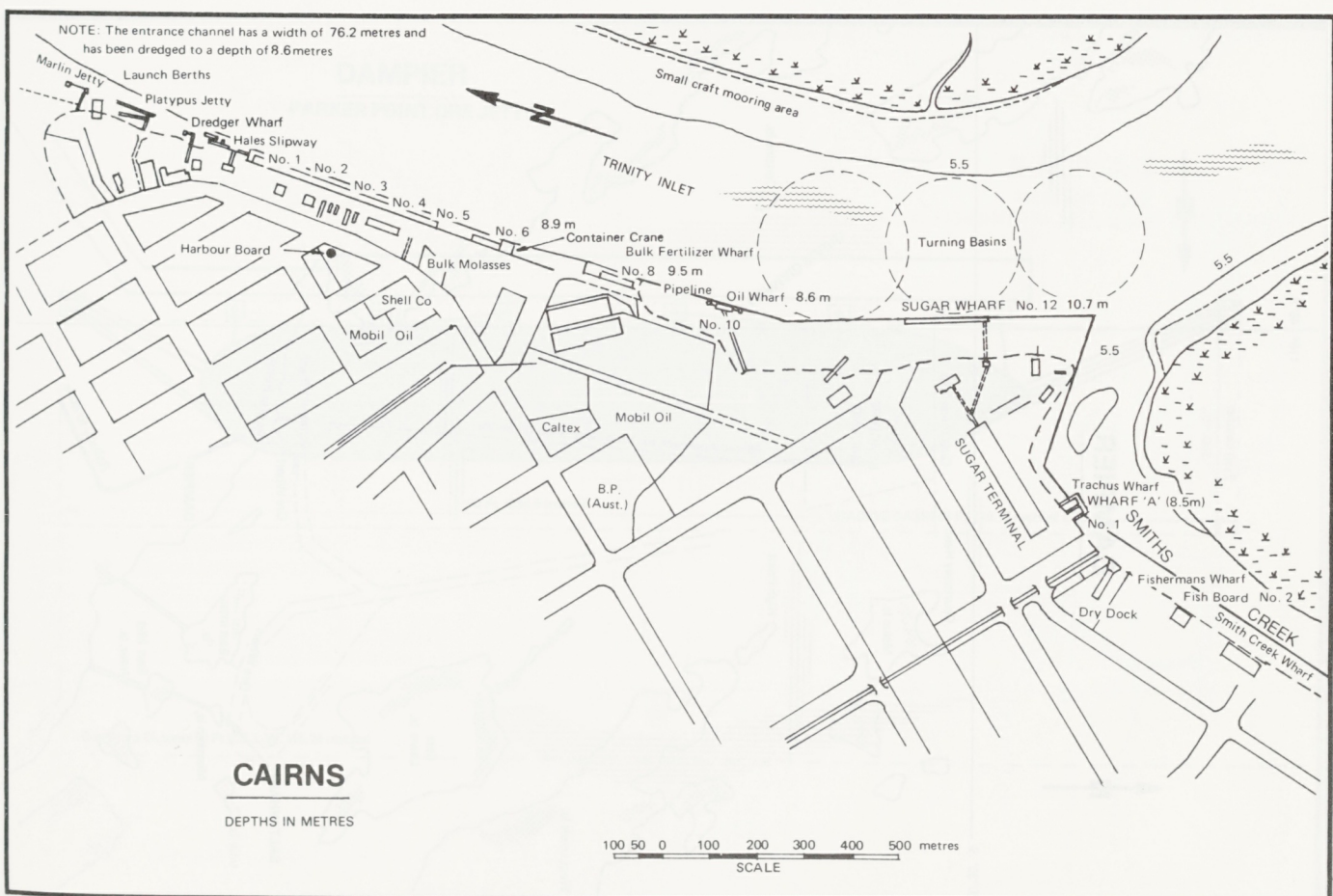
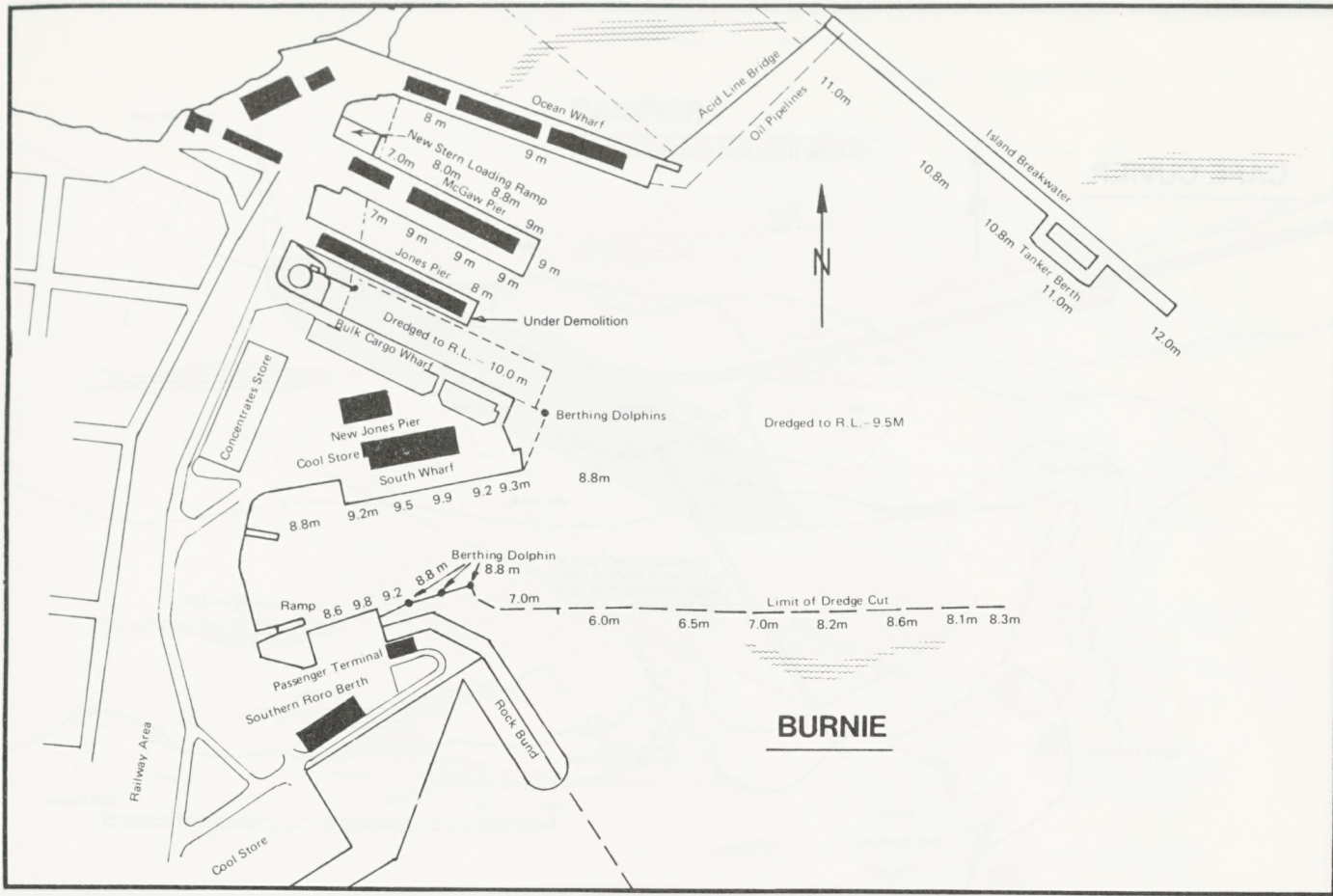
CROSS SECTION OF JETTY AND SHED

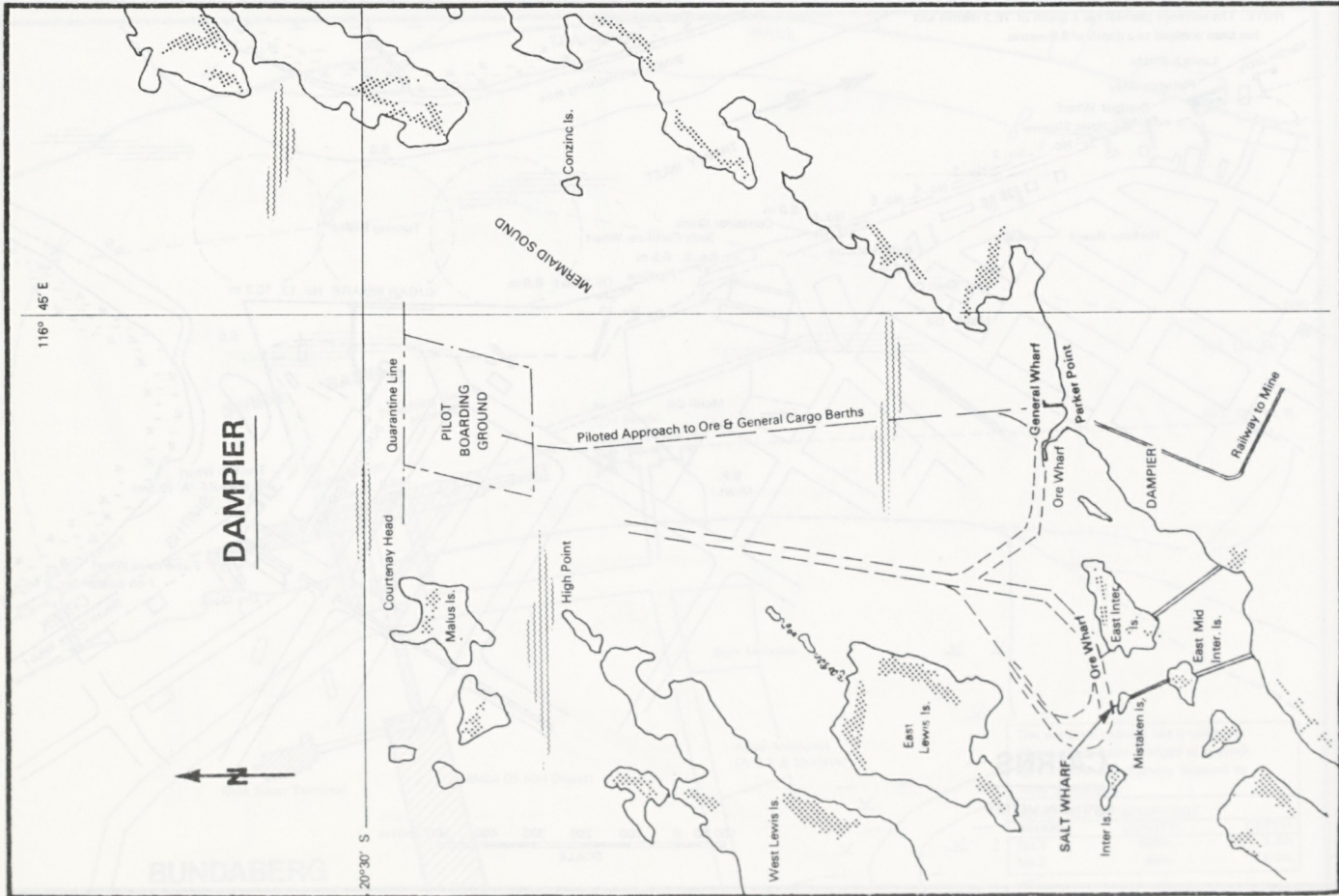
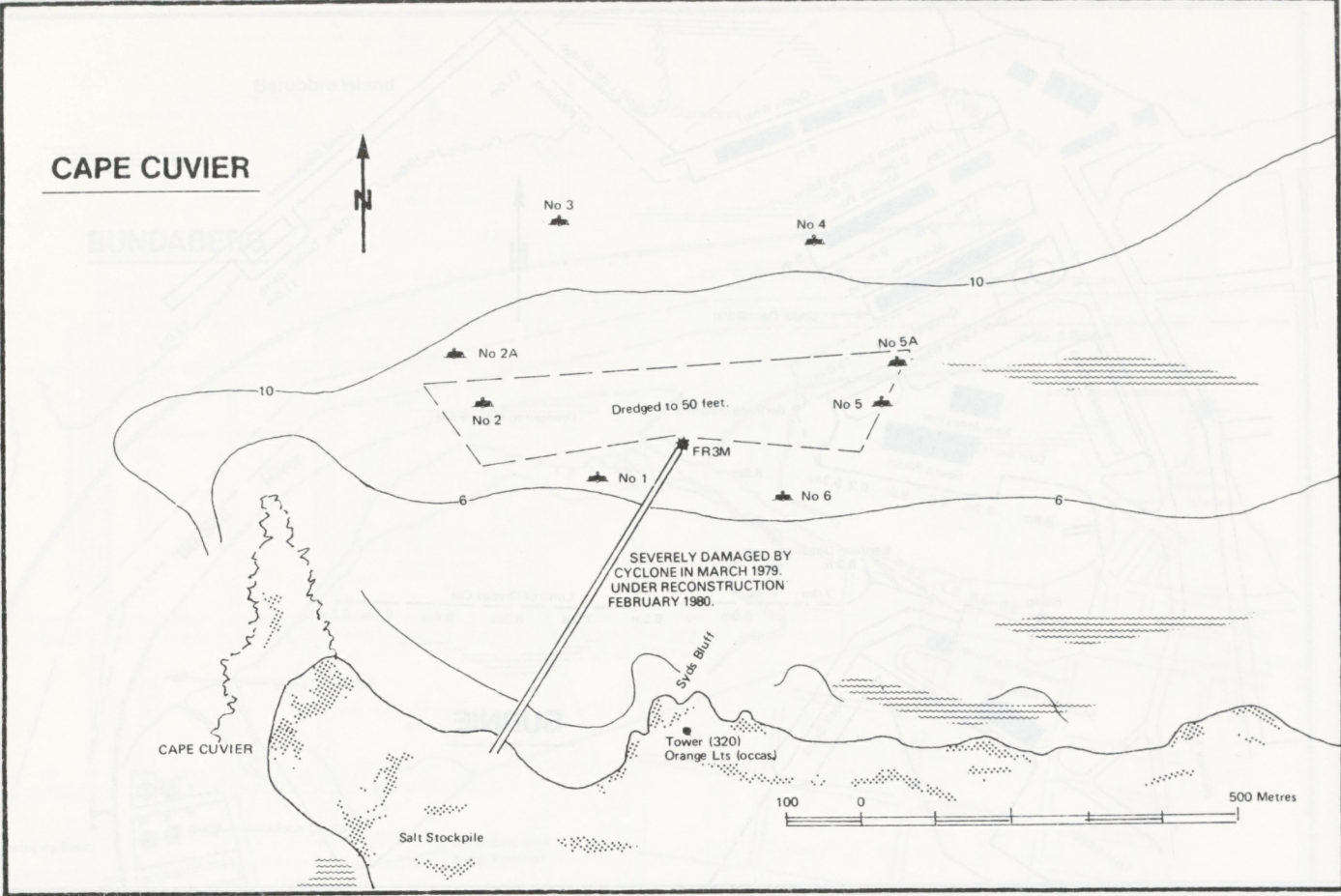


BUNBURY









Mooring Buoy

DAMPIER

PORT DAMPIER SERVICE WHARF

Railway

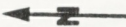
Mooring Buoy

20 000 DWT TANKER

BASIN 27 Ft. I.S.L.W.

600'-0"

125'-0"



DAMPIER
PARKER POINT ORE JETTY

100,000 DWT ORE CARRIER

1164 Ft. (354.8 metres)

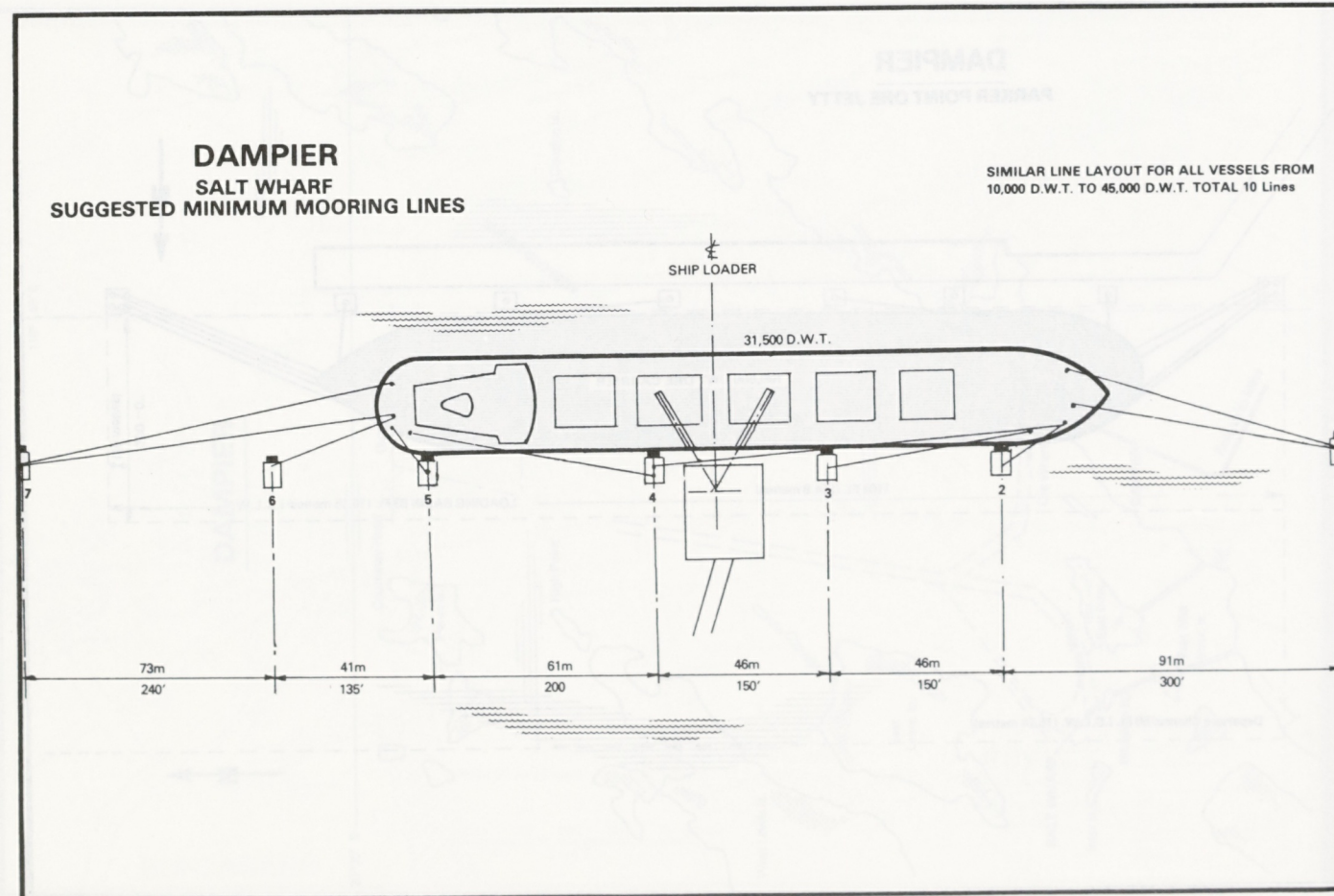
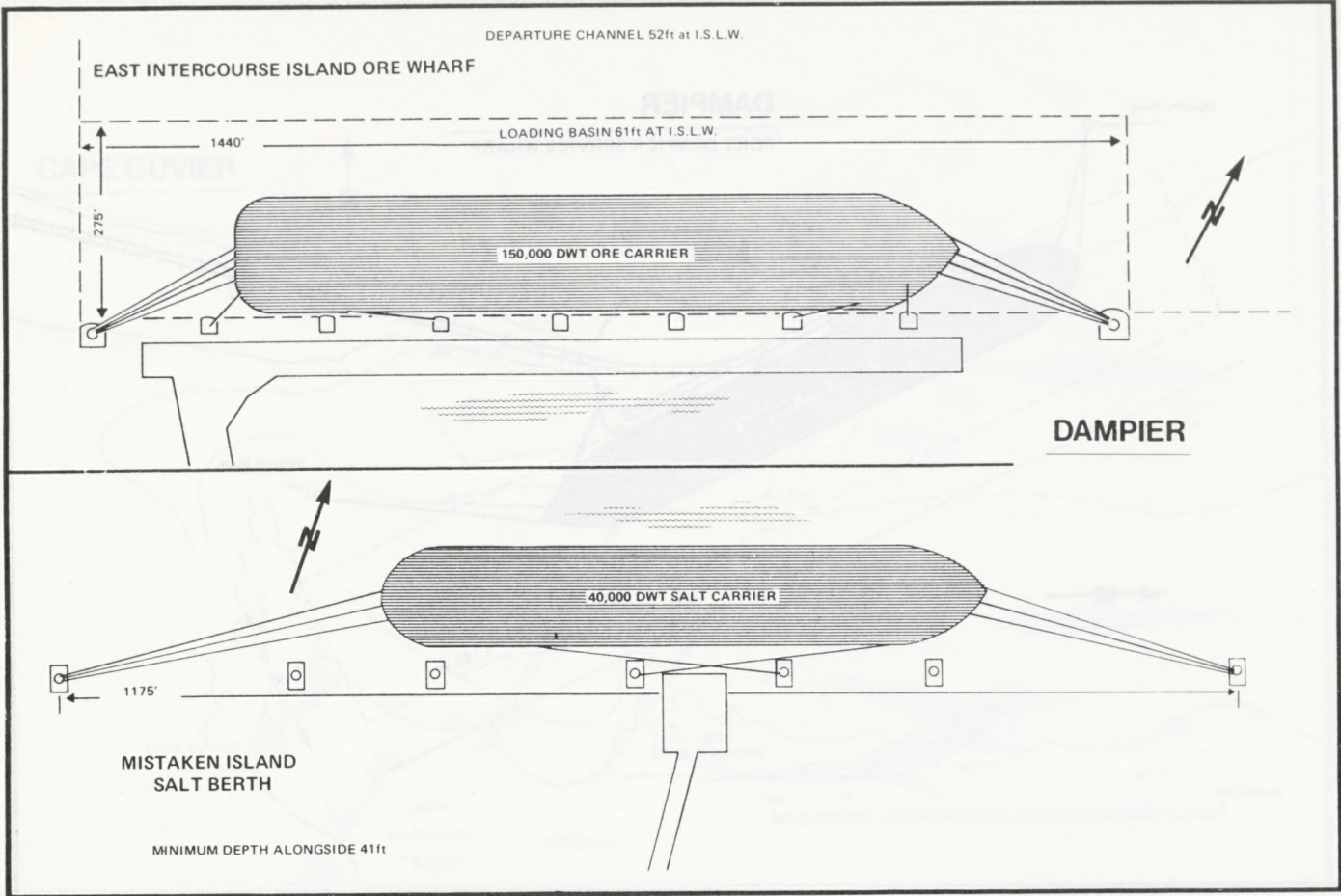
LOADING BASIN 53 Ft. (16.15 metres) I.S.L.W.

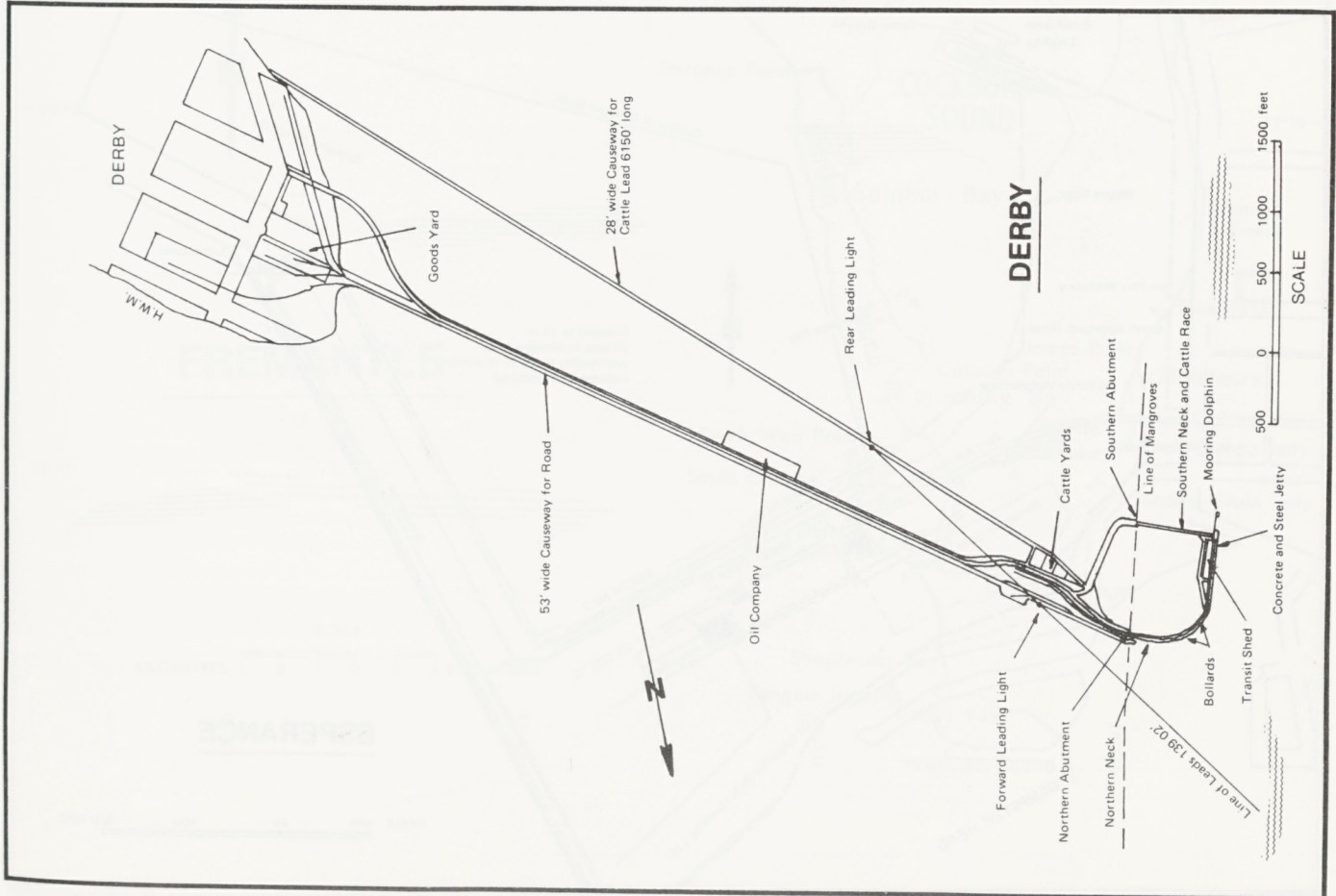
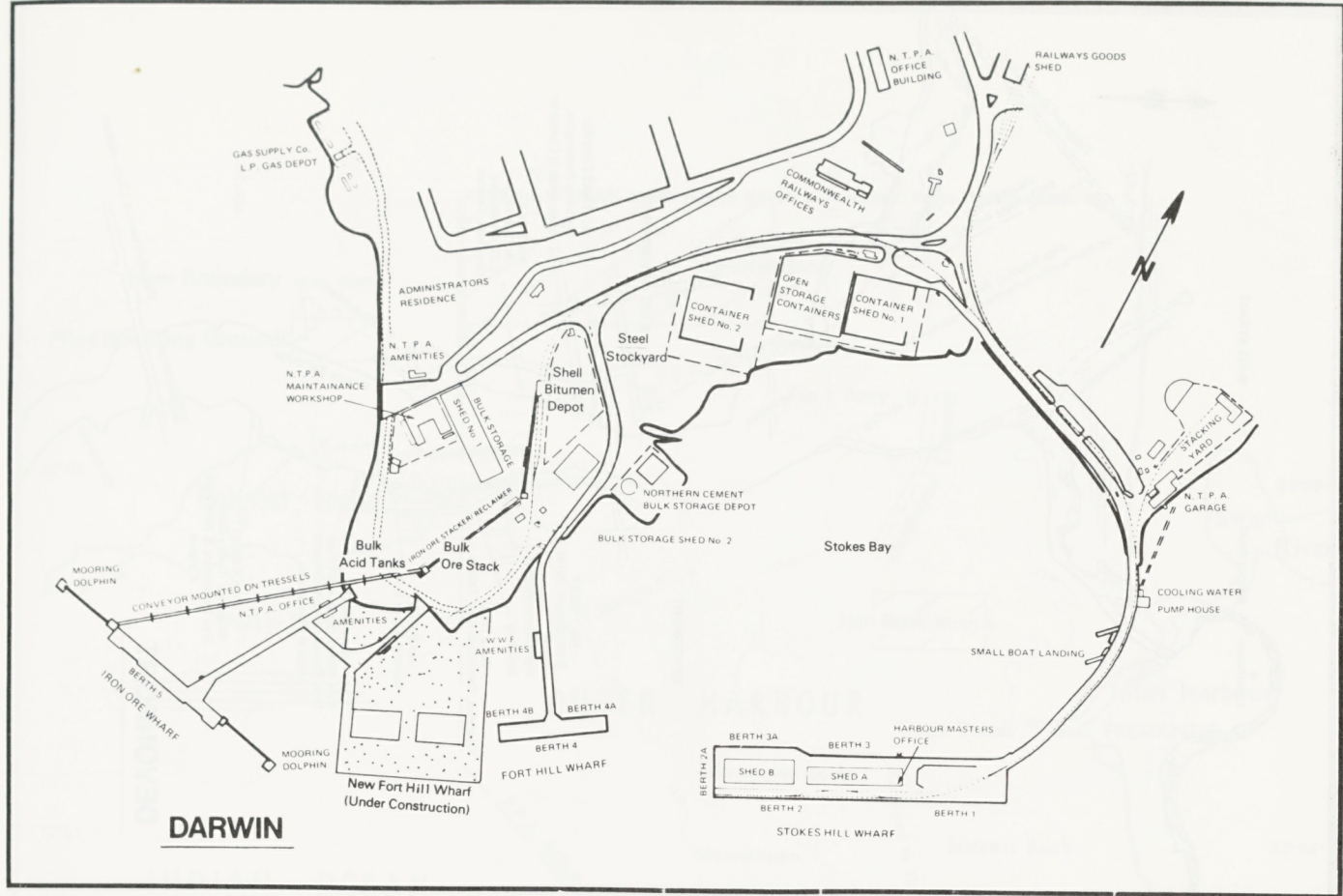
200'-0"

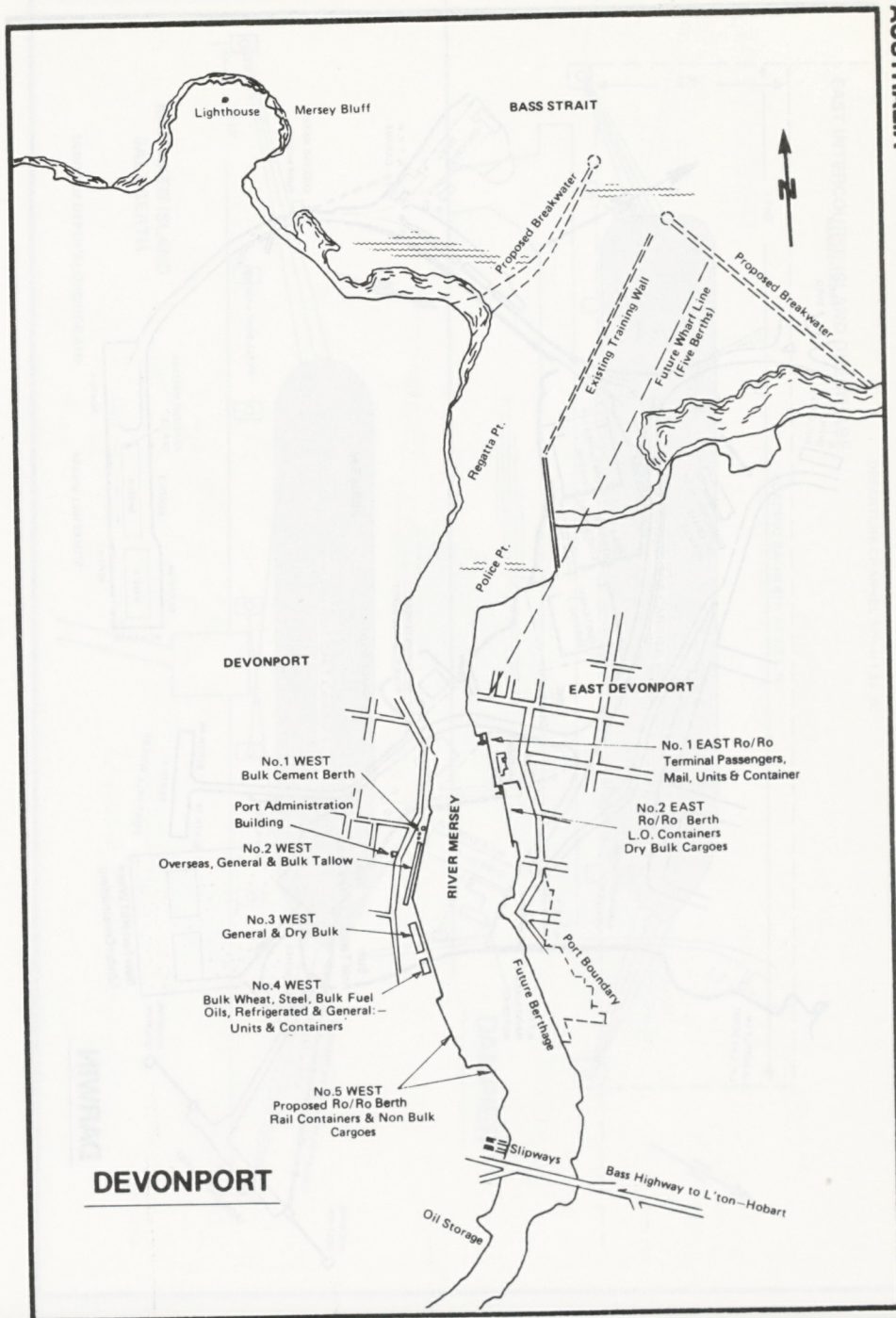
(16 metres)

Departure Channel 50 Ft. I.S.L.W. (15.24 metres)

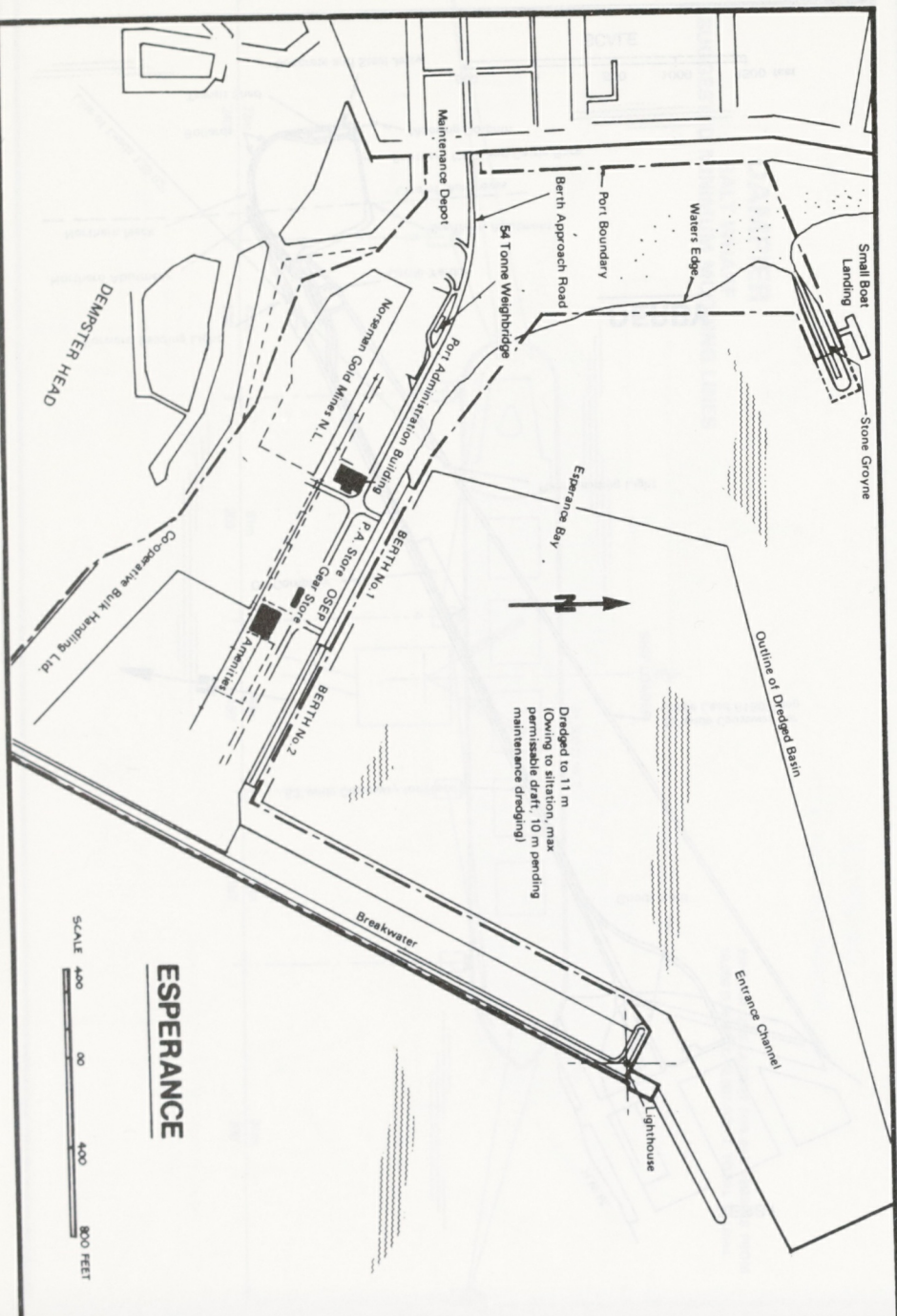




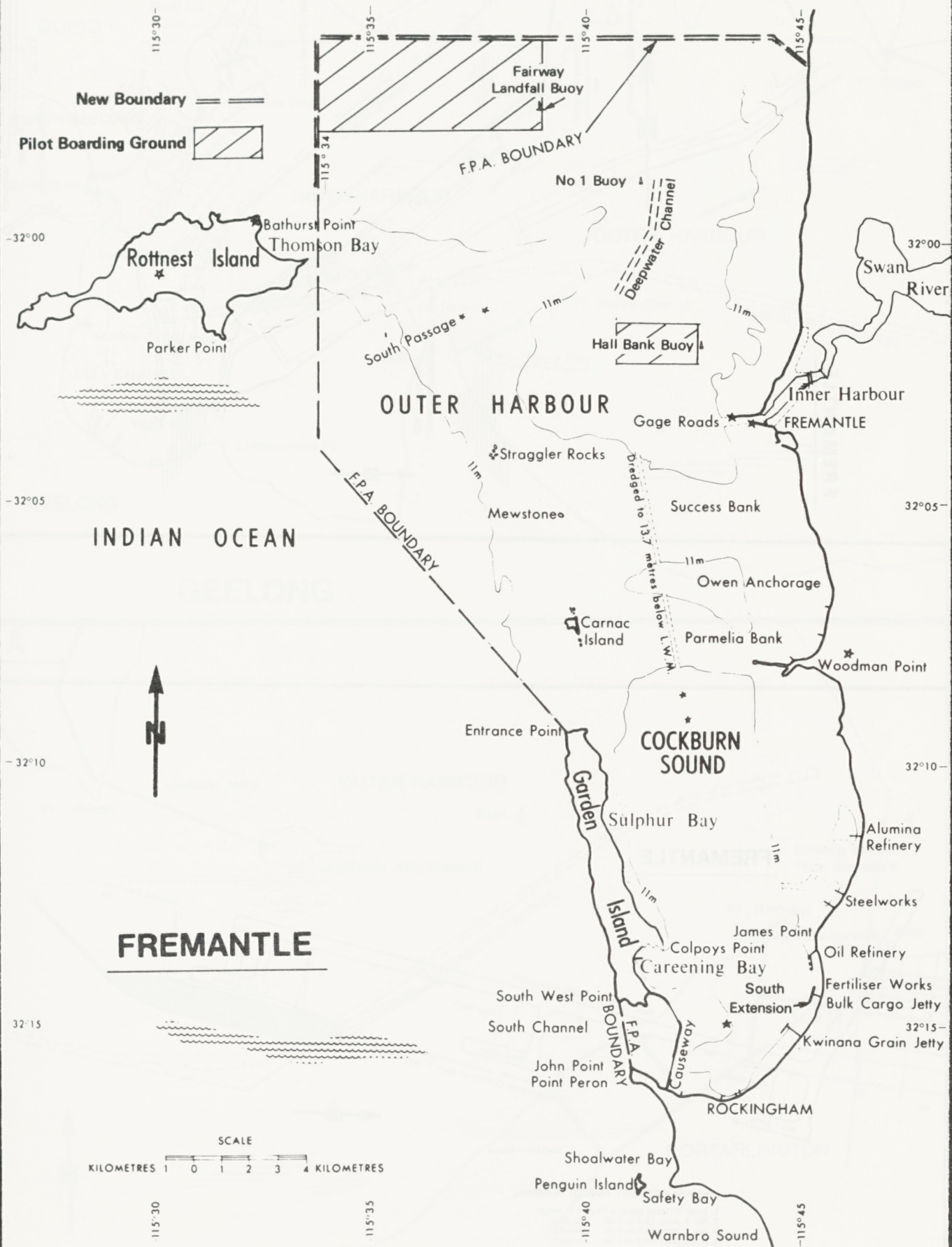


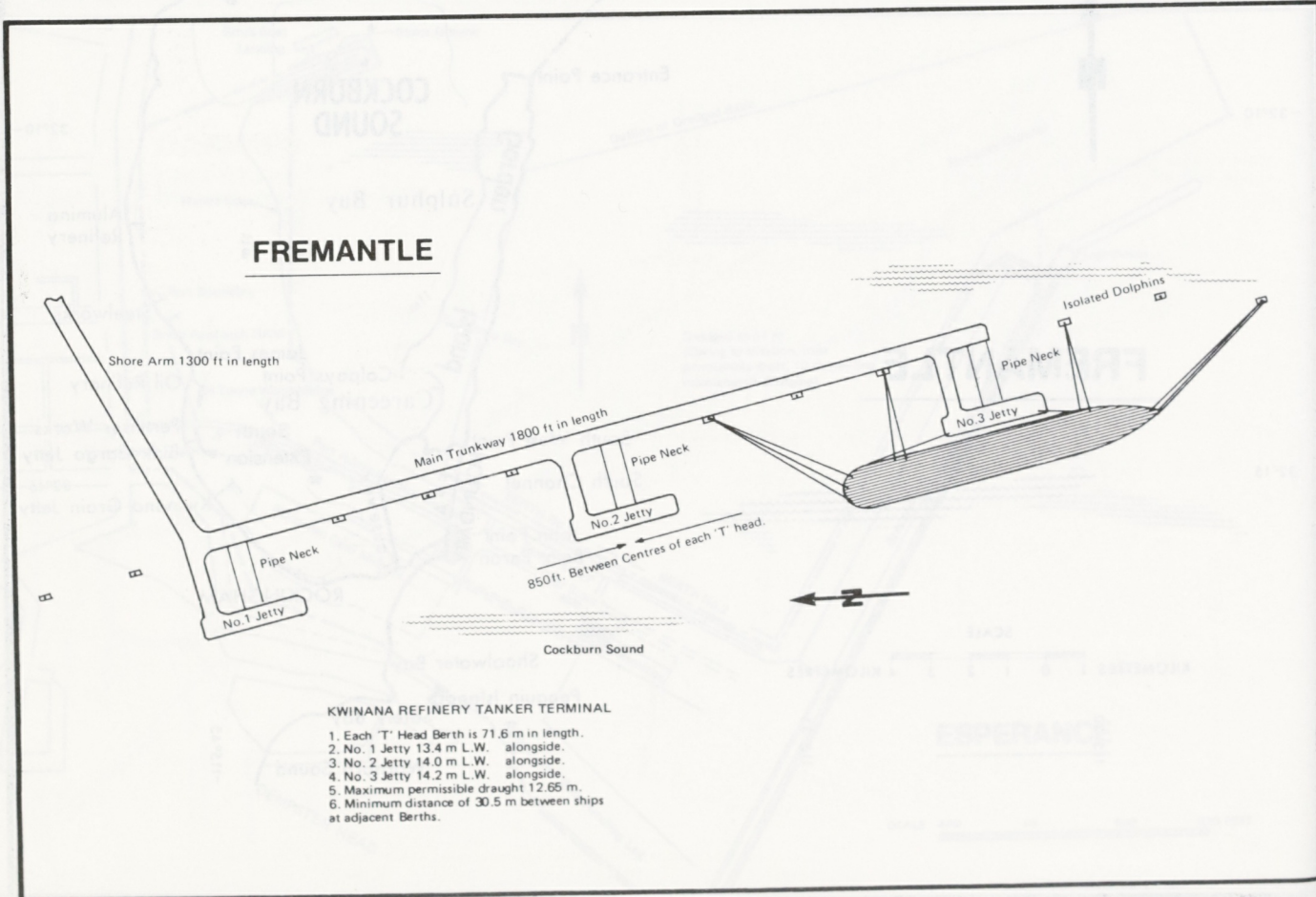
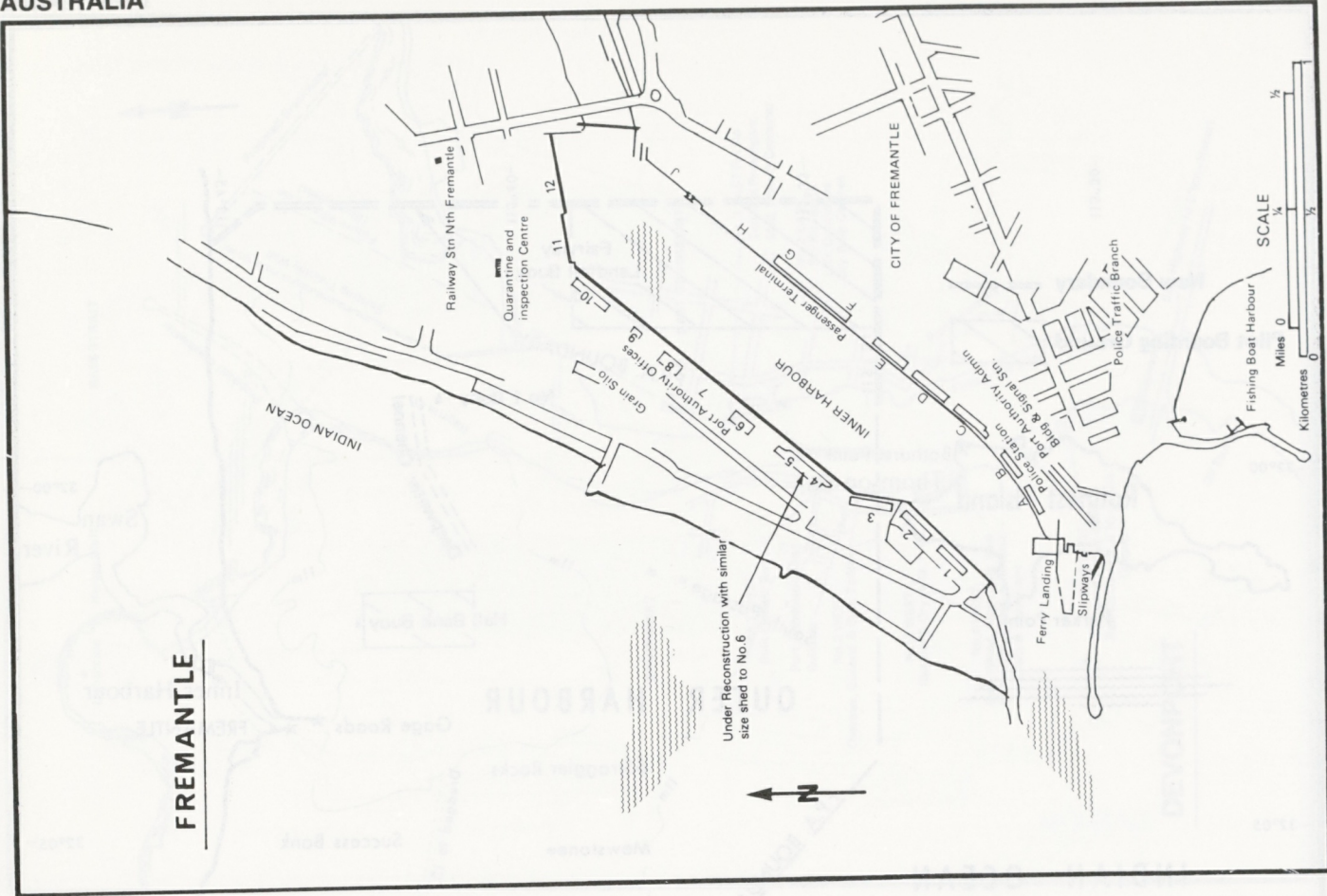


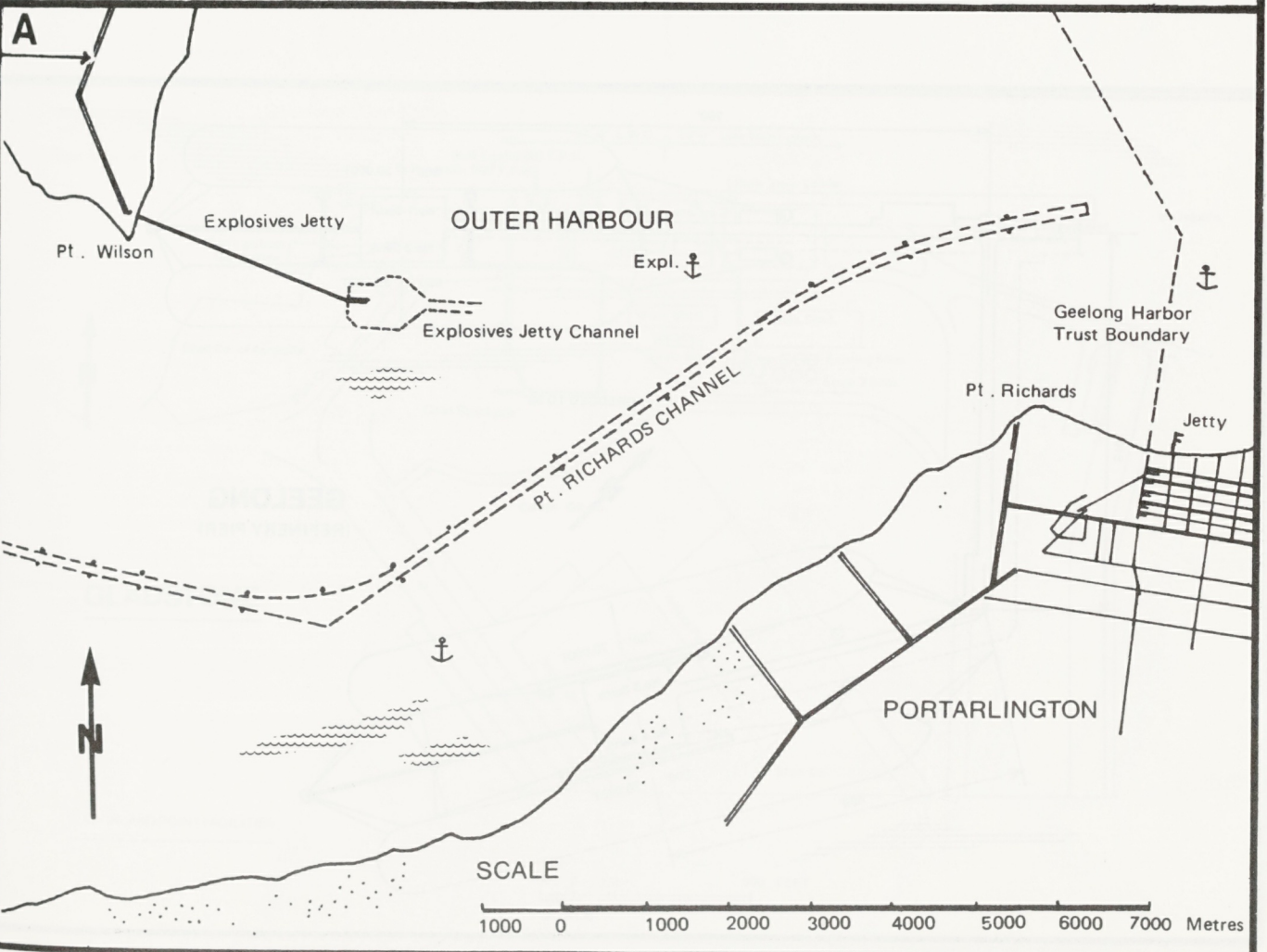
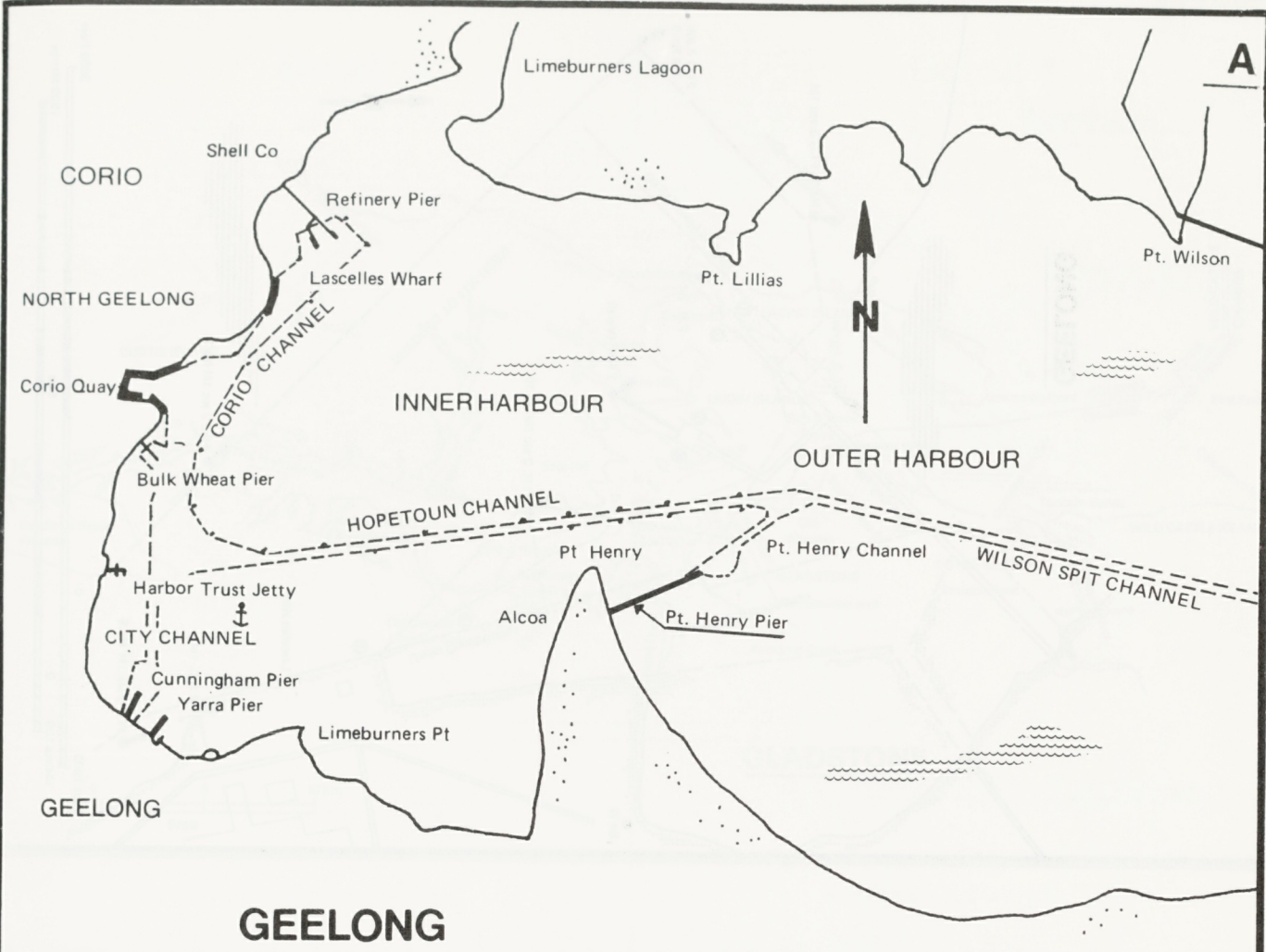
DEVONPORT

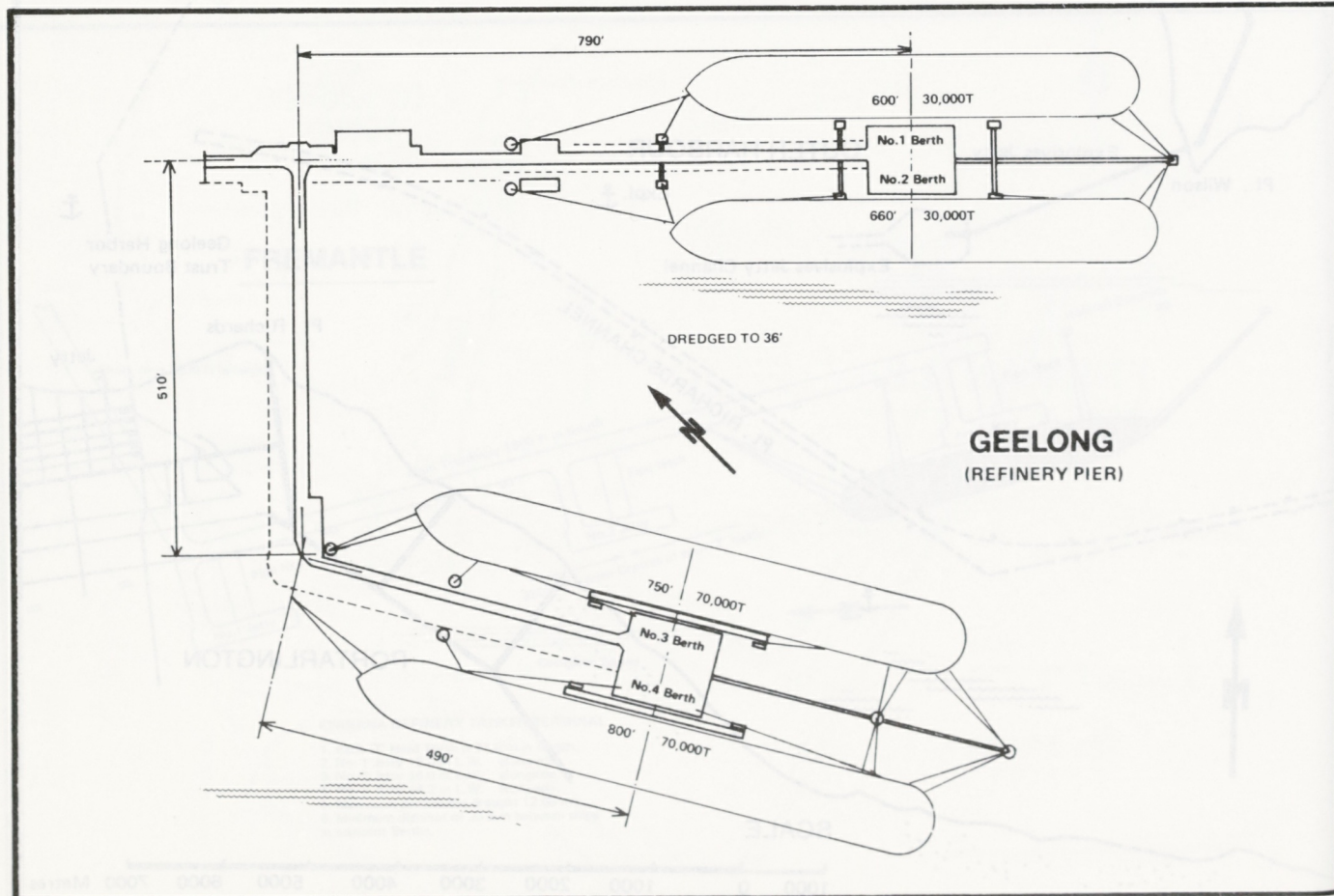
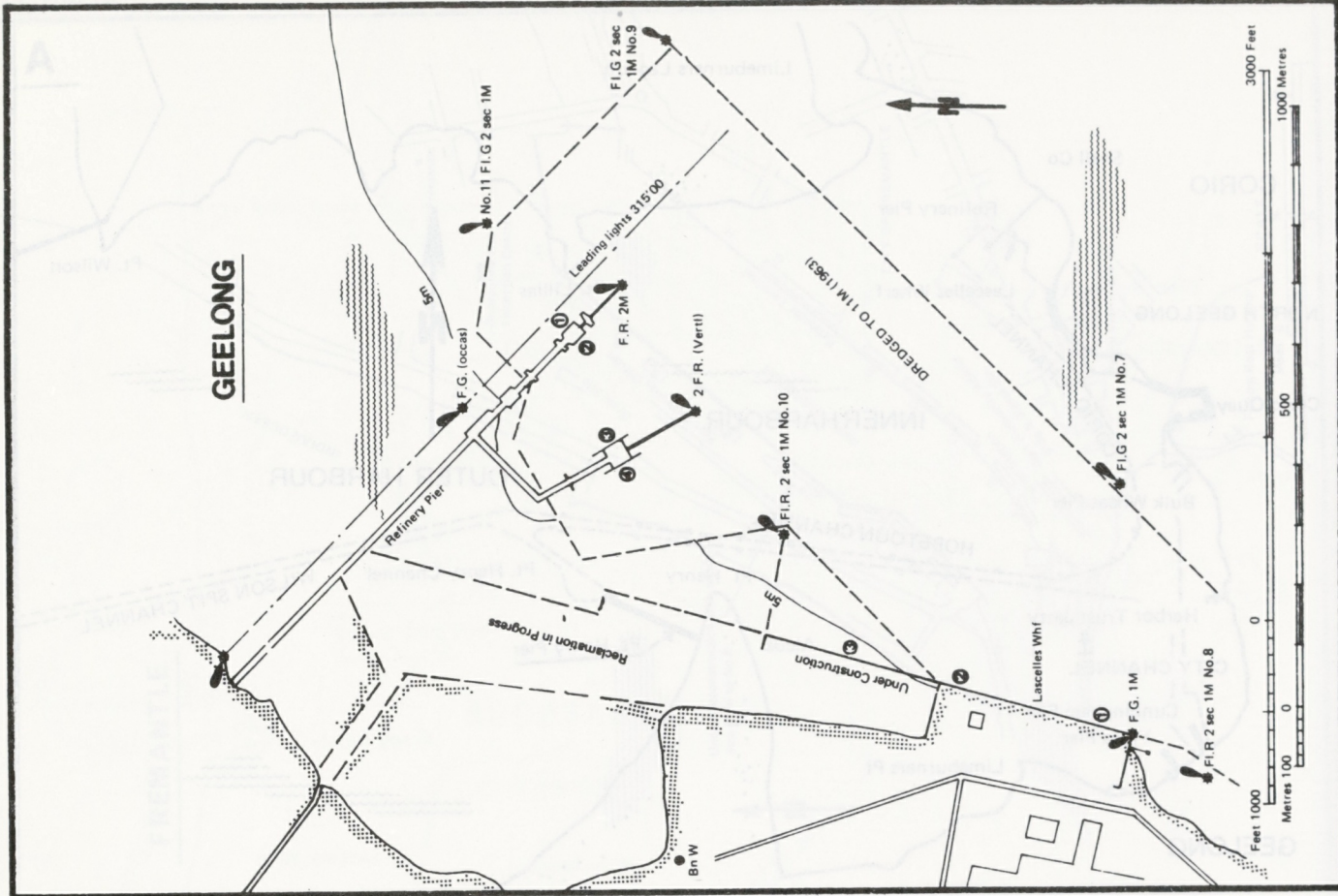


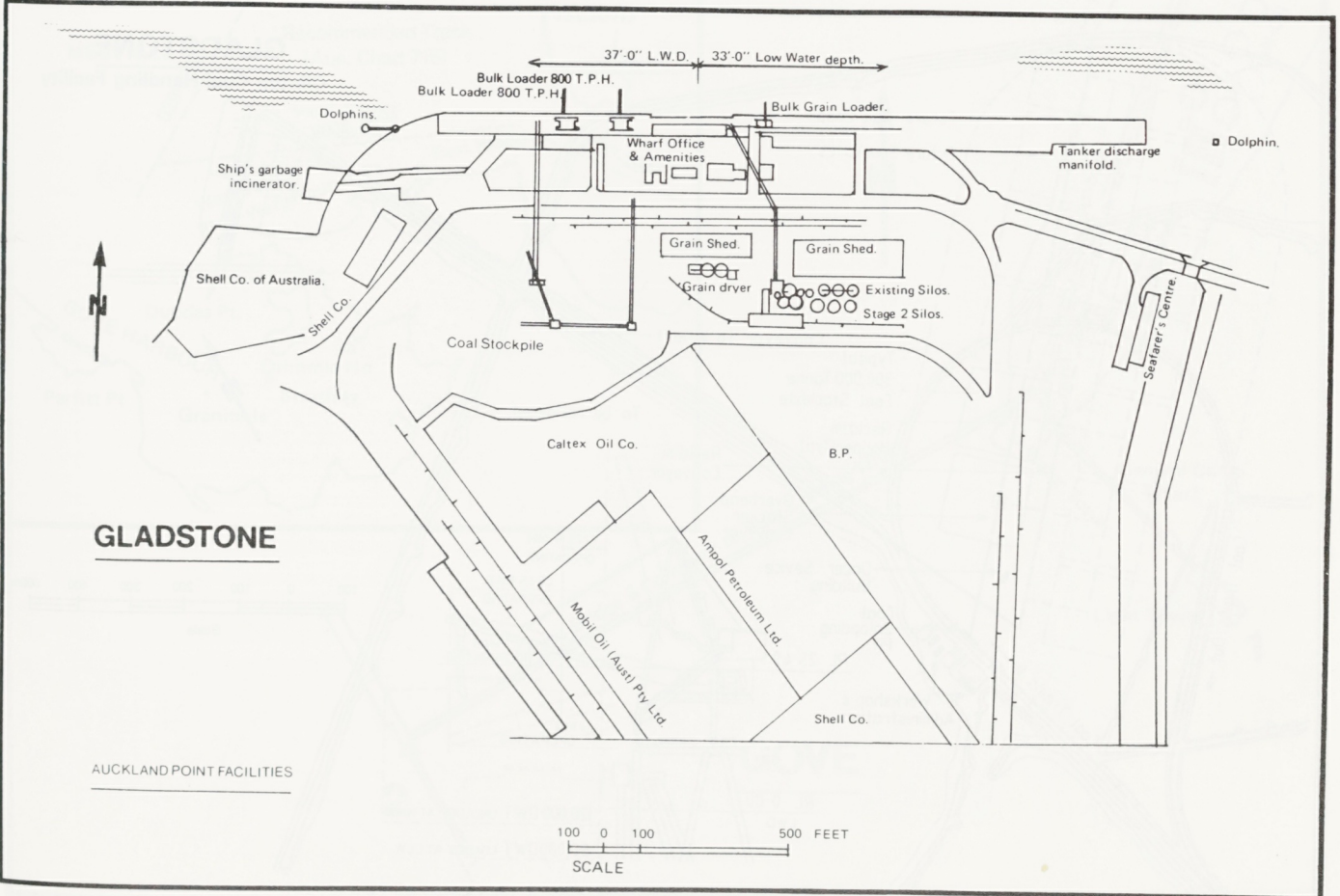
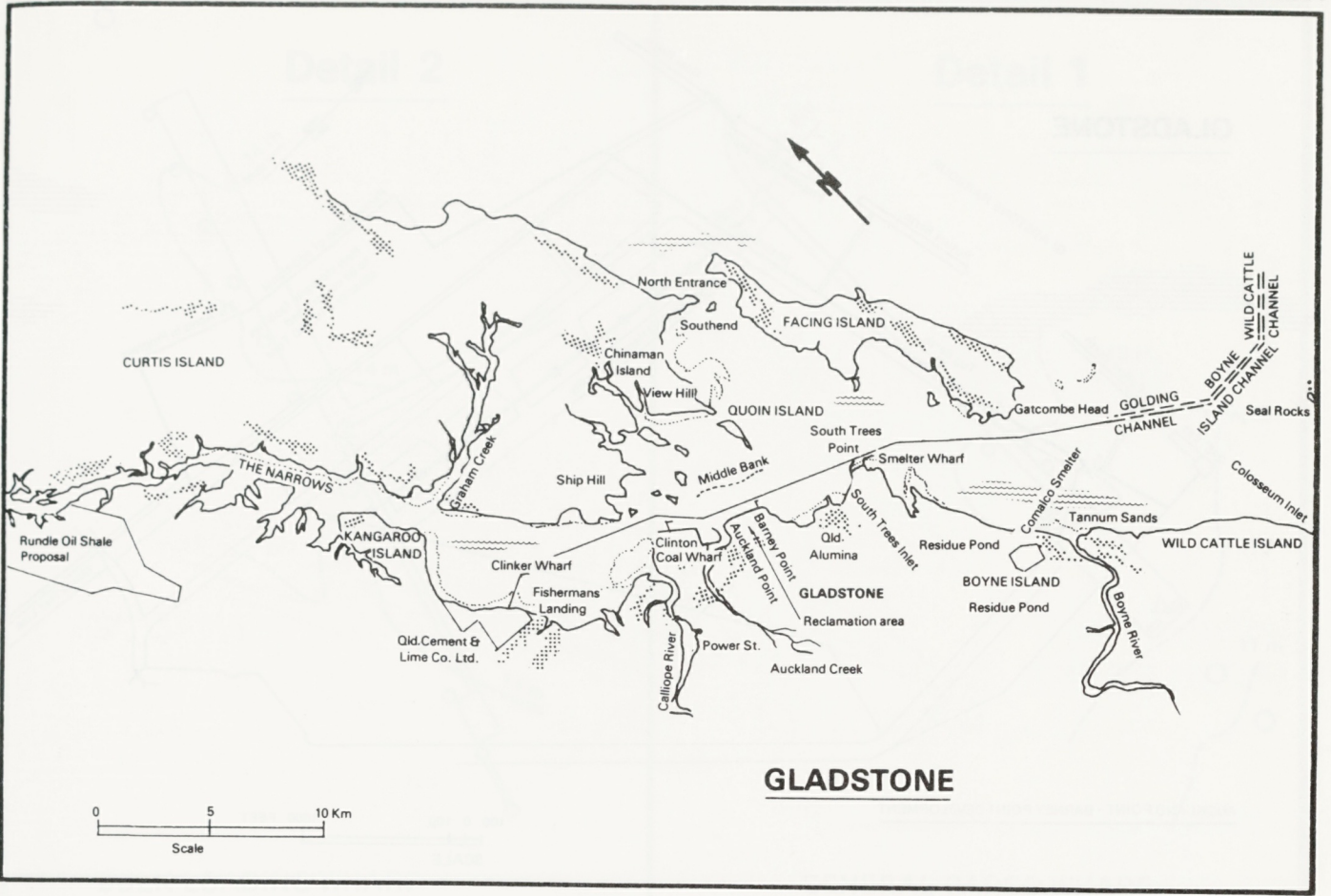
ESPERANCE

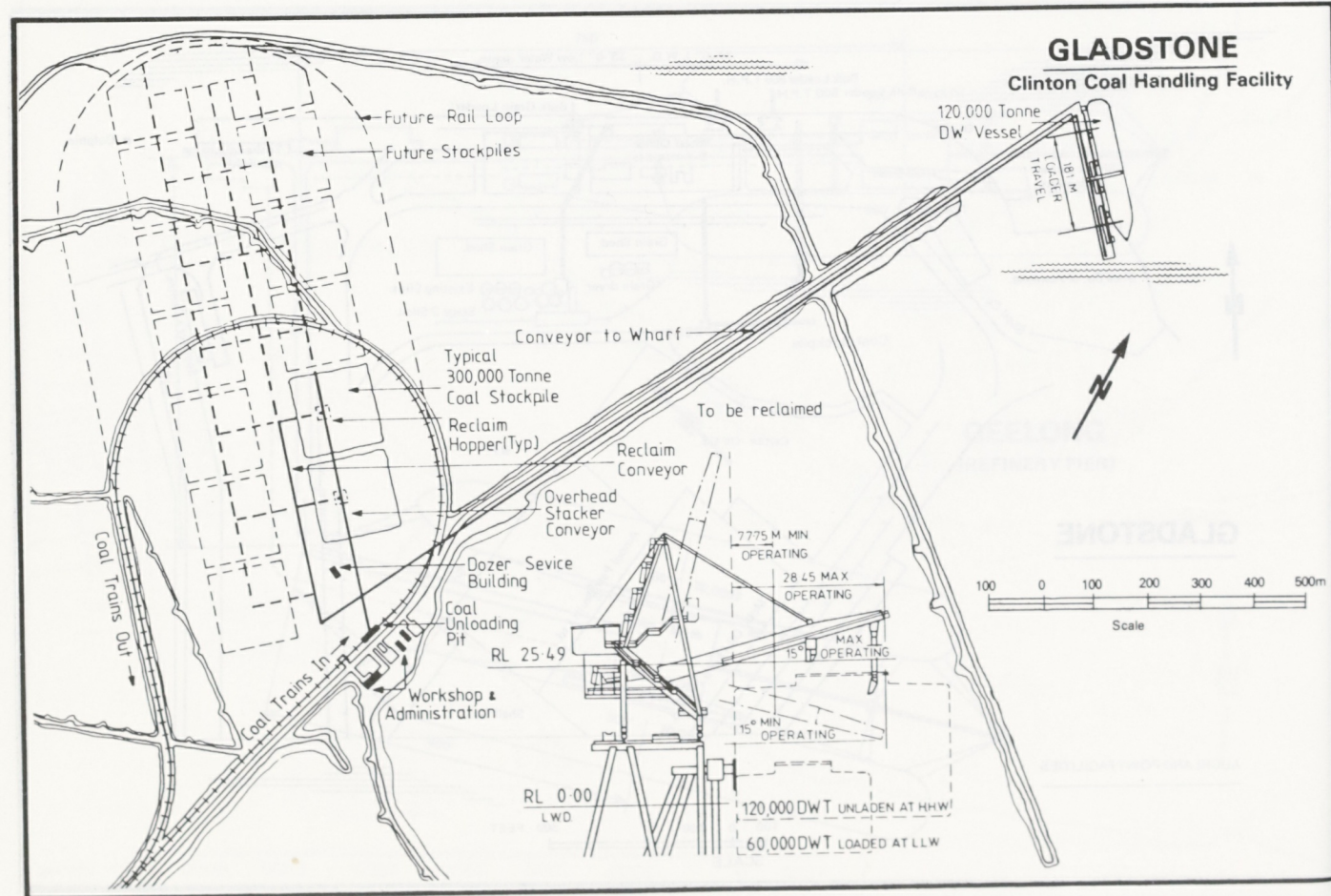
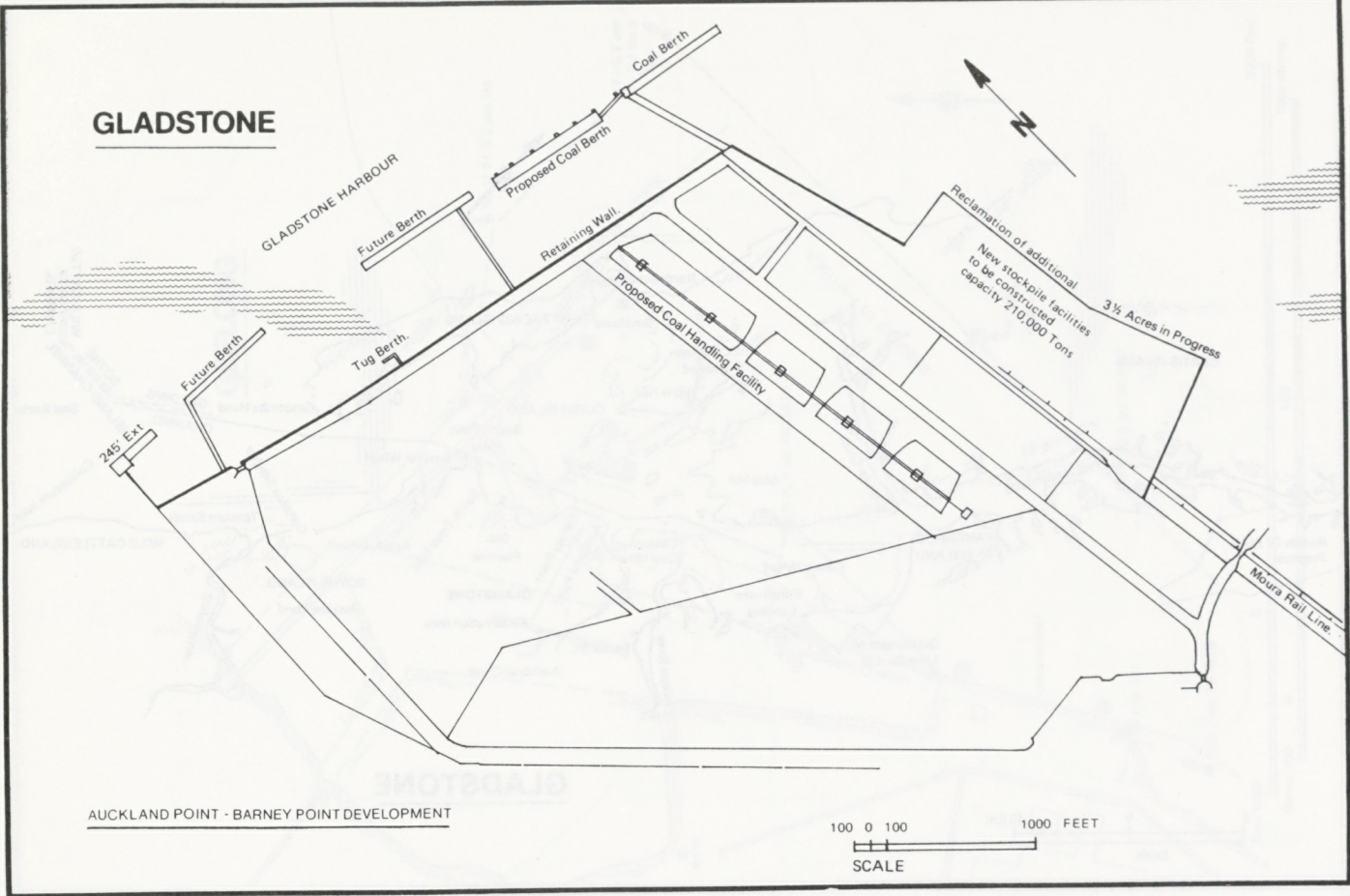




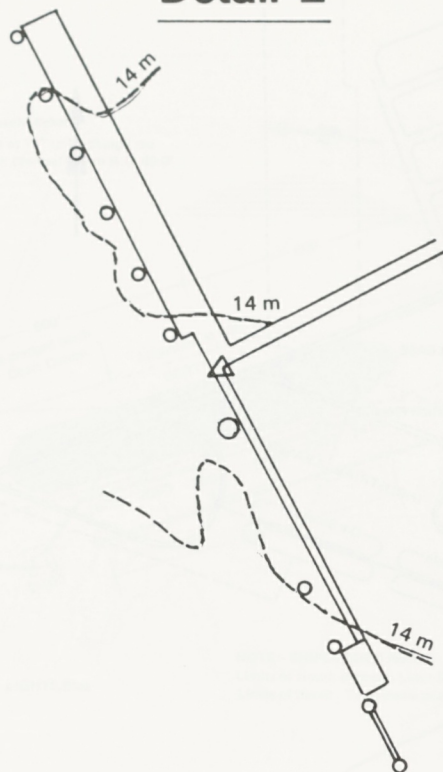






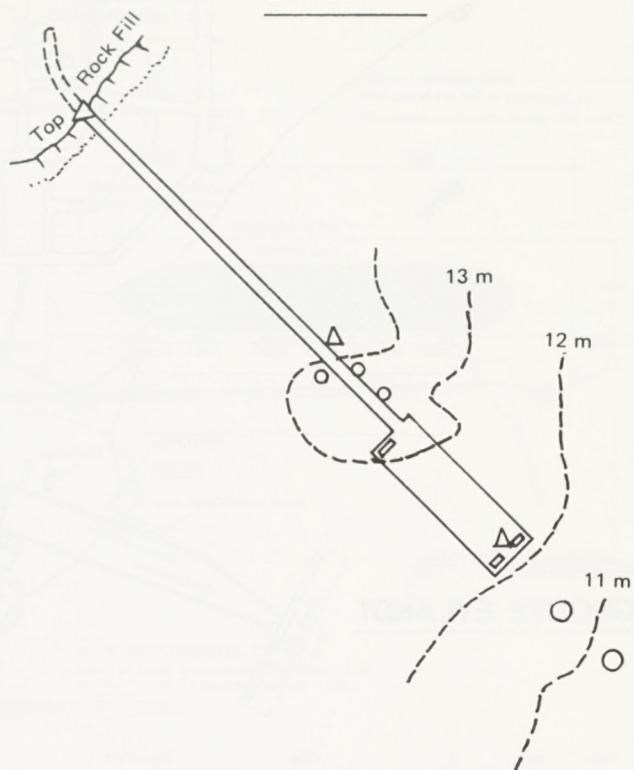


Detail 2



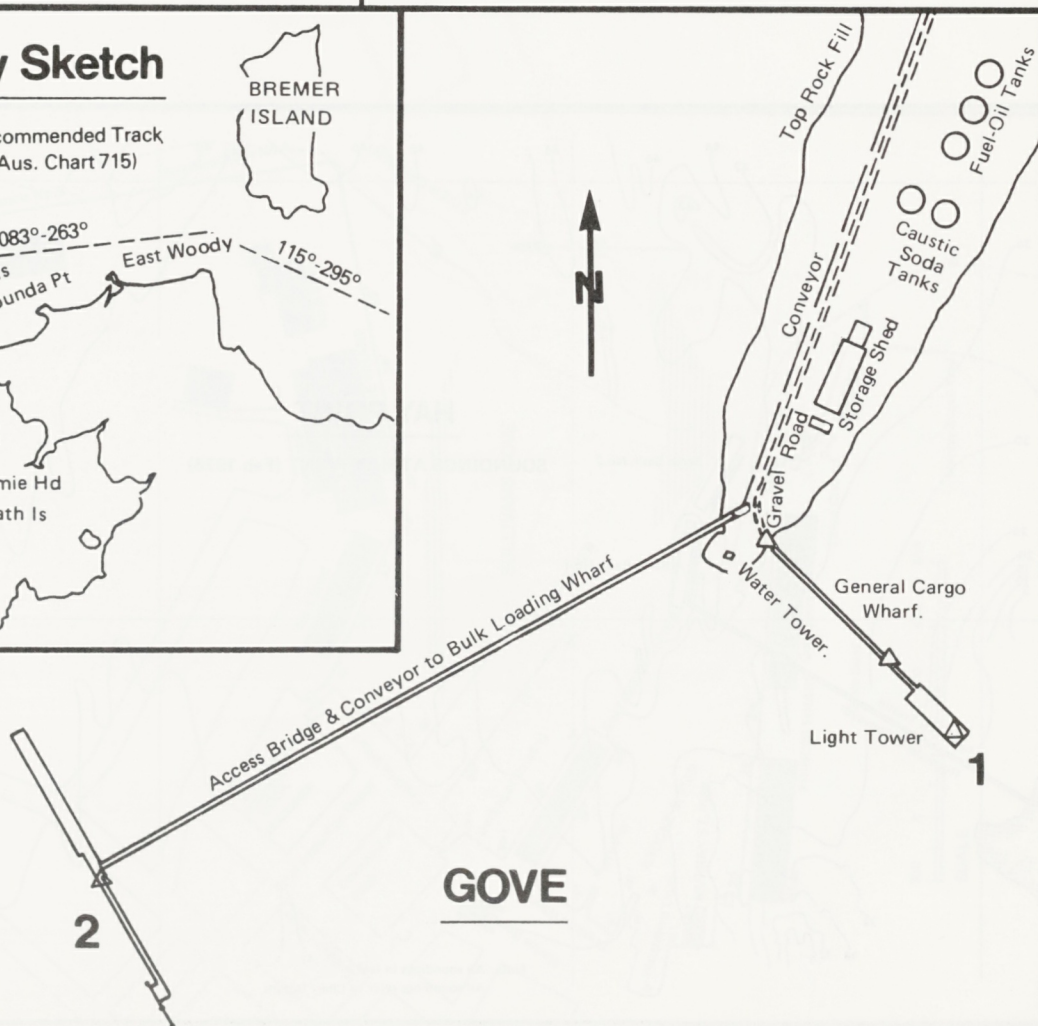
BULK LOADING WHARF
DEPTHS ARE IN METRES

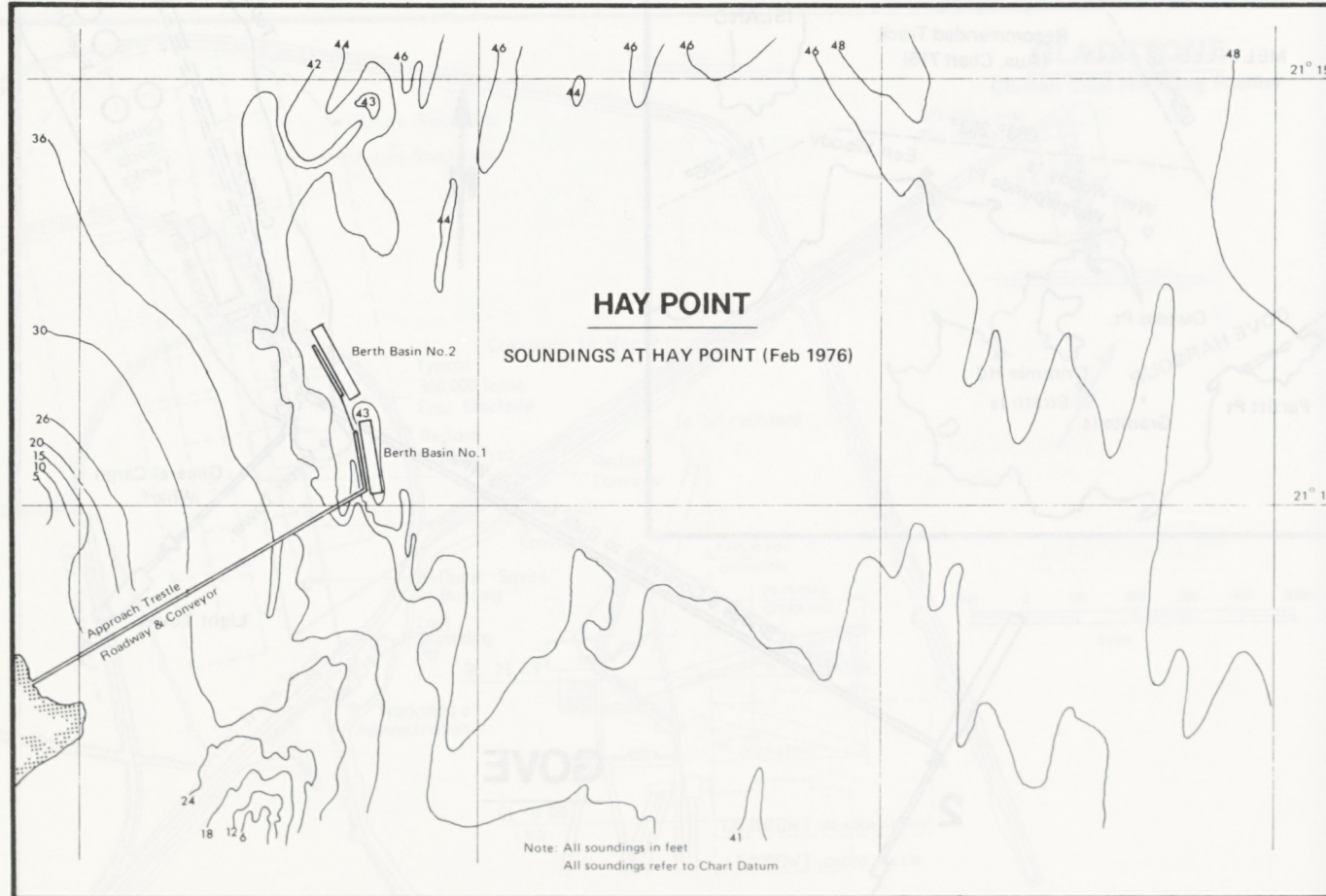
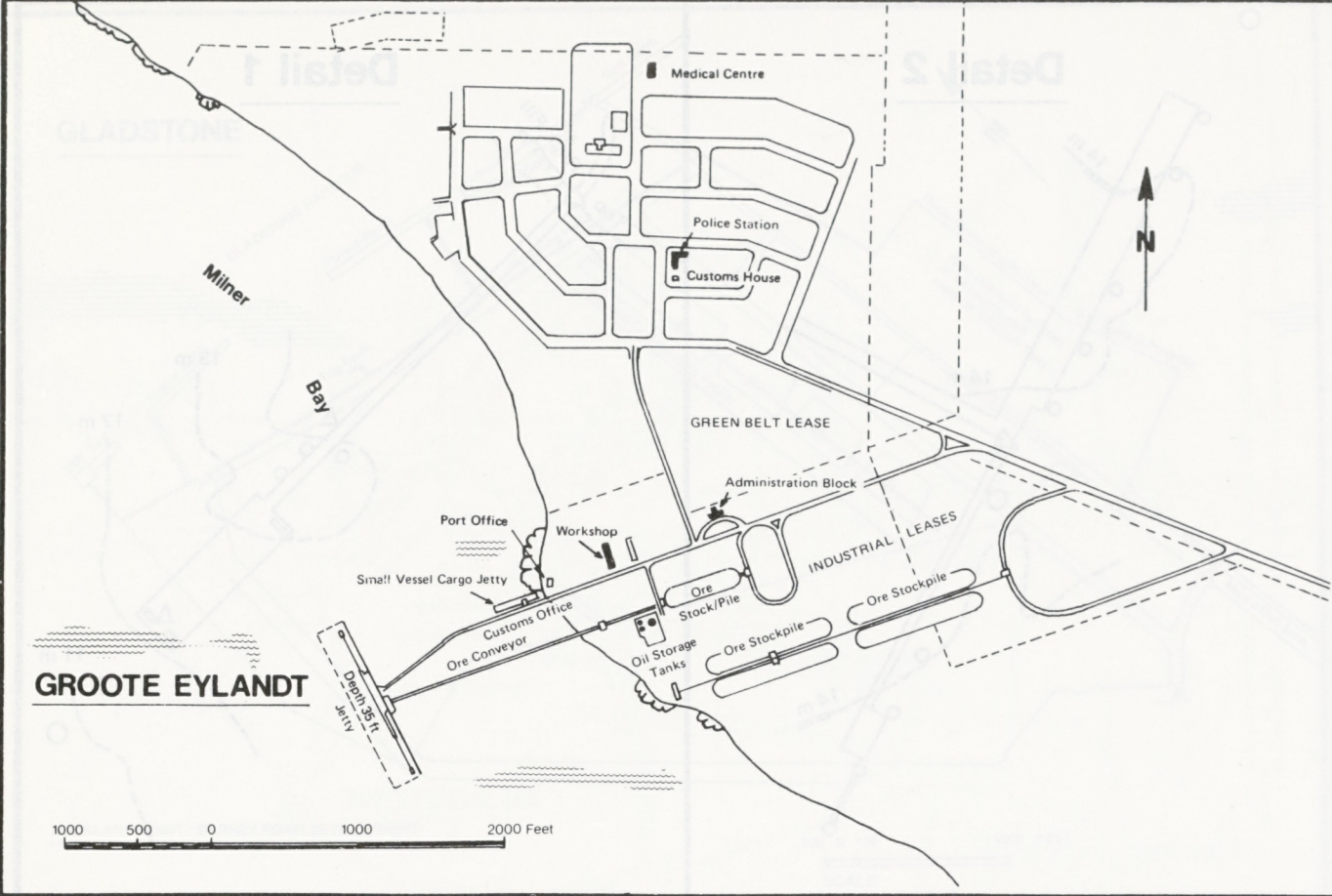
Detail 1



GENERAL CARGO WHARF
DEPTHS ARE IN METRES

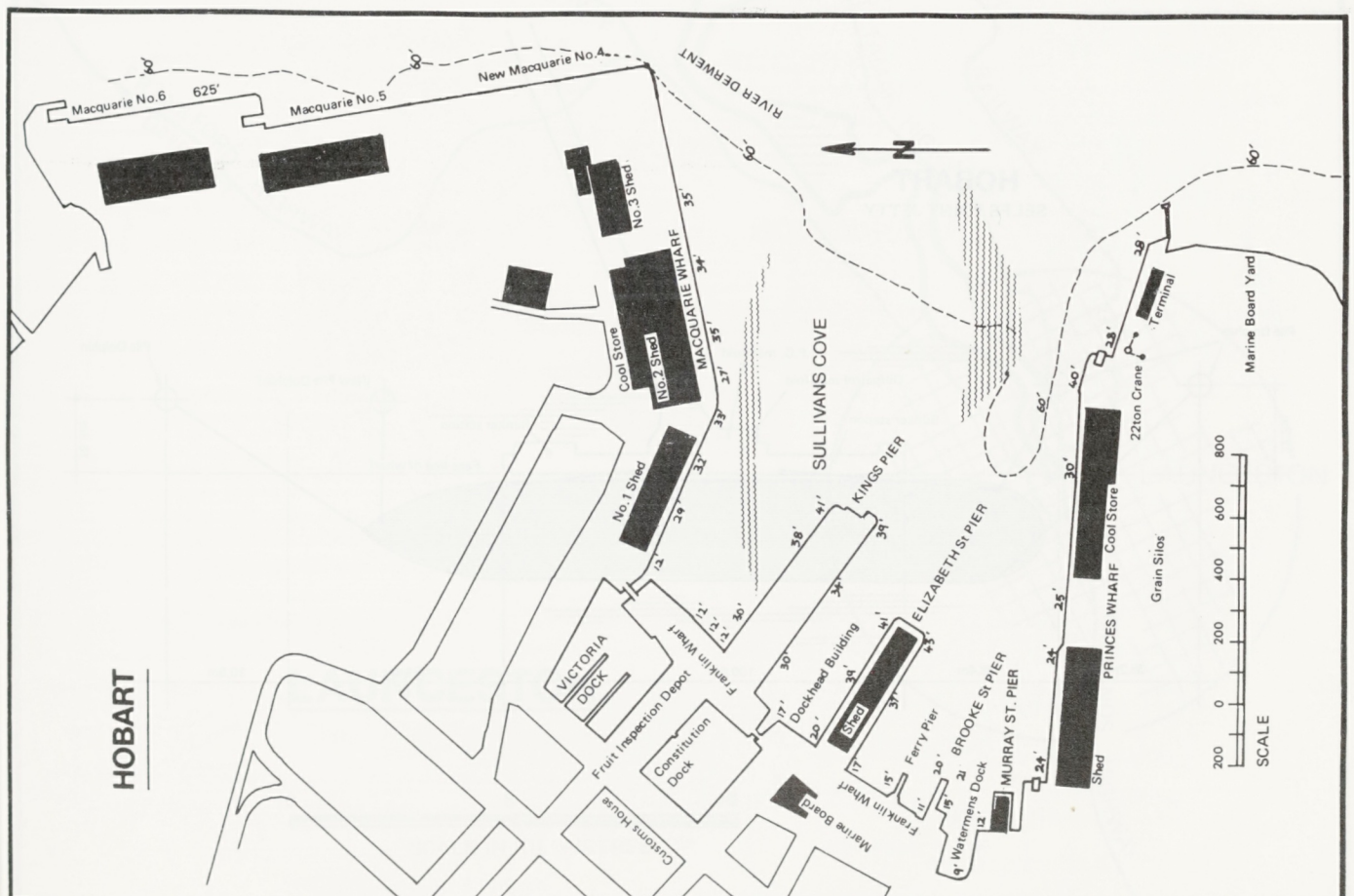
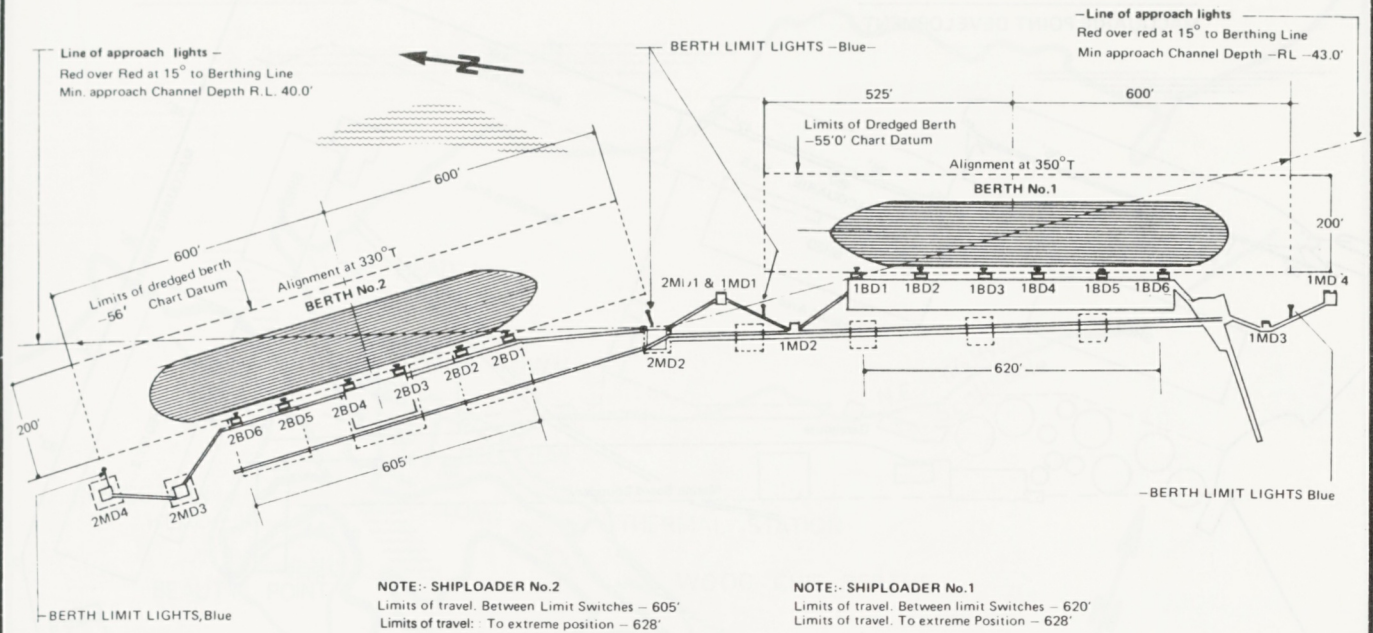
Locality Sketch





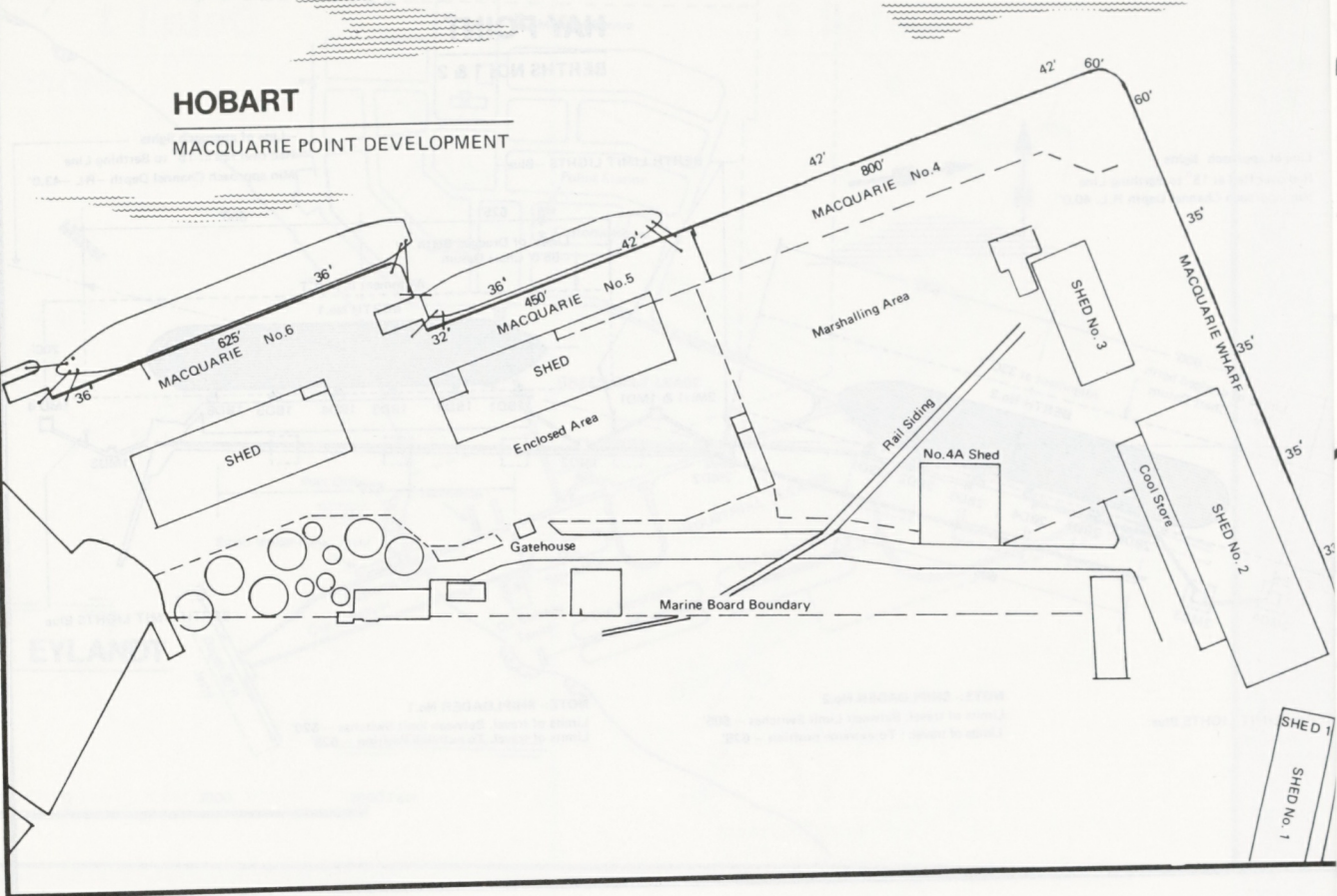
HAY POINT

BERTHS NOs 1 & 2

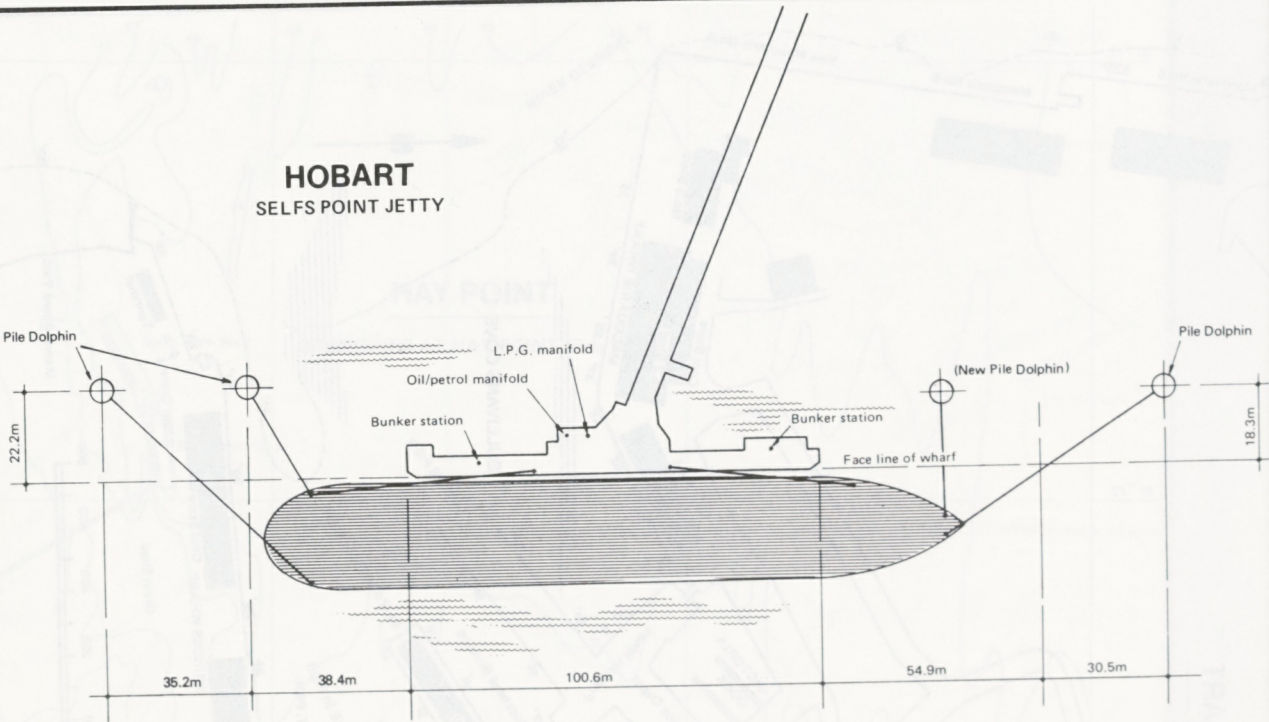


HOBART

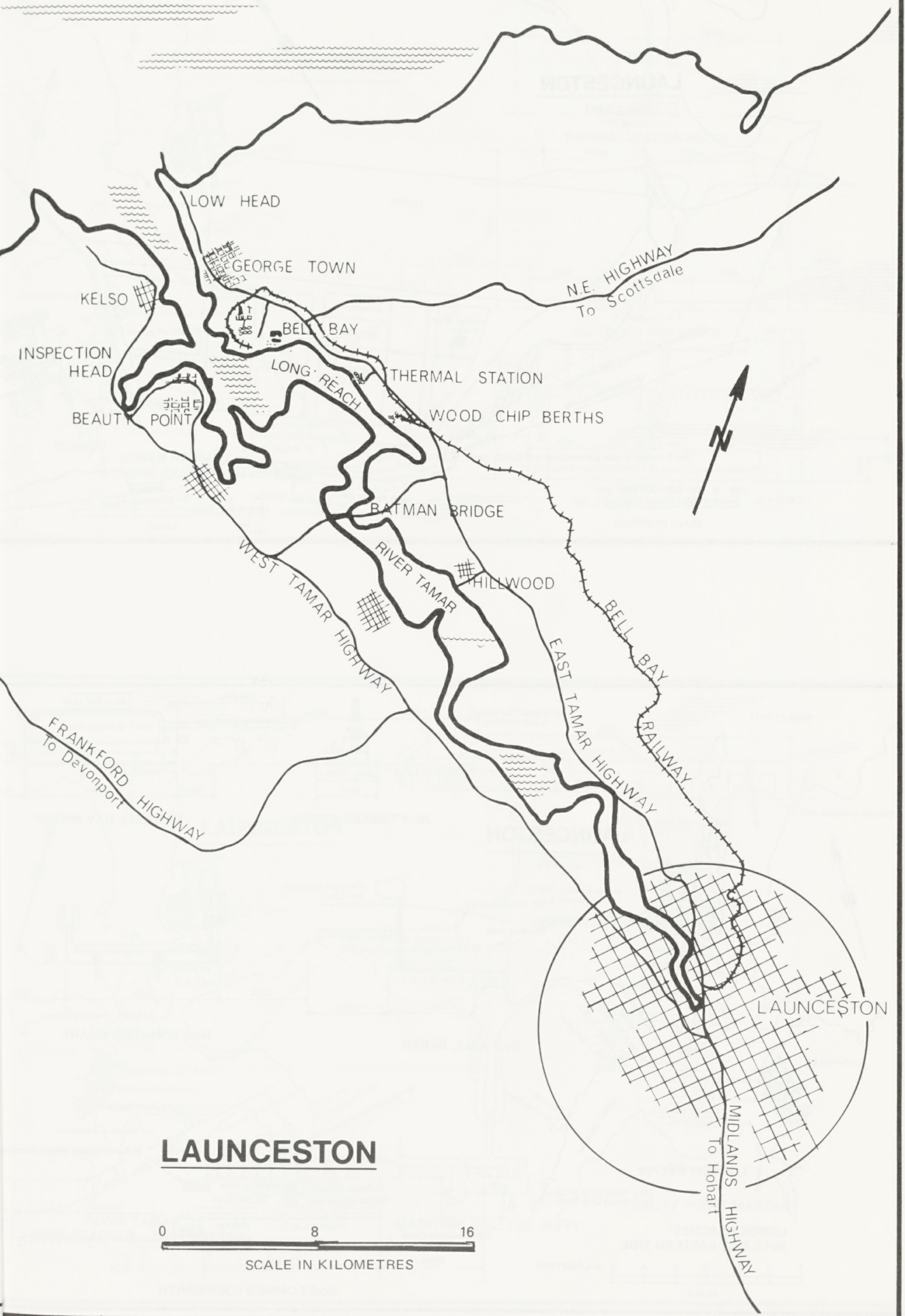
MACQUARIE POINT DEVELOPMENT



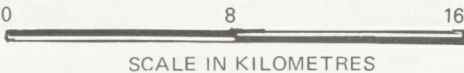
HOBART
SELF'S POINT JETTY

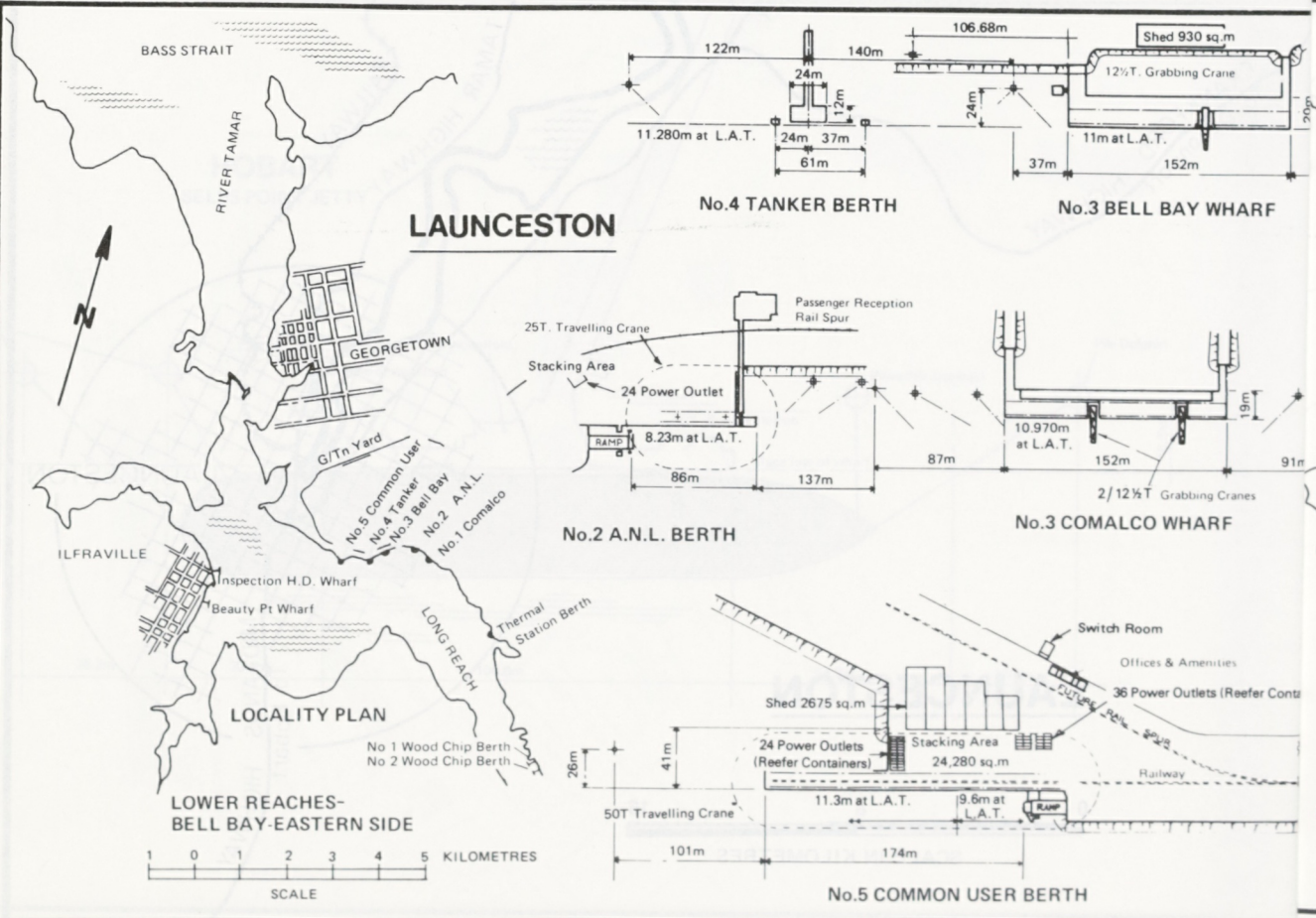
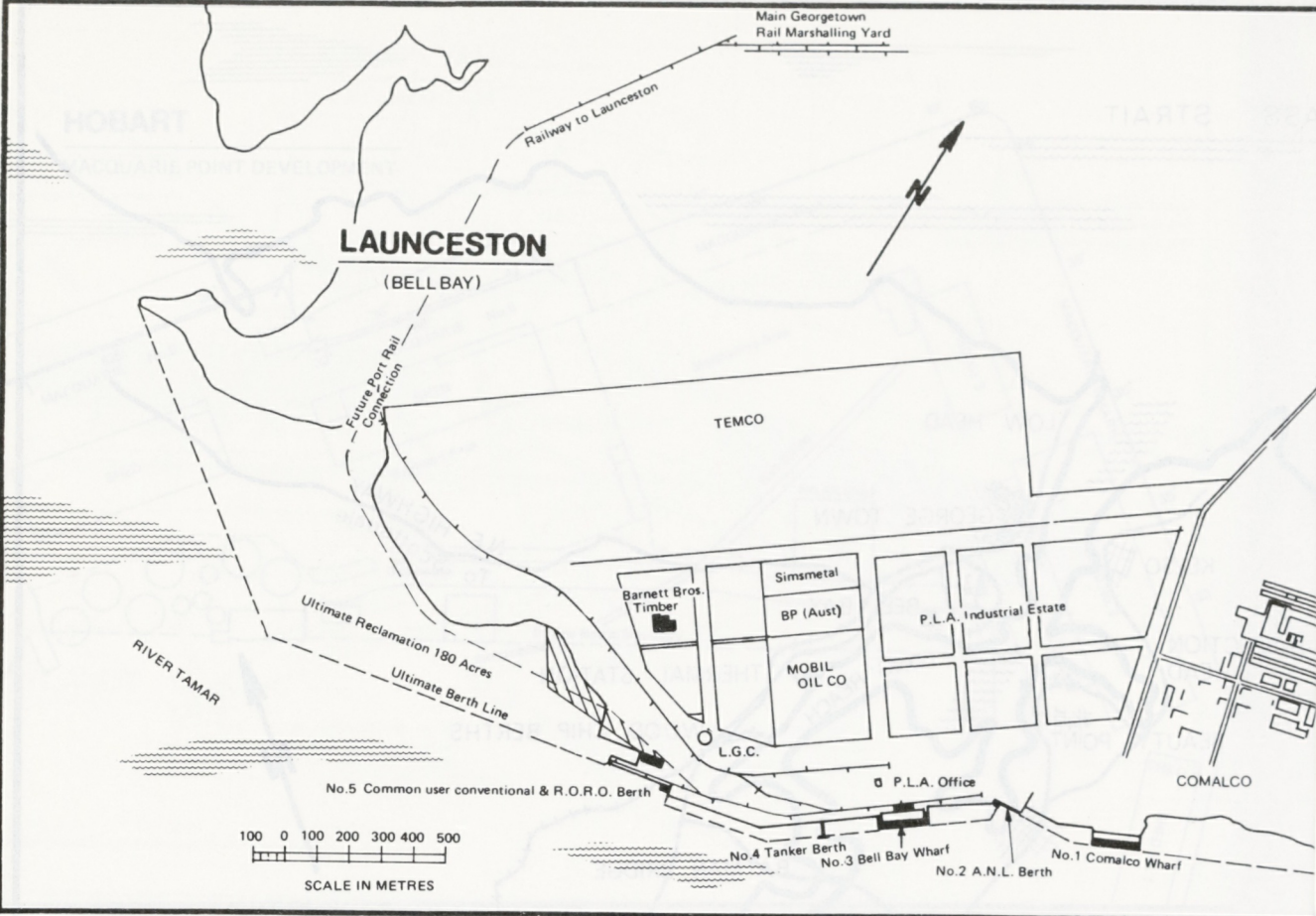


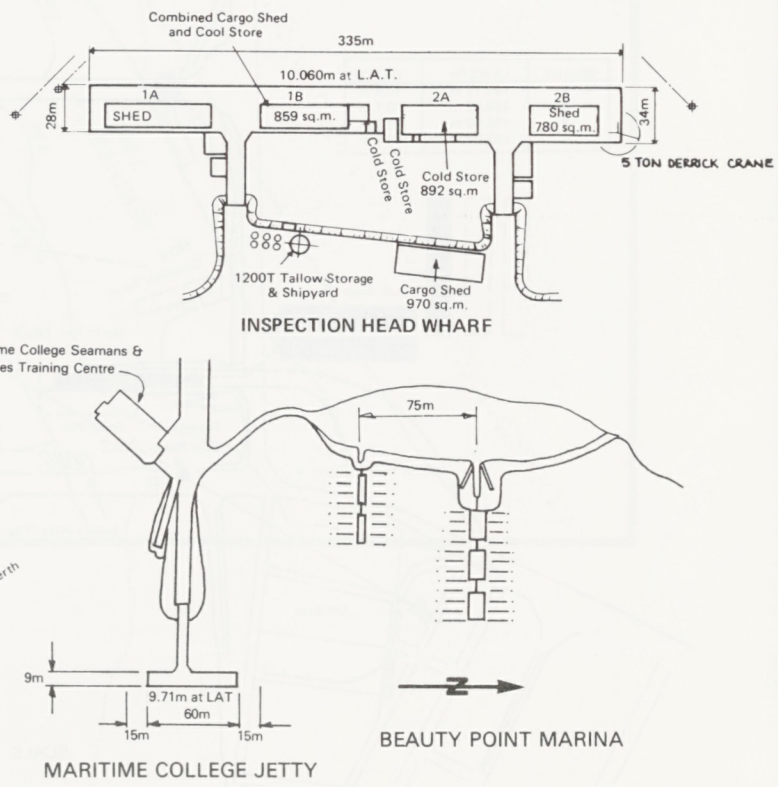
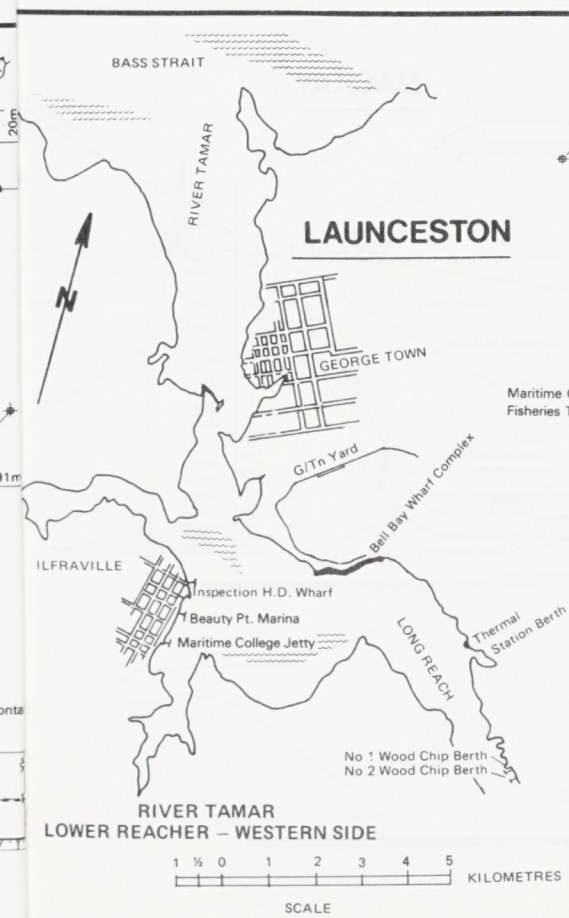
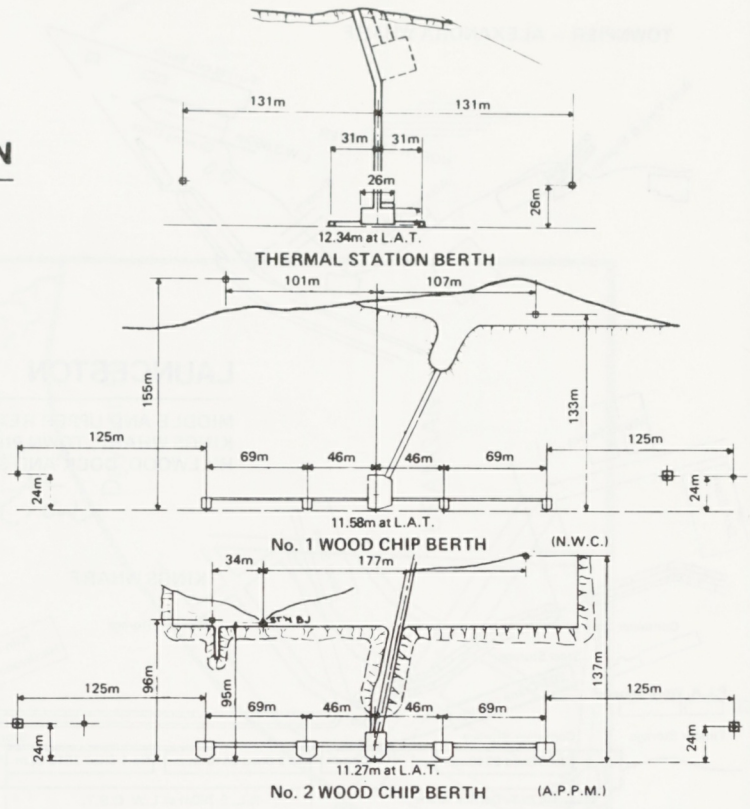
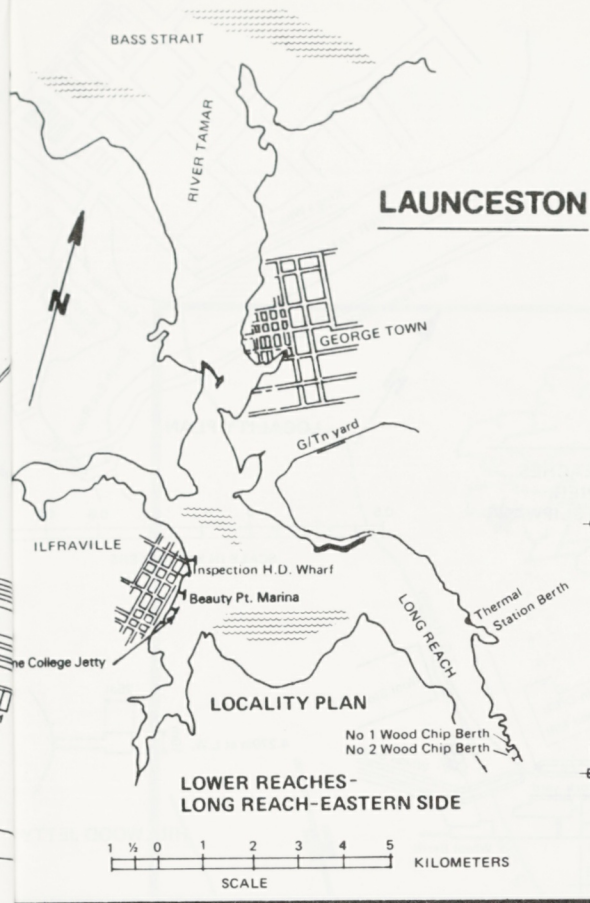
BASS STRAIT

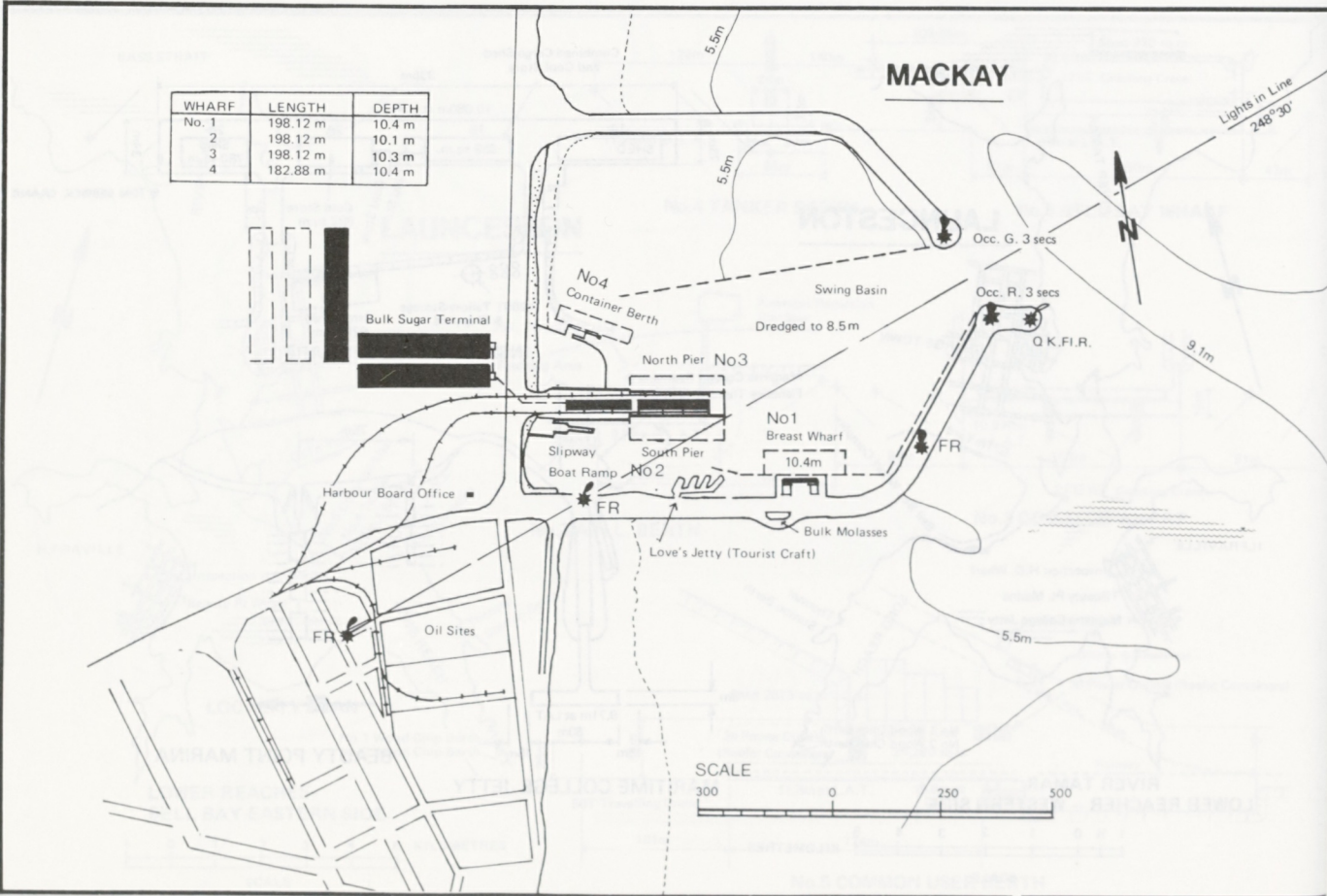
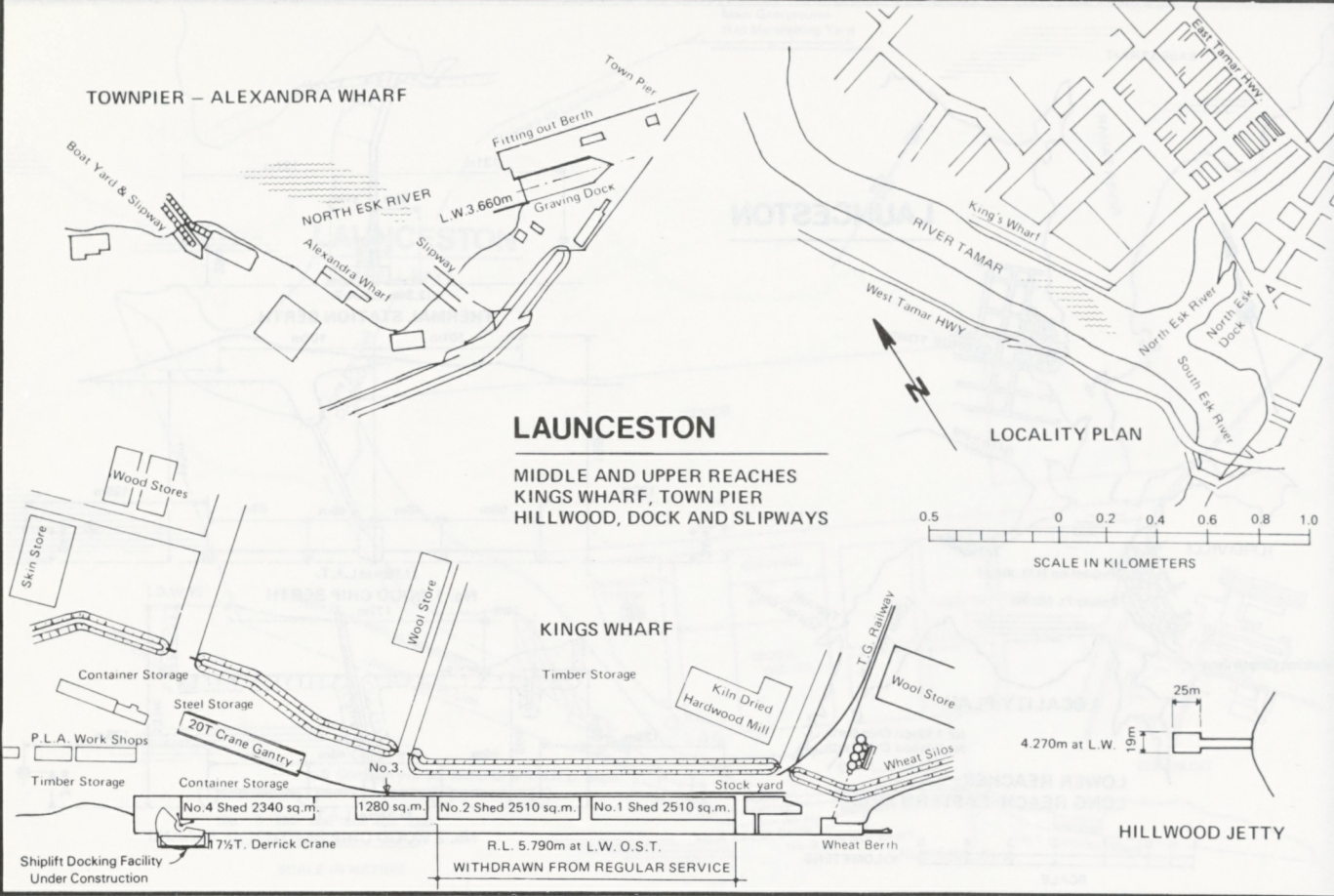


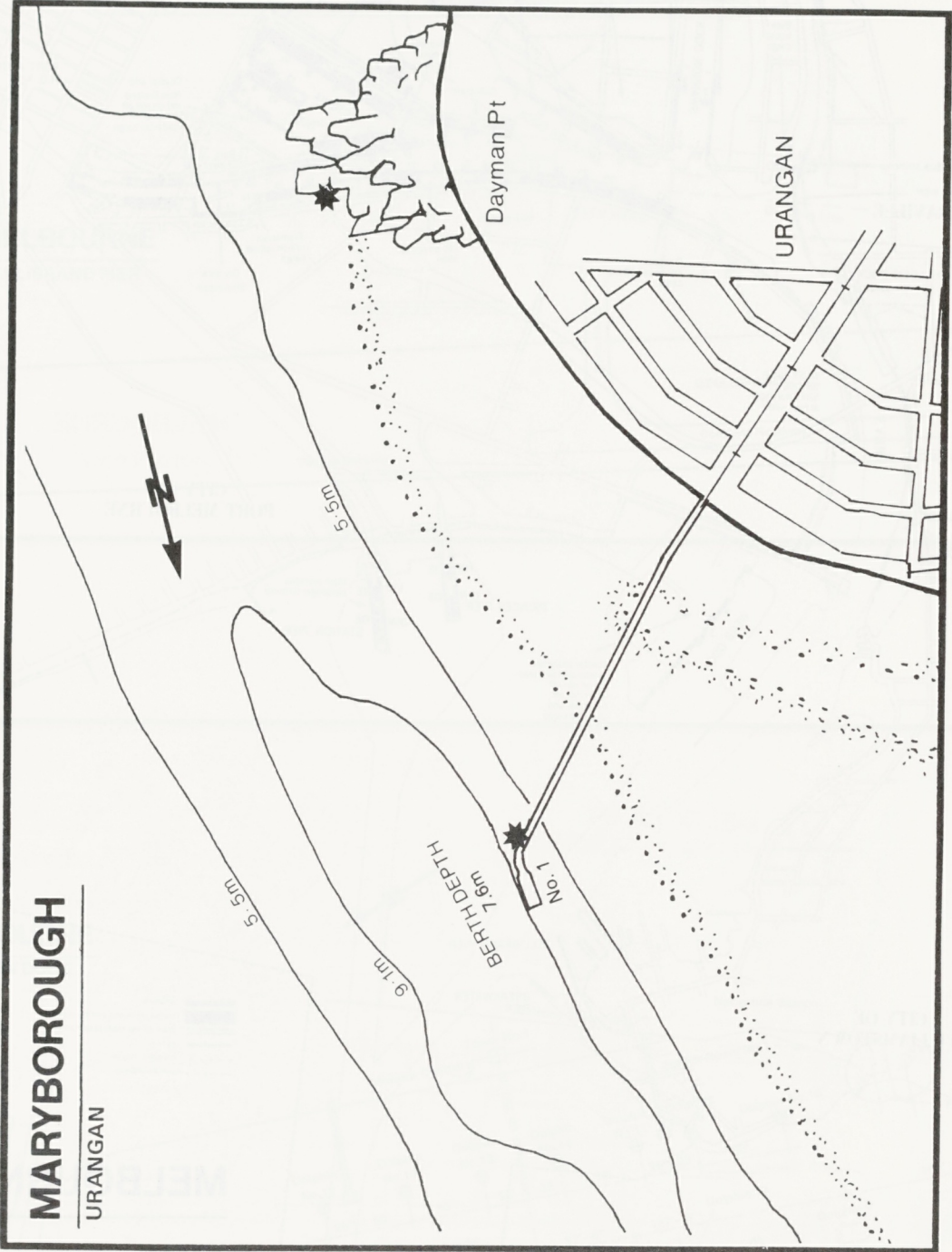
LAUNCESTON

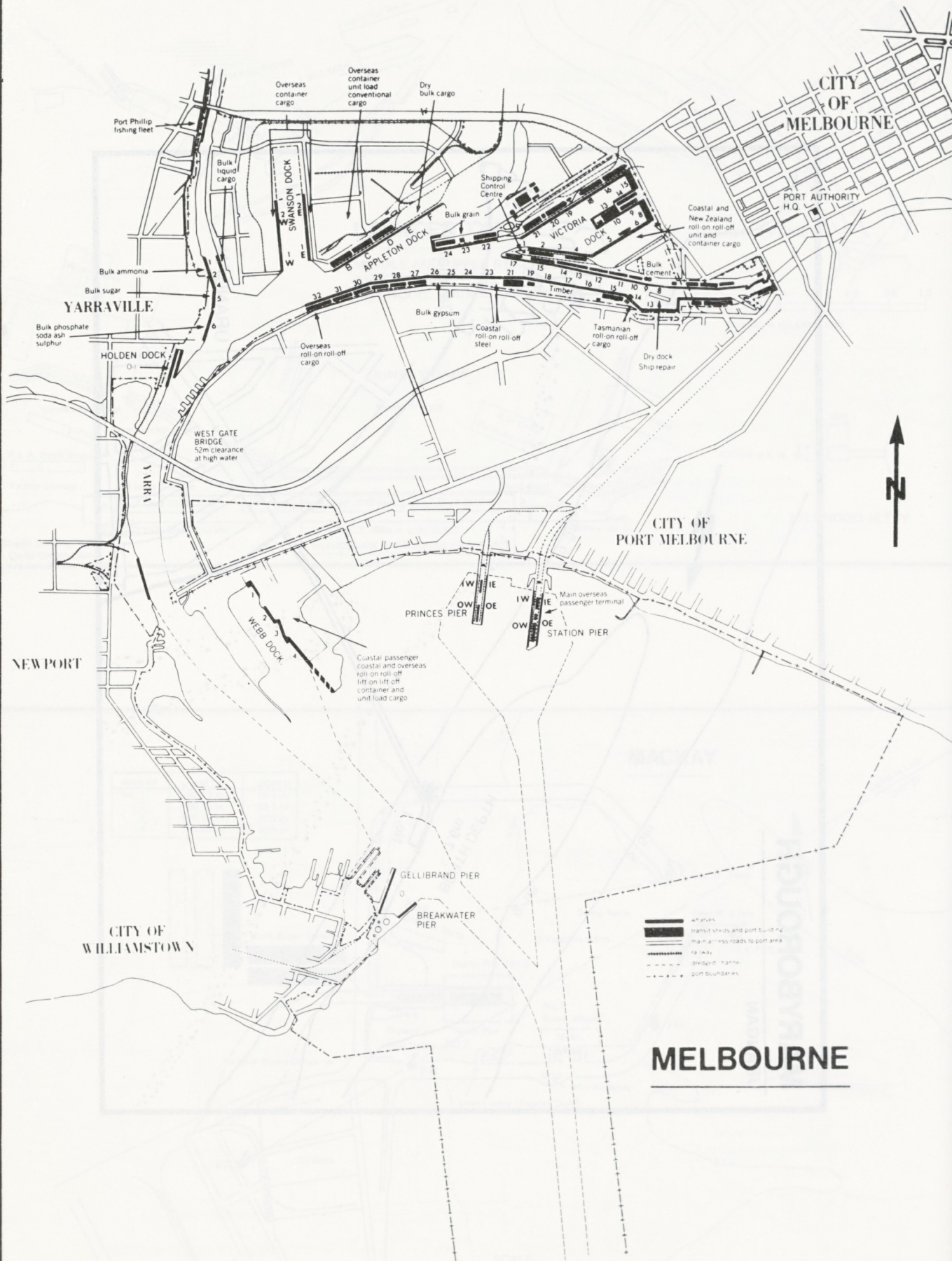


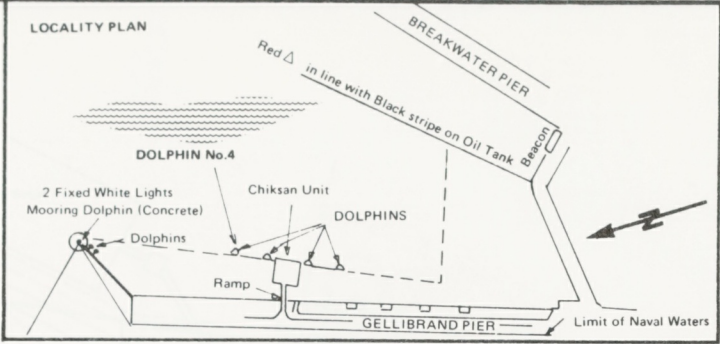




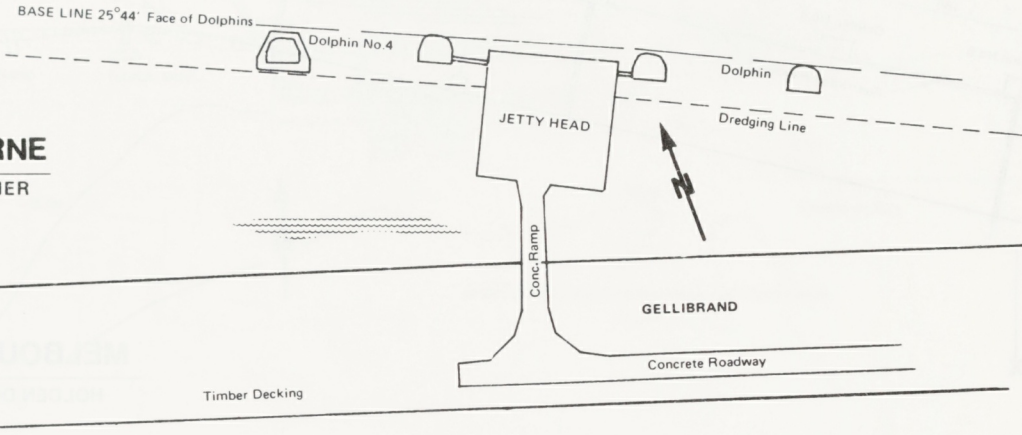




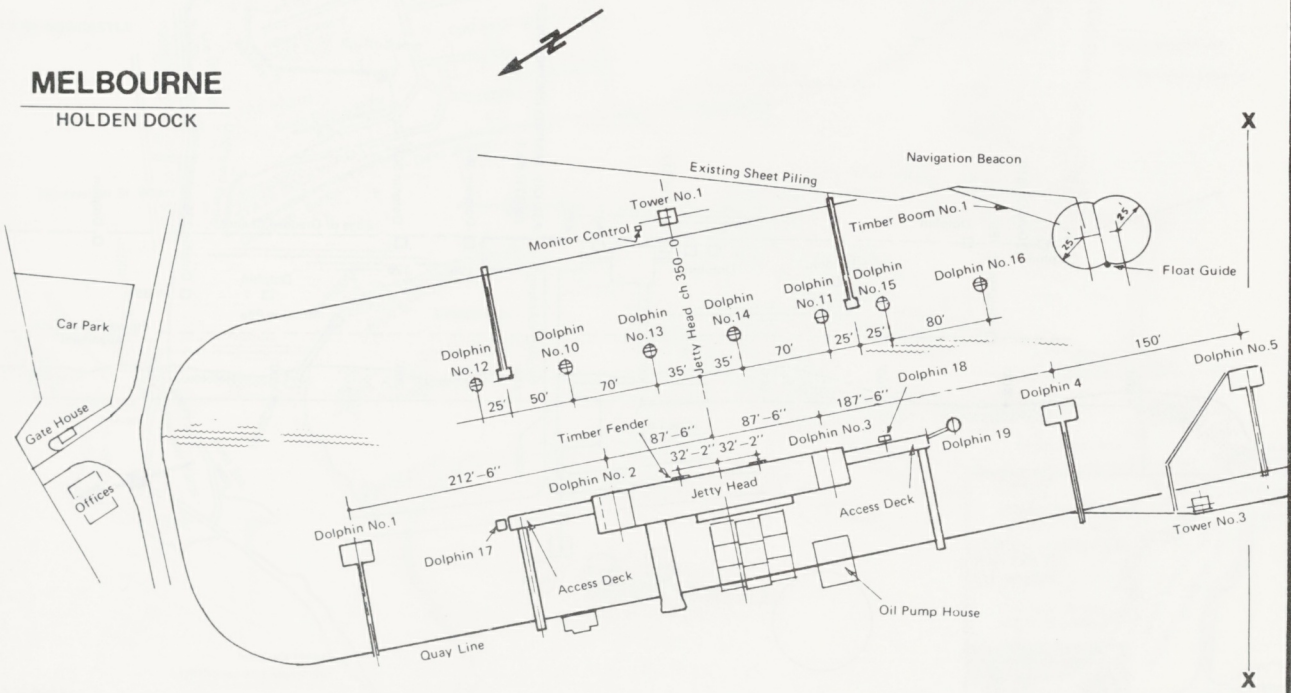


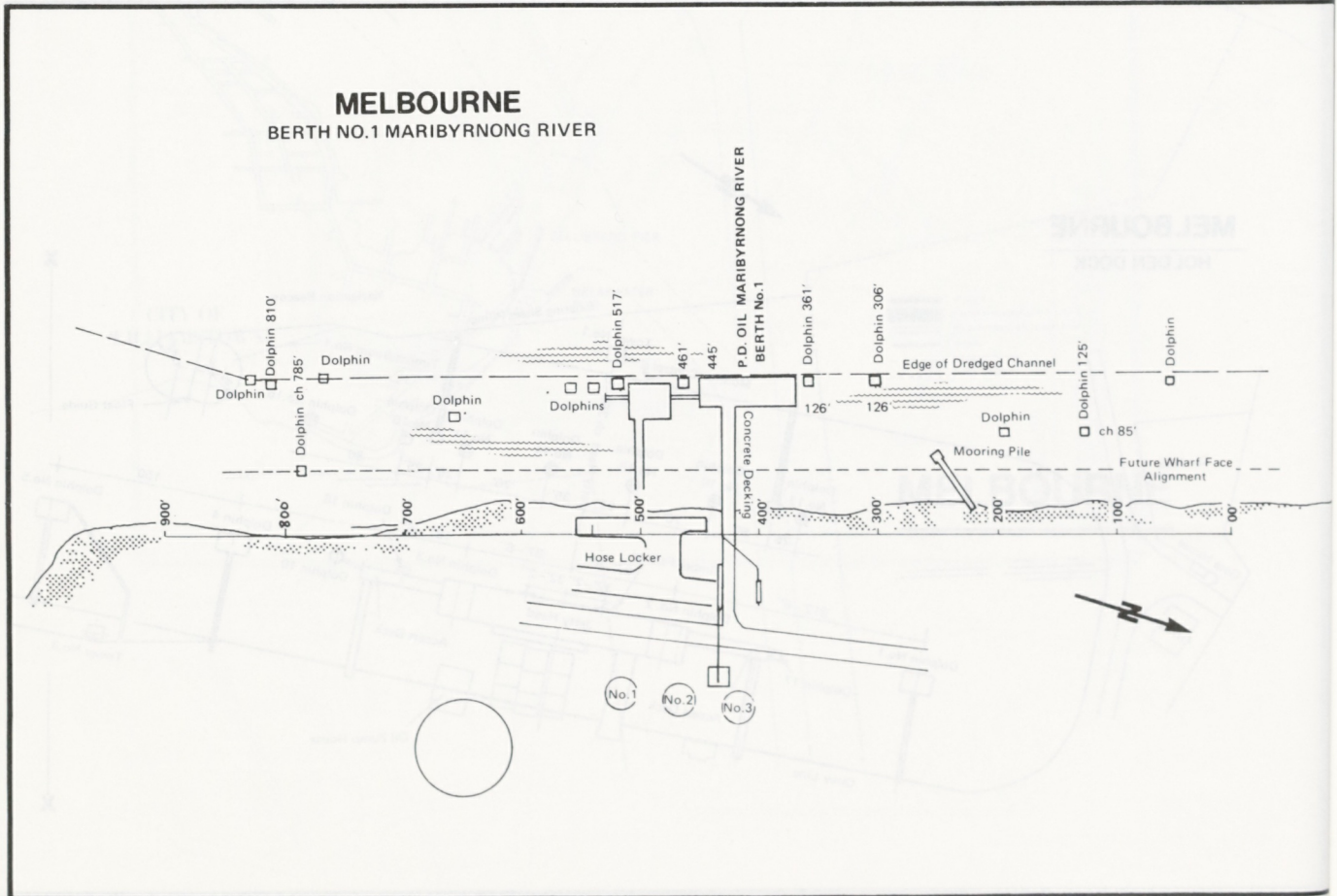
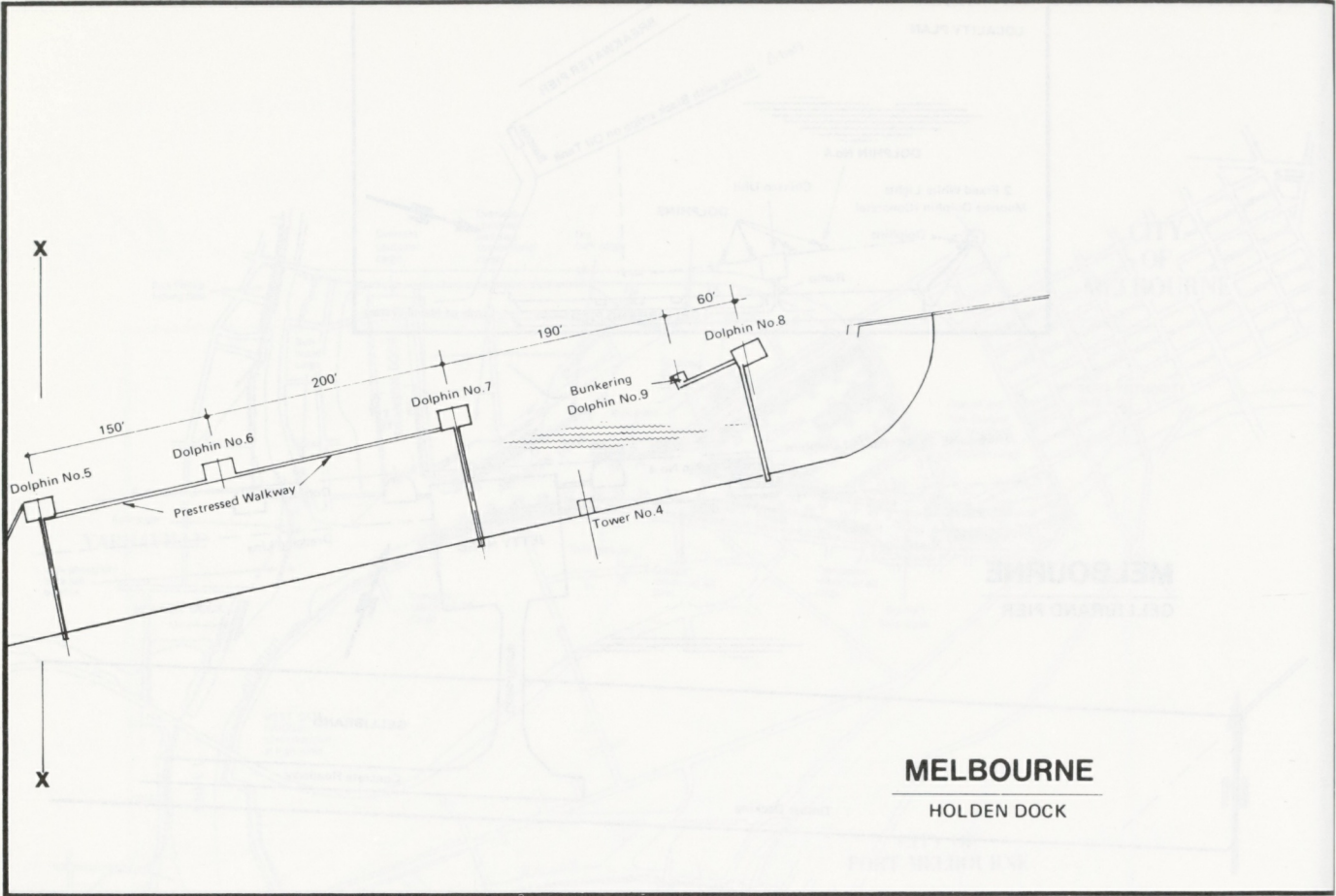


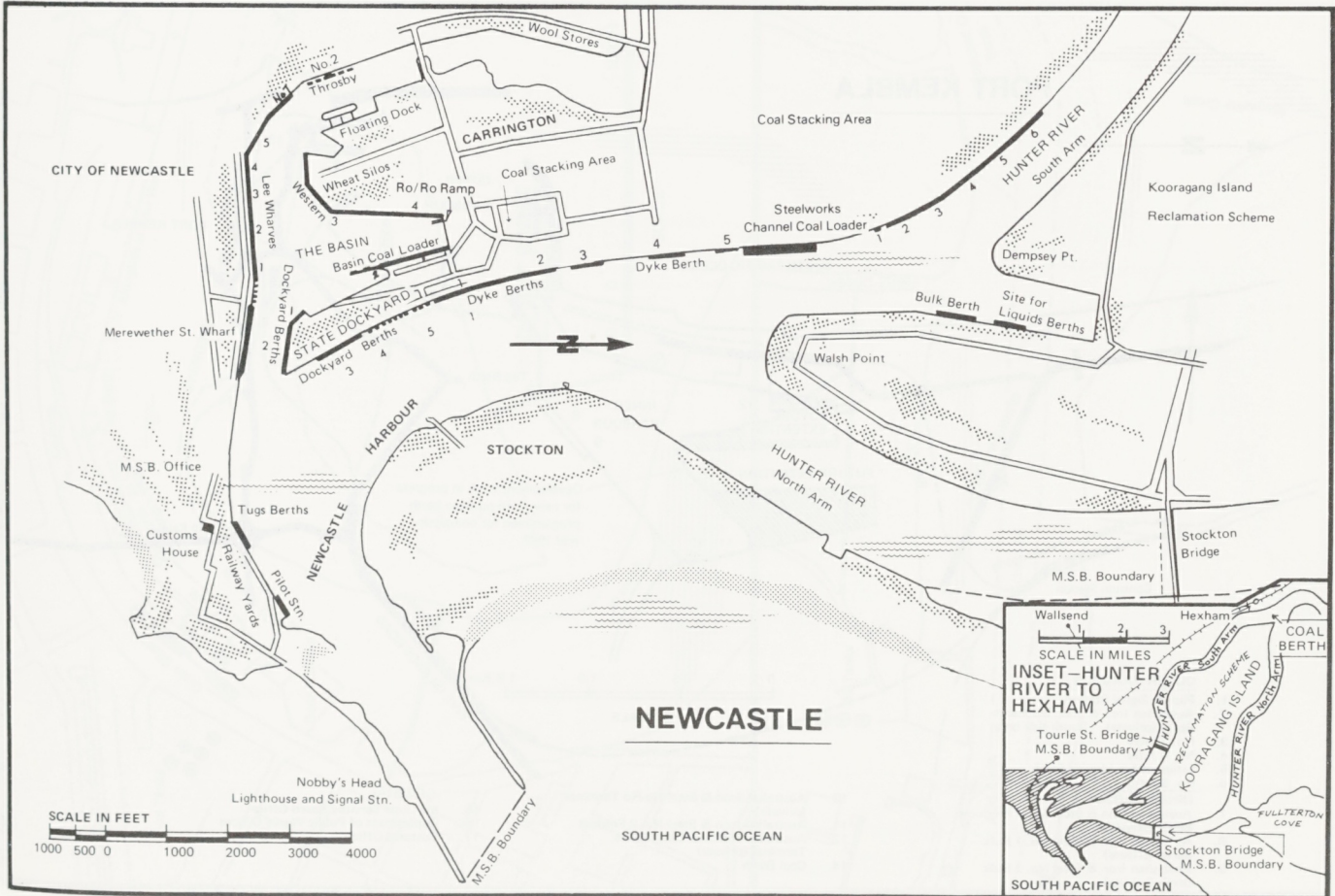
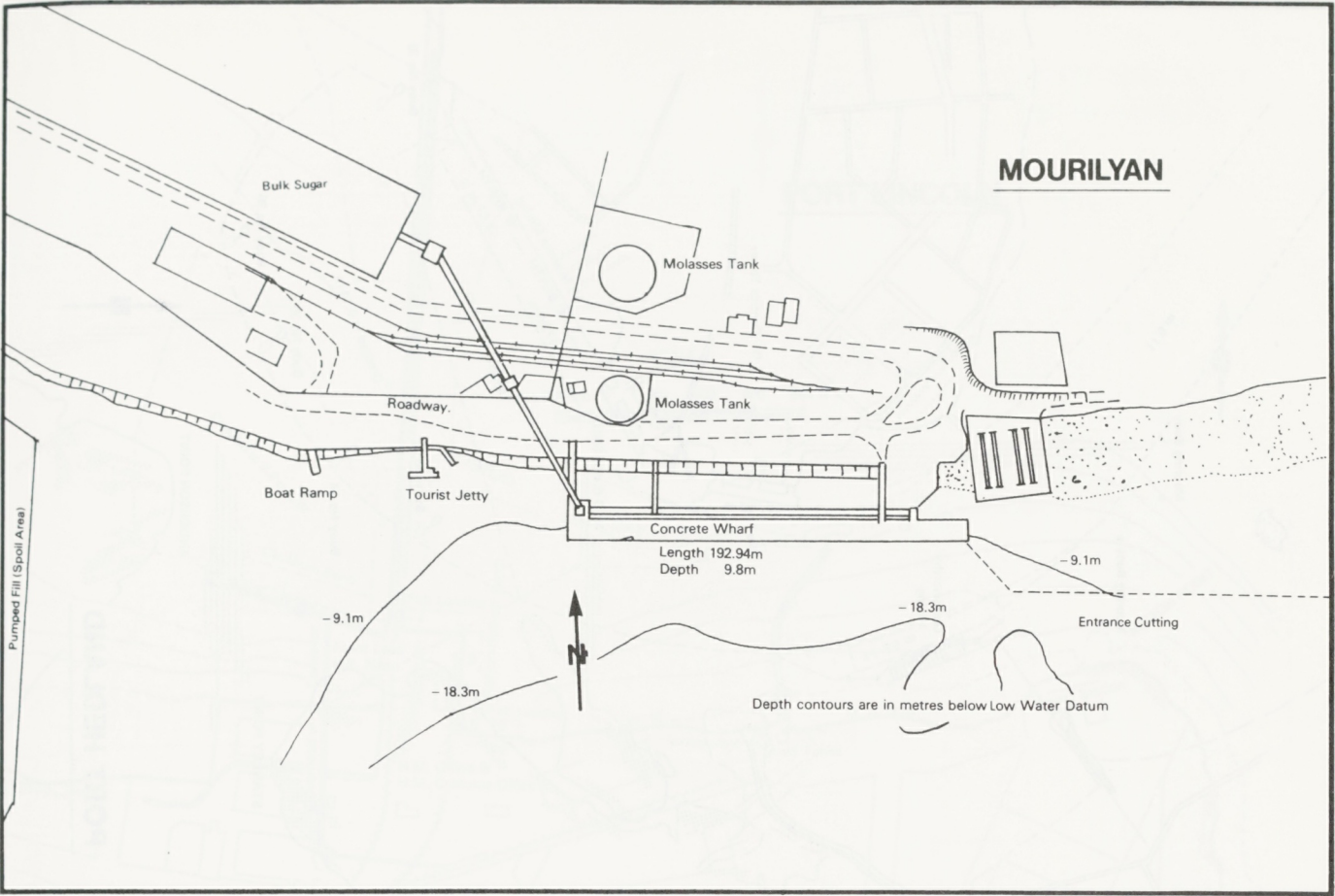
MELBOURNE
GELLIBRAND PIER

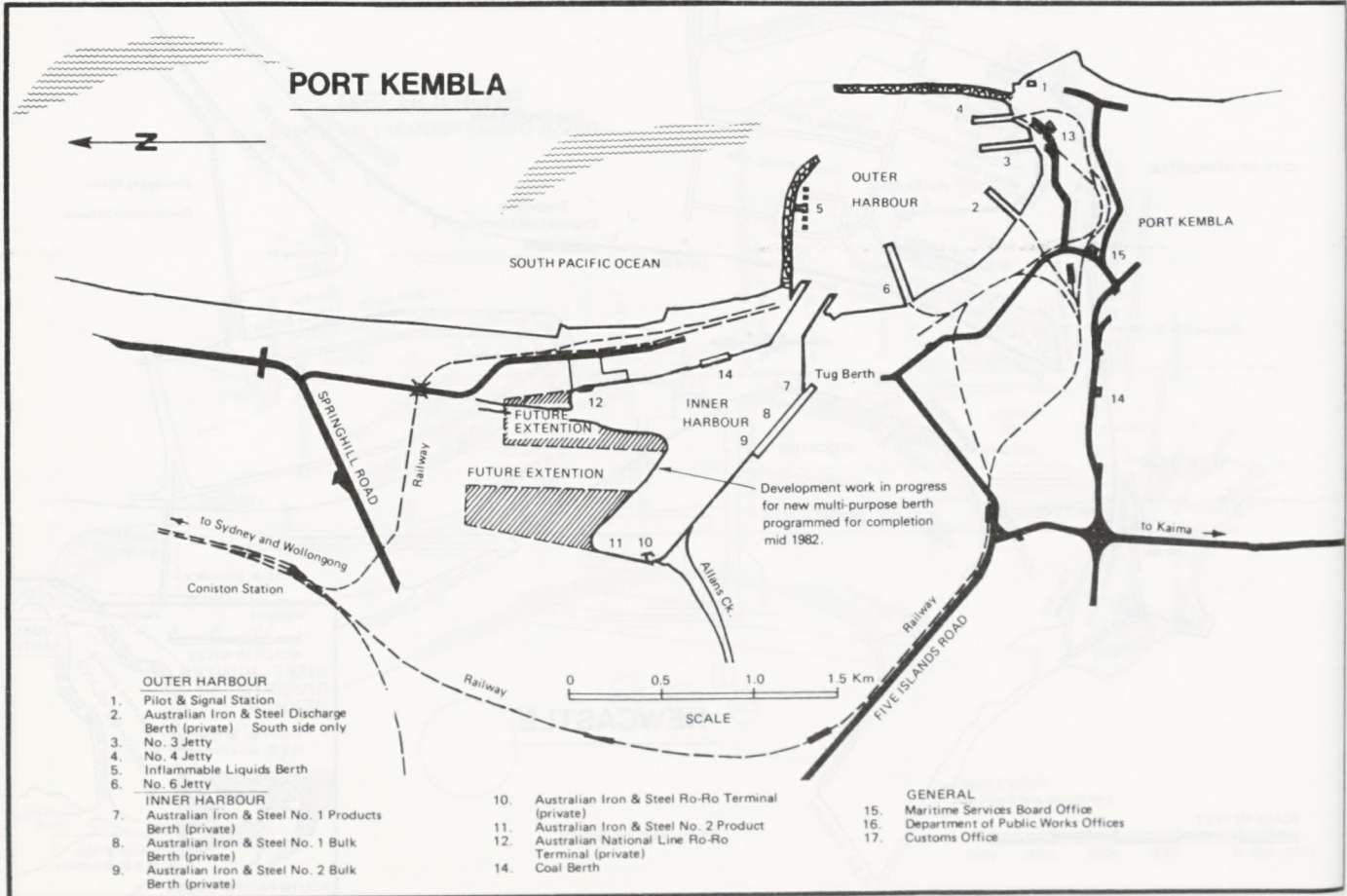


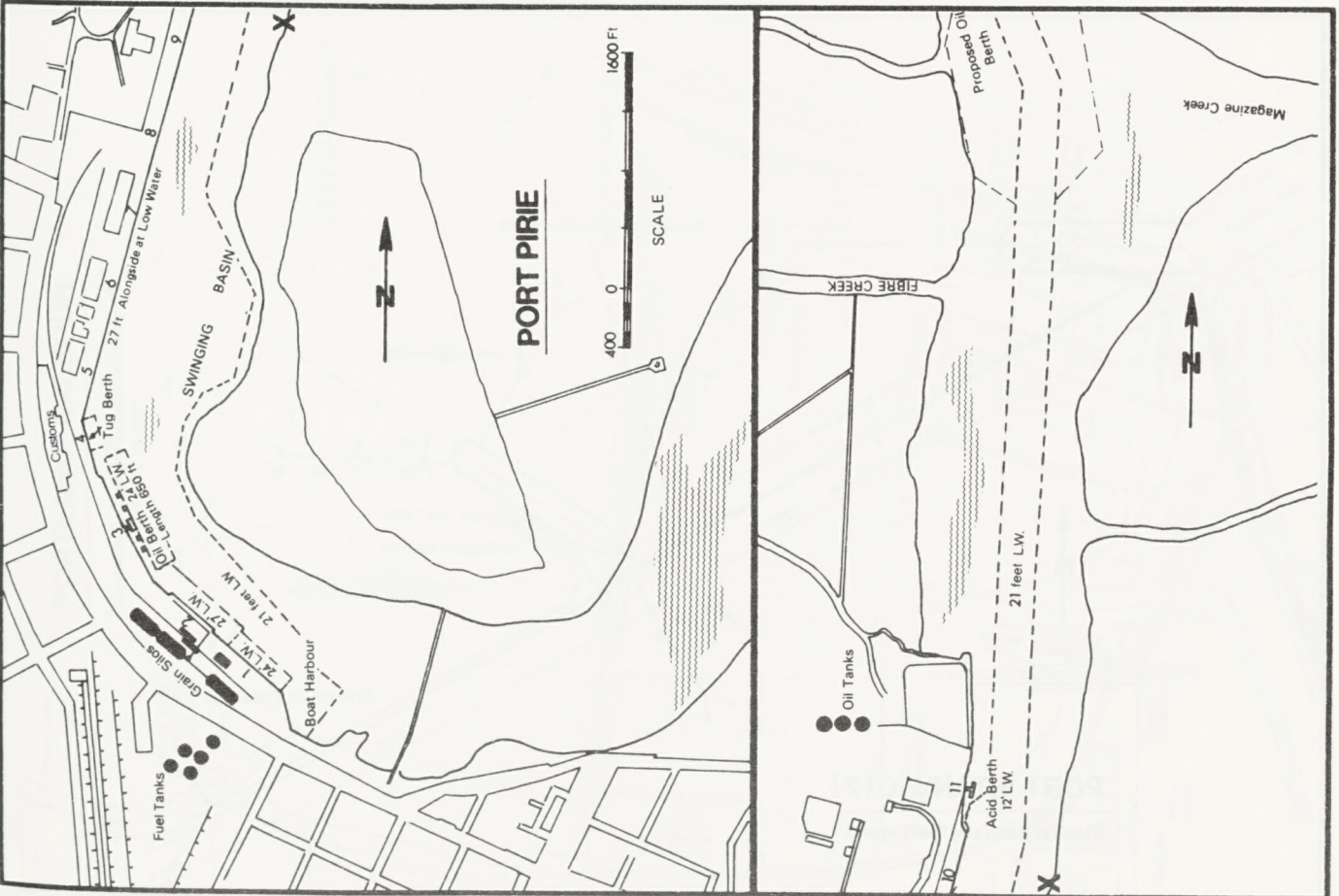
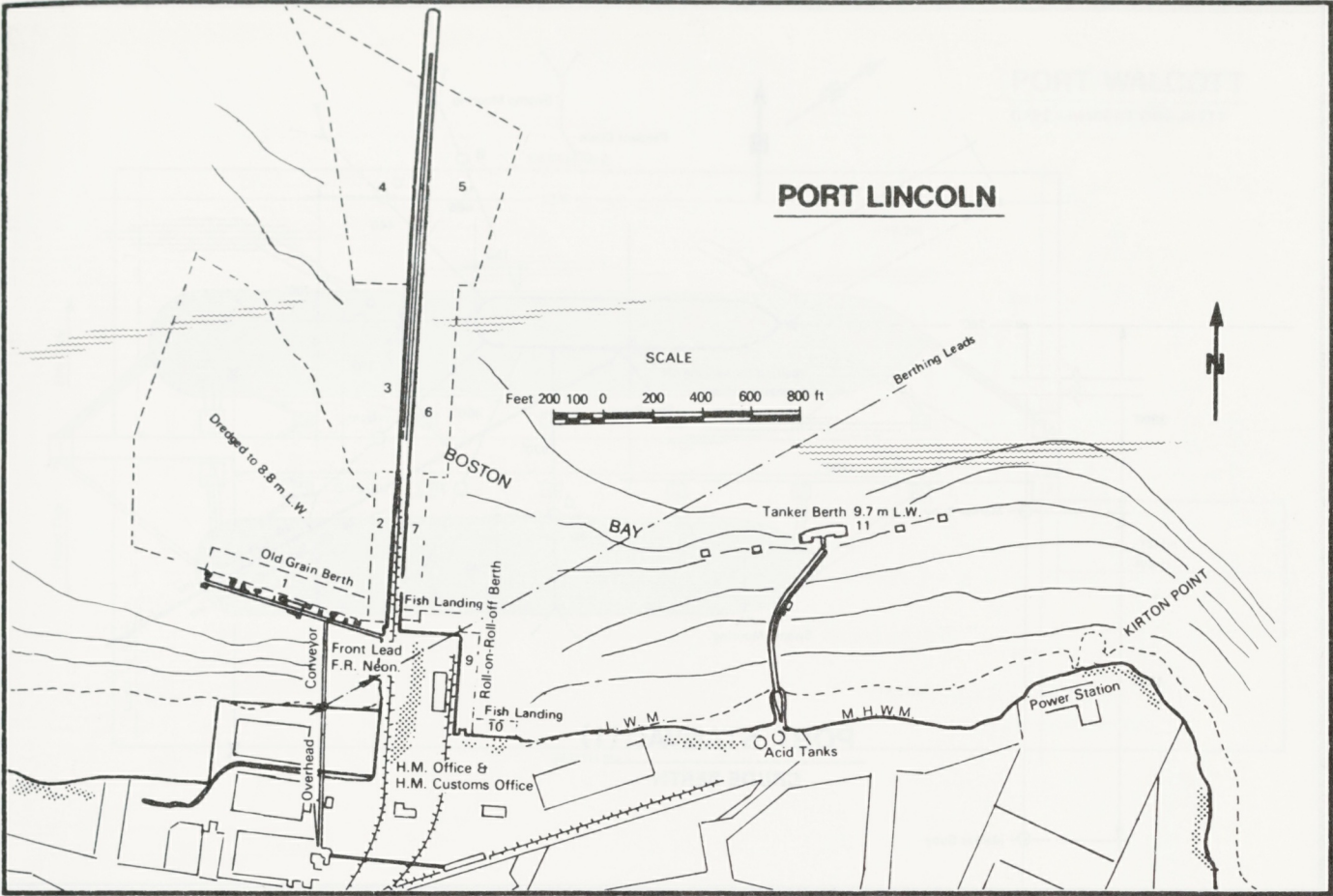
MELBOURNE
HOLDEN DOCK

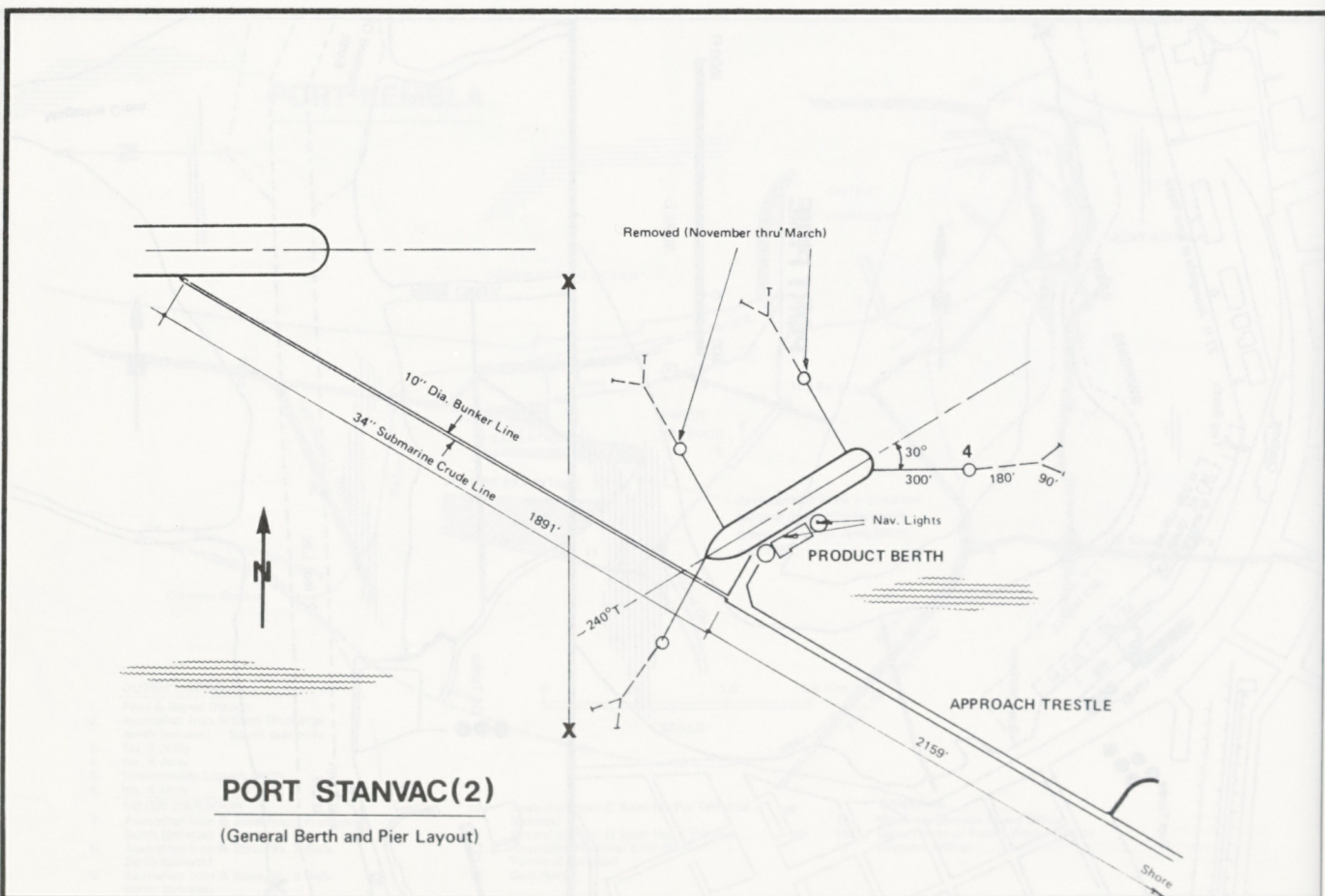
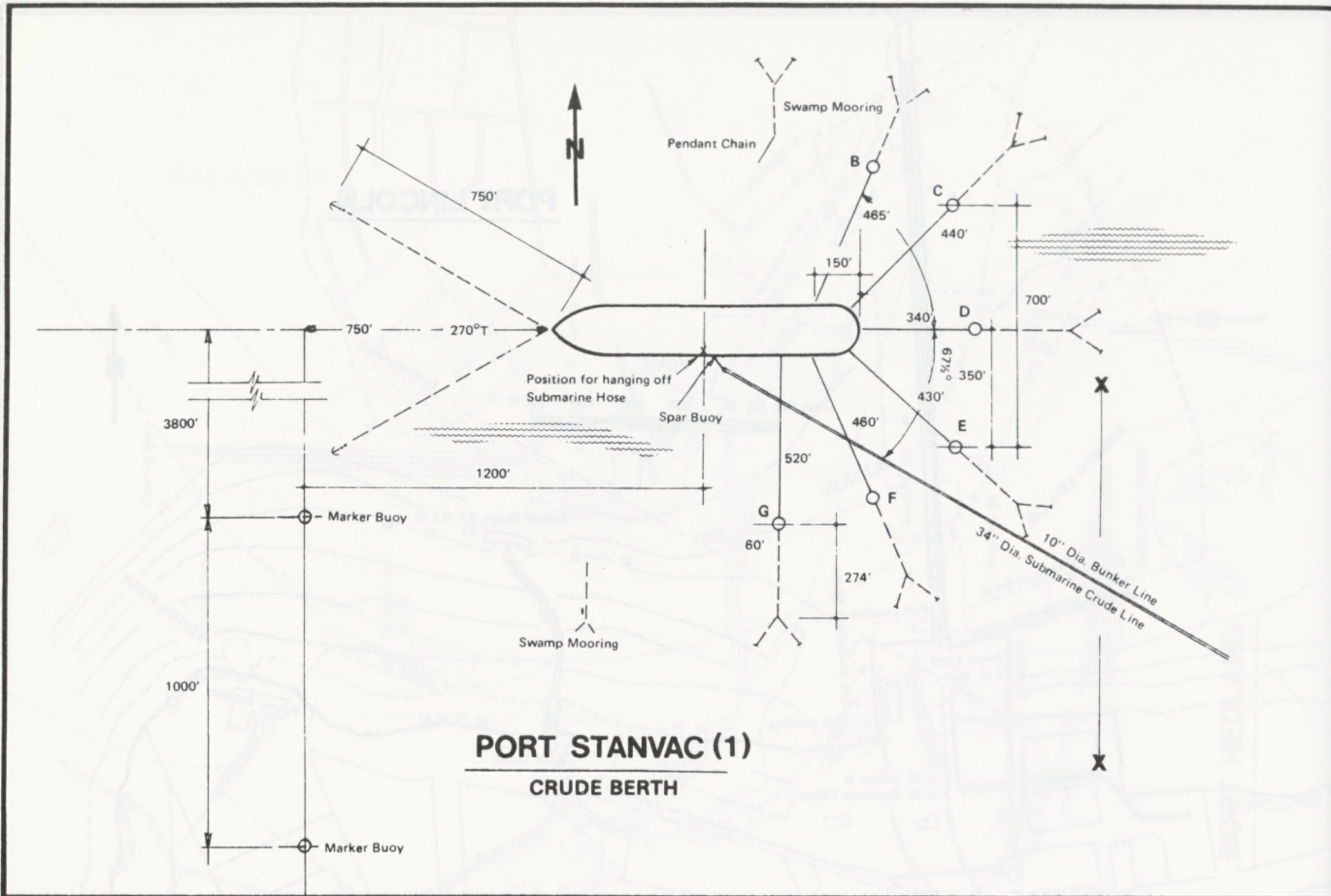




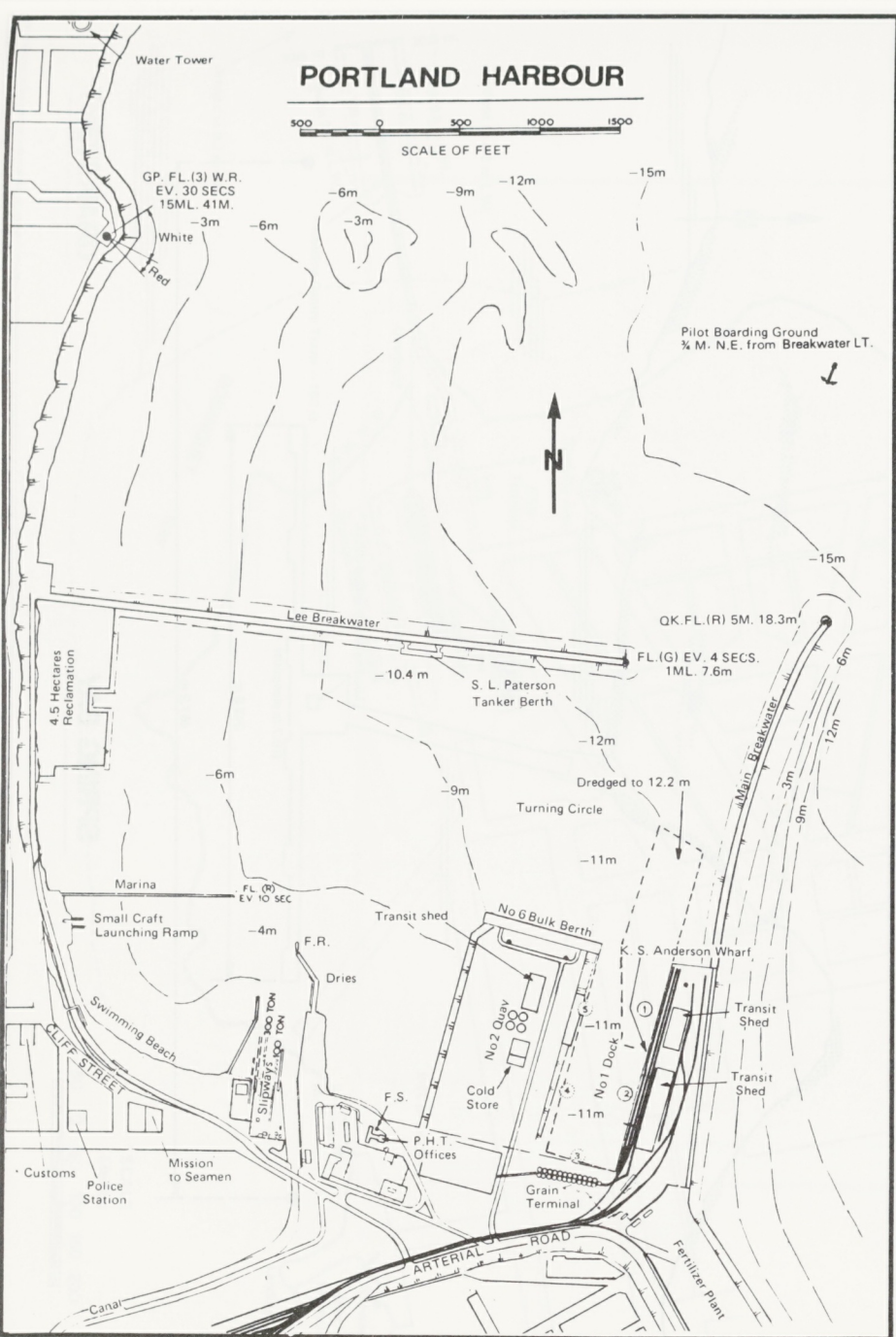
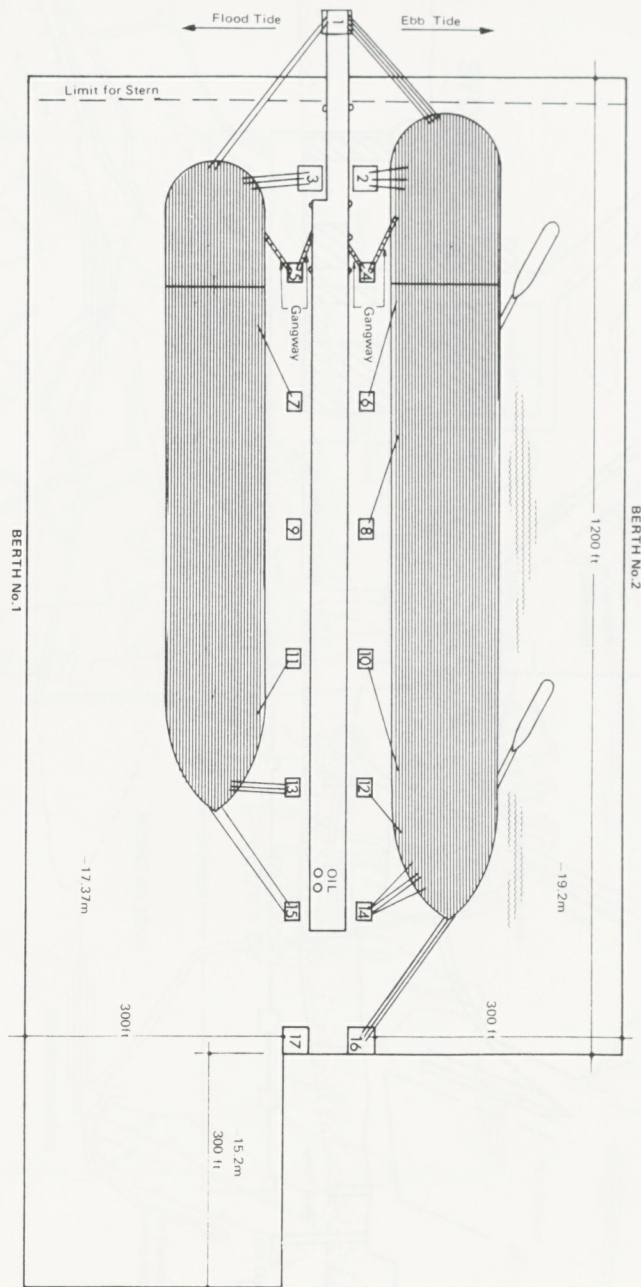




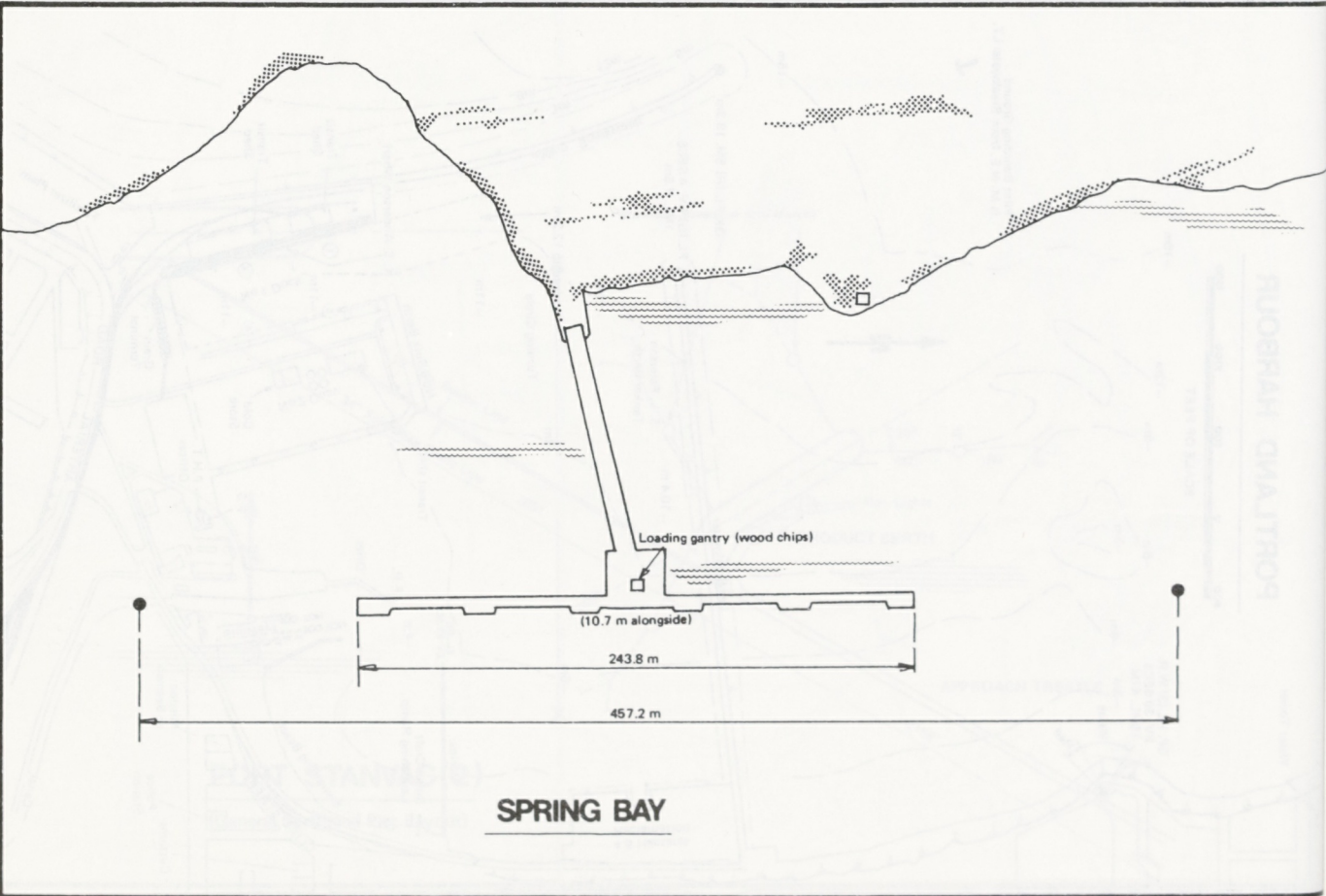
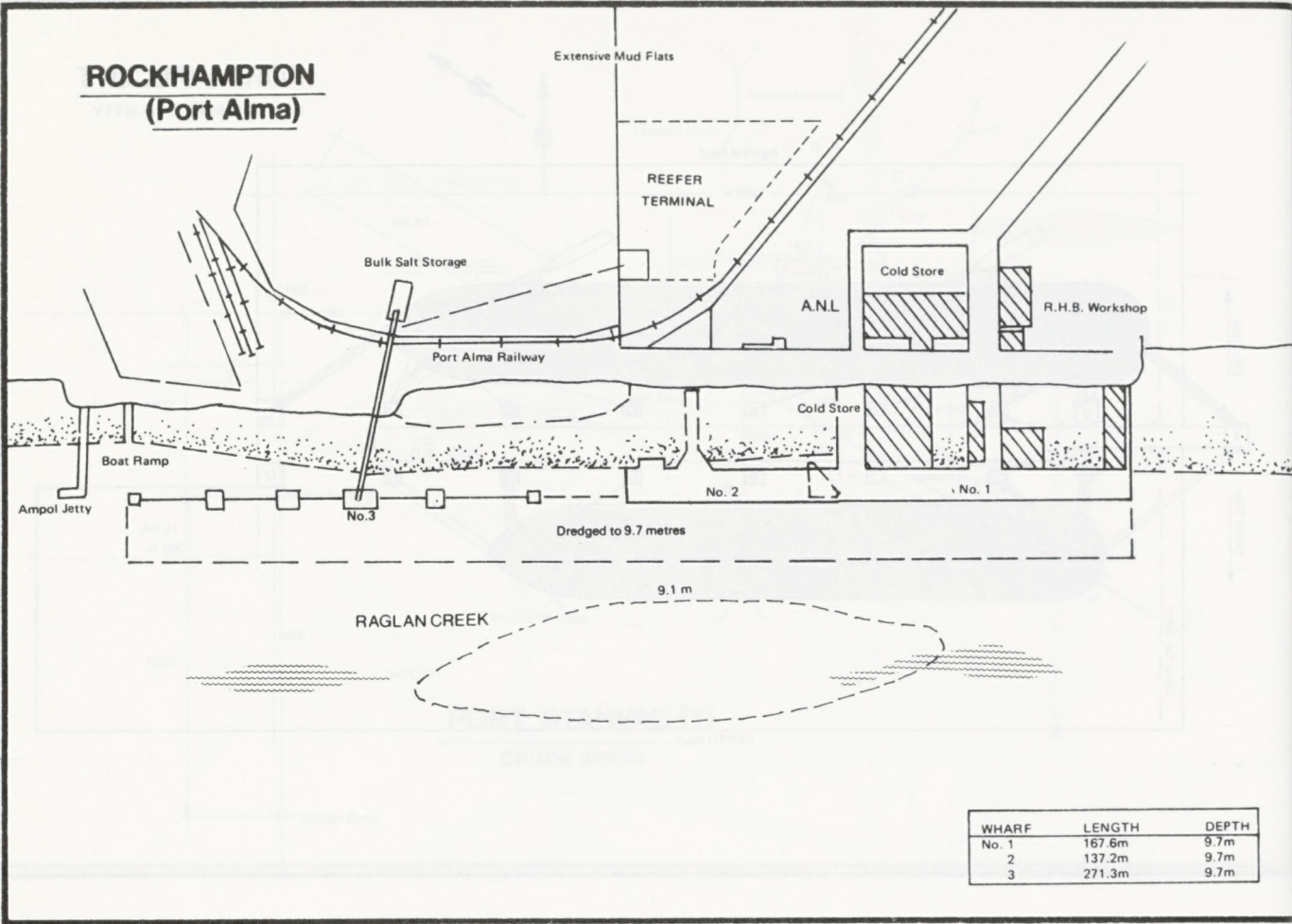


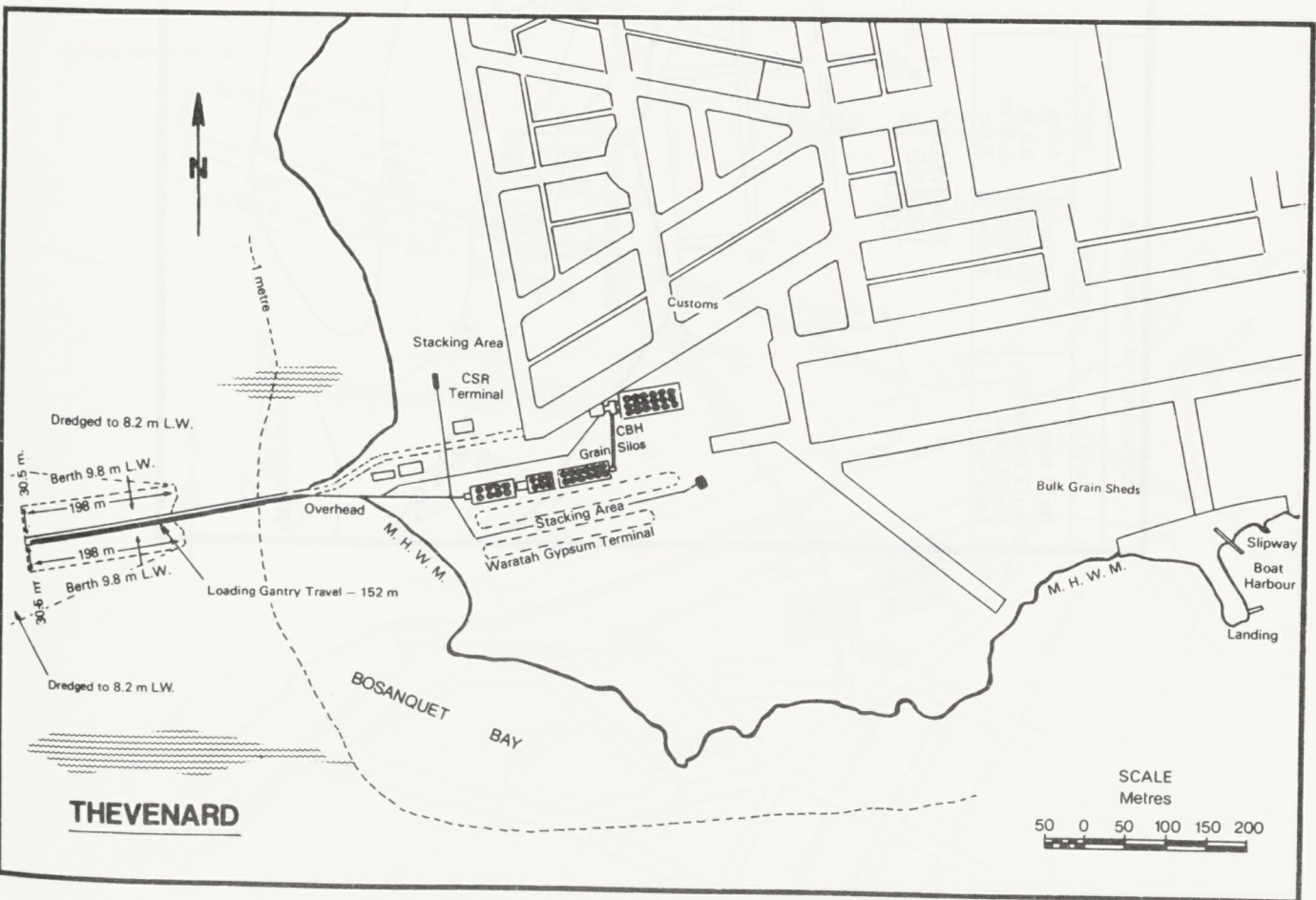
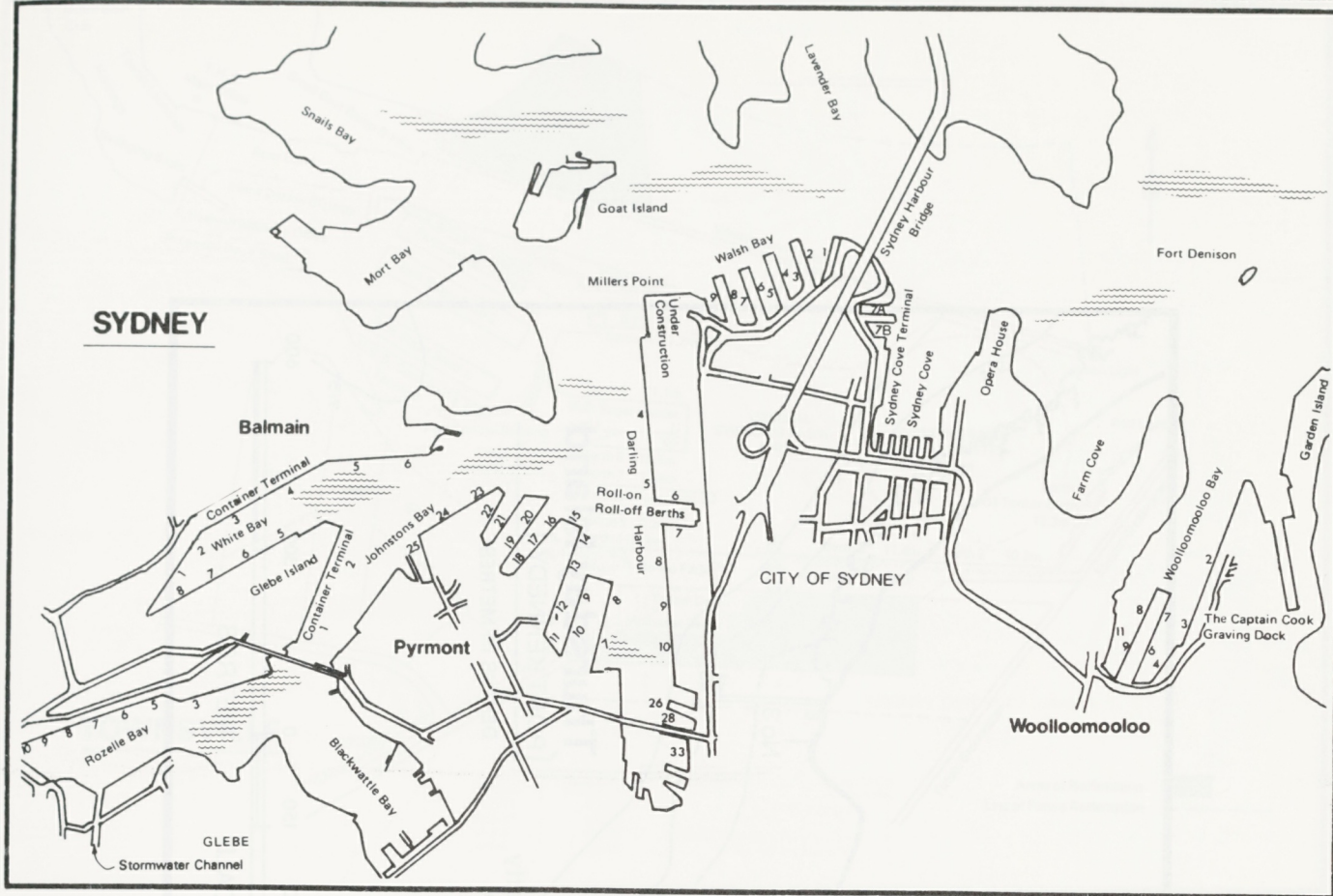


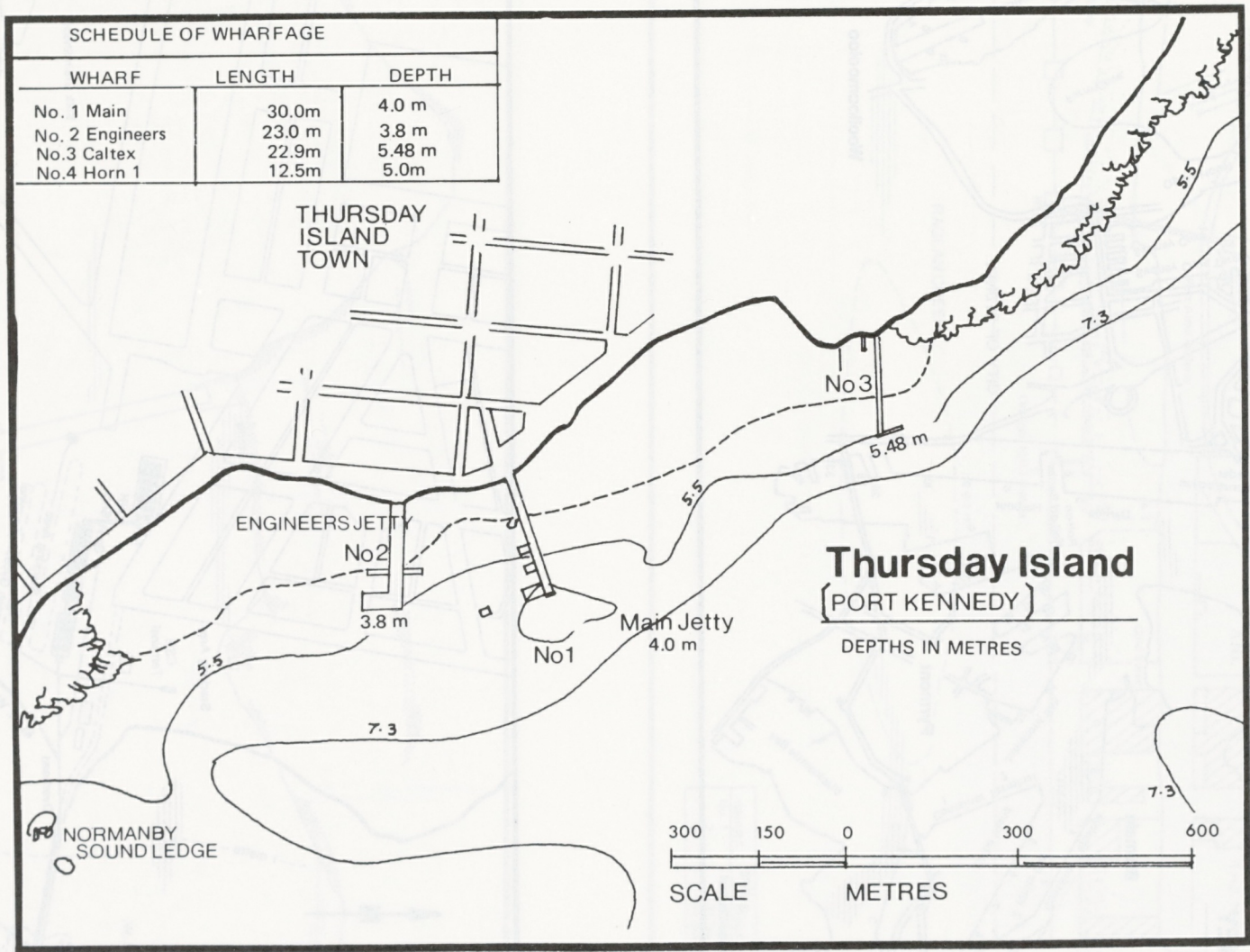
PORT WALCOTT
CAPE LAMBERT ORE JETTY

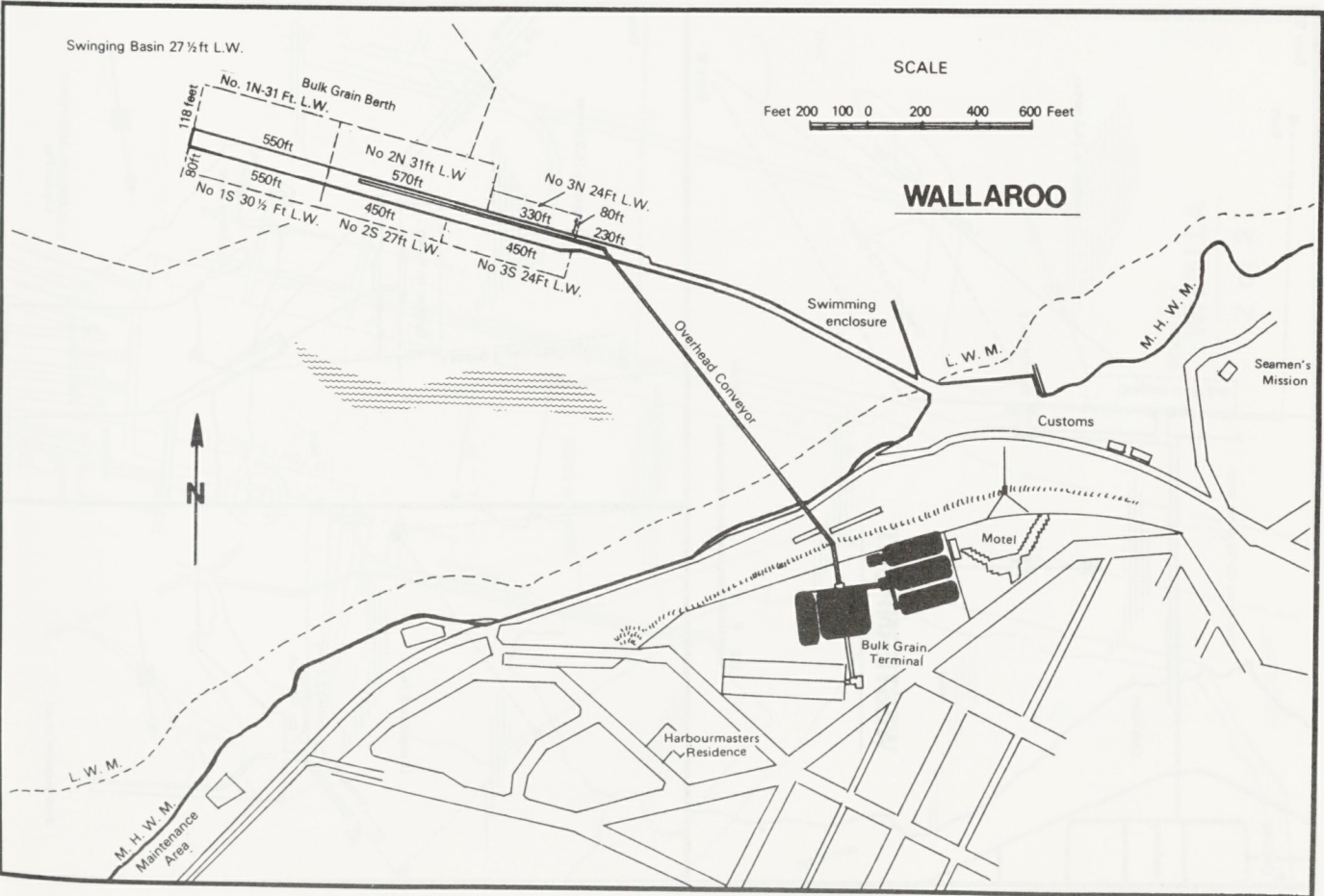
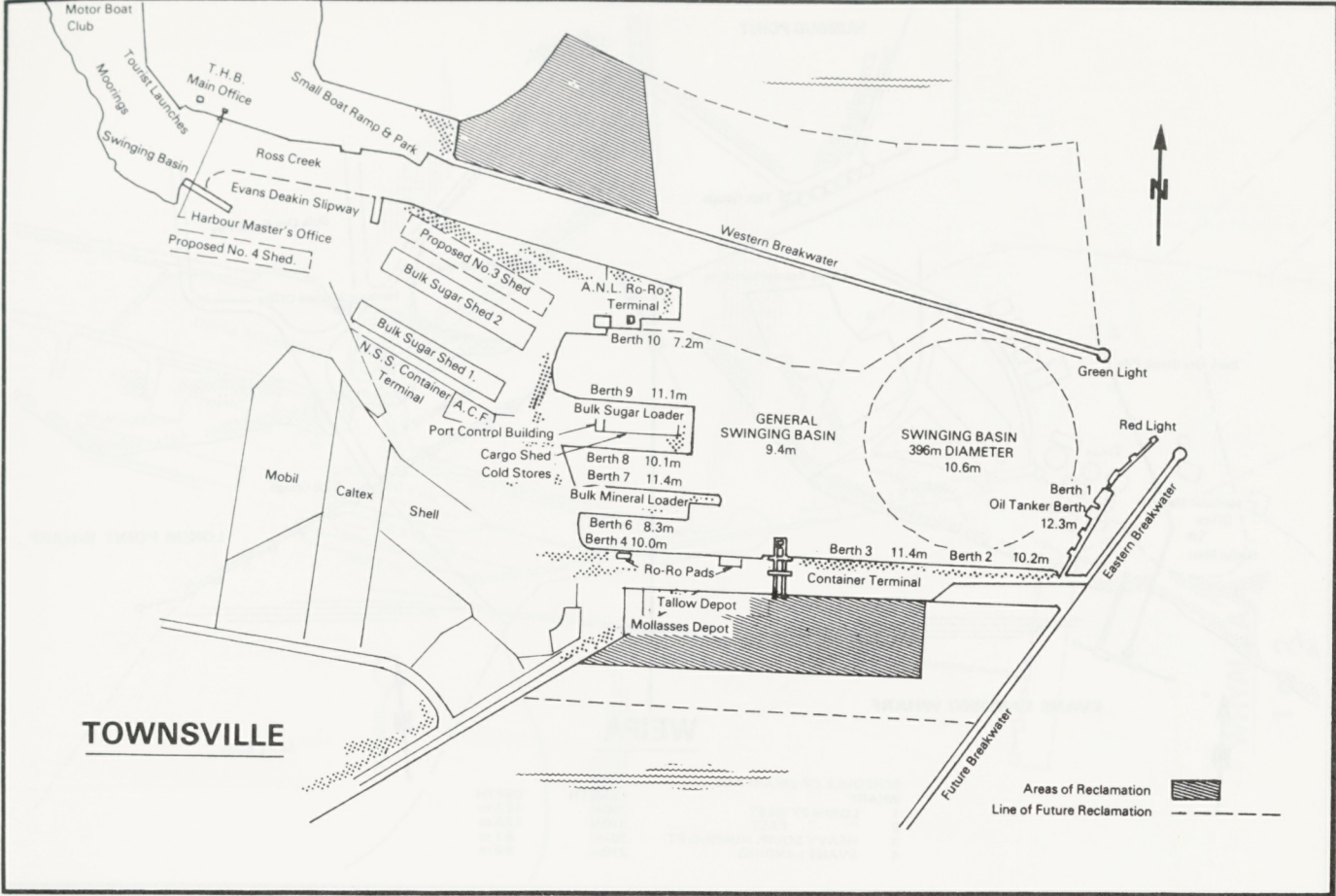


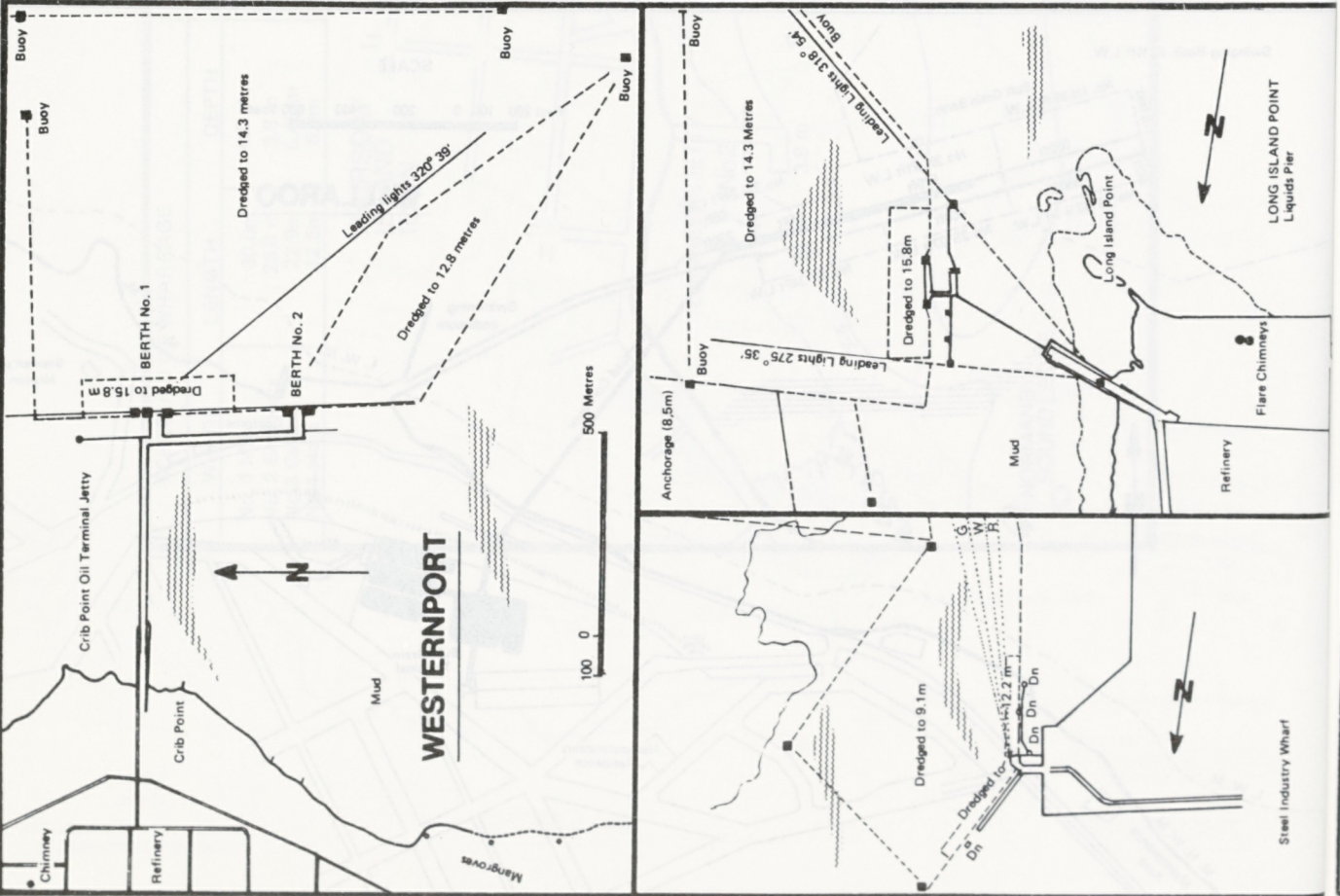
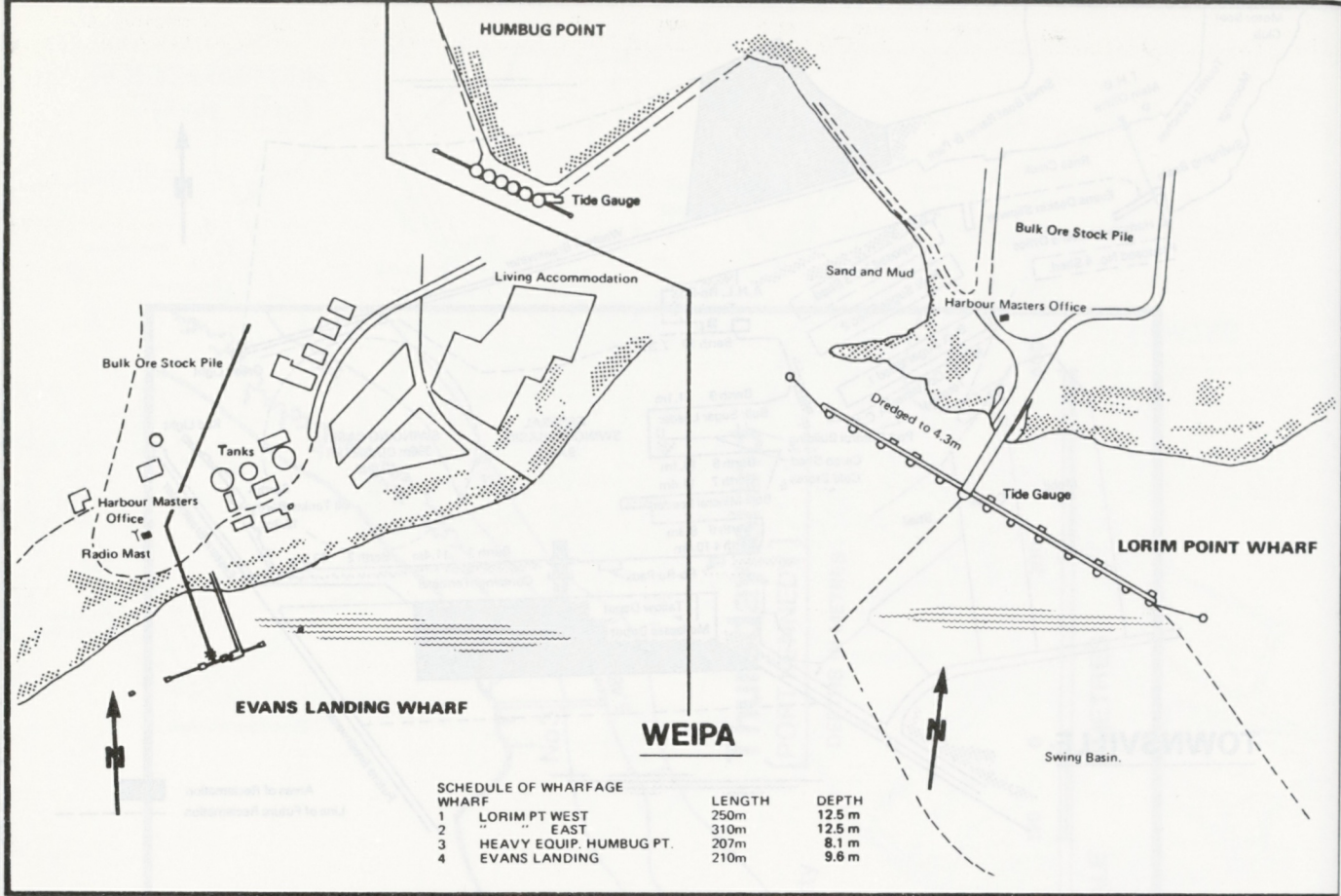
ROCKHAMPTON
(Port Alma)

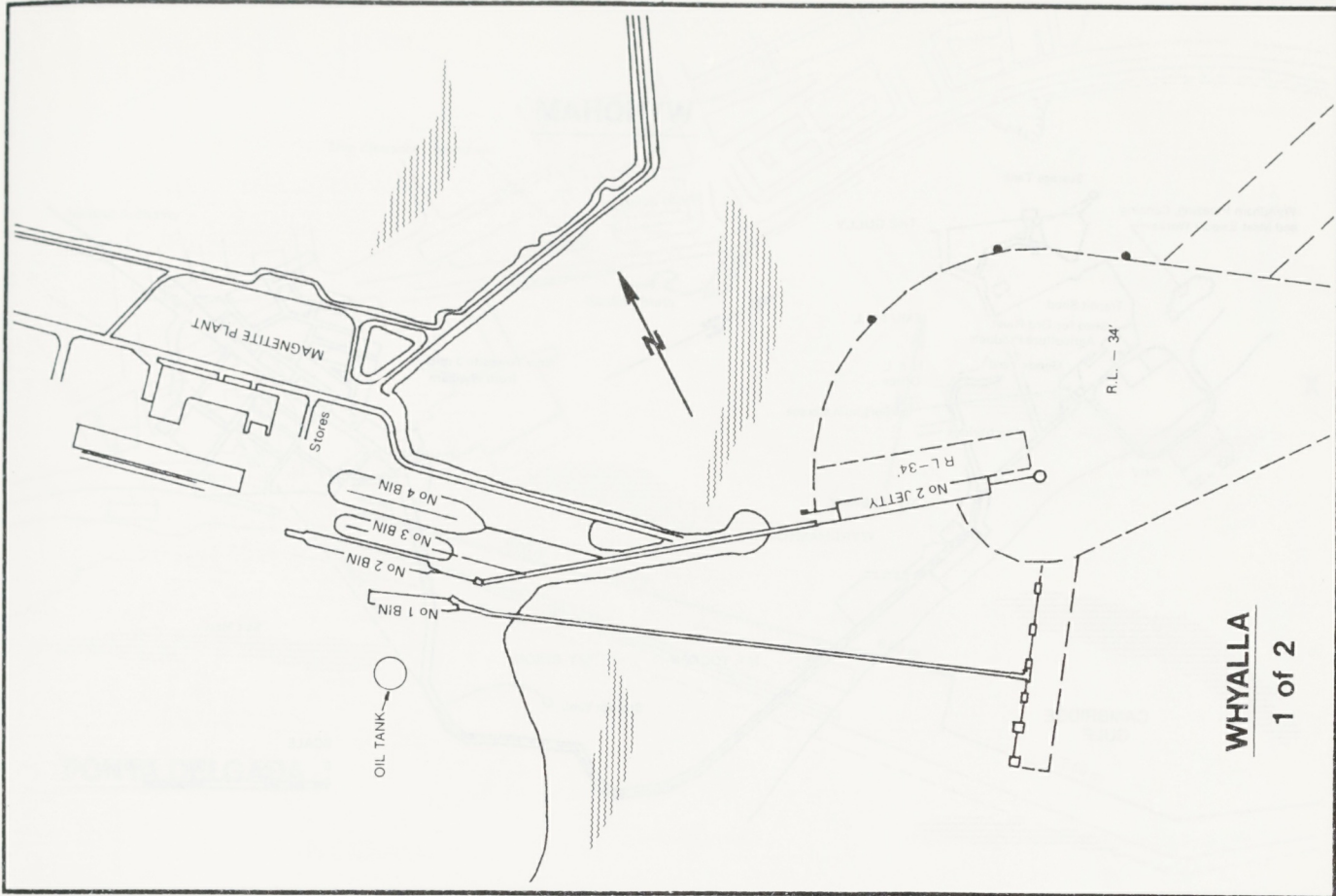




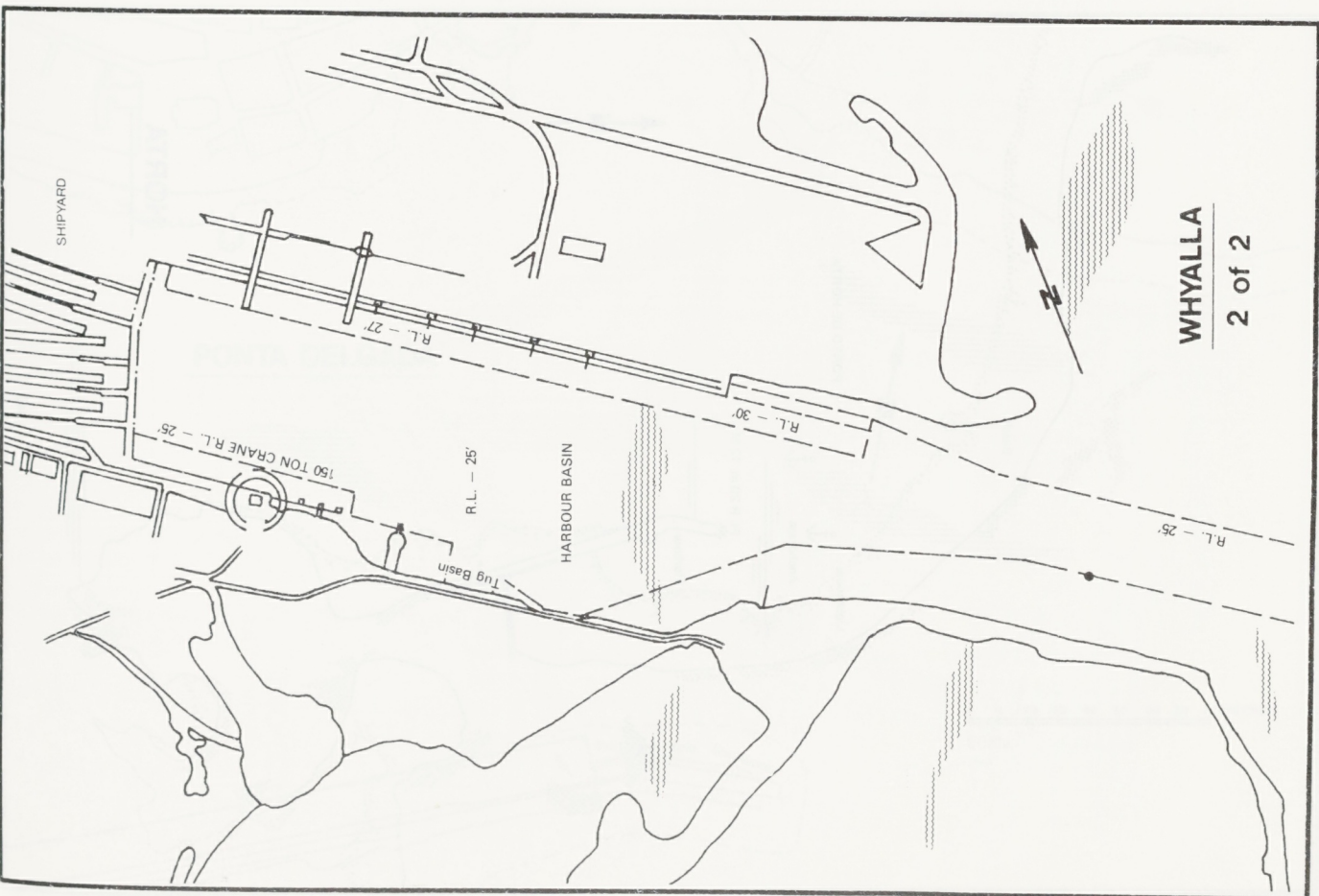






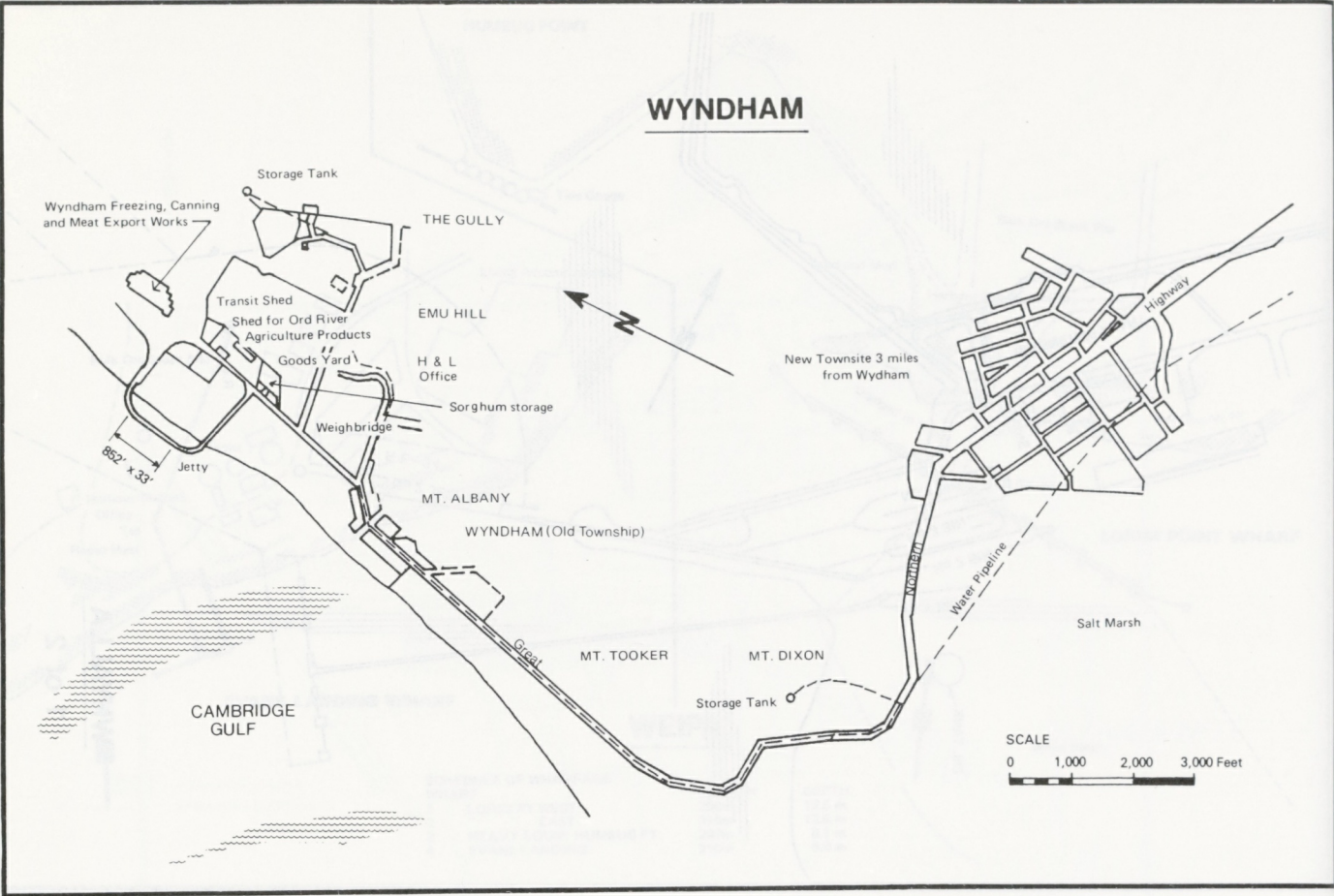


WHYALLA
1 of 2

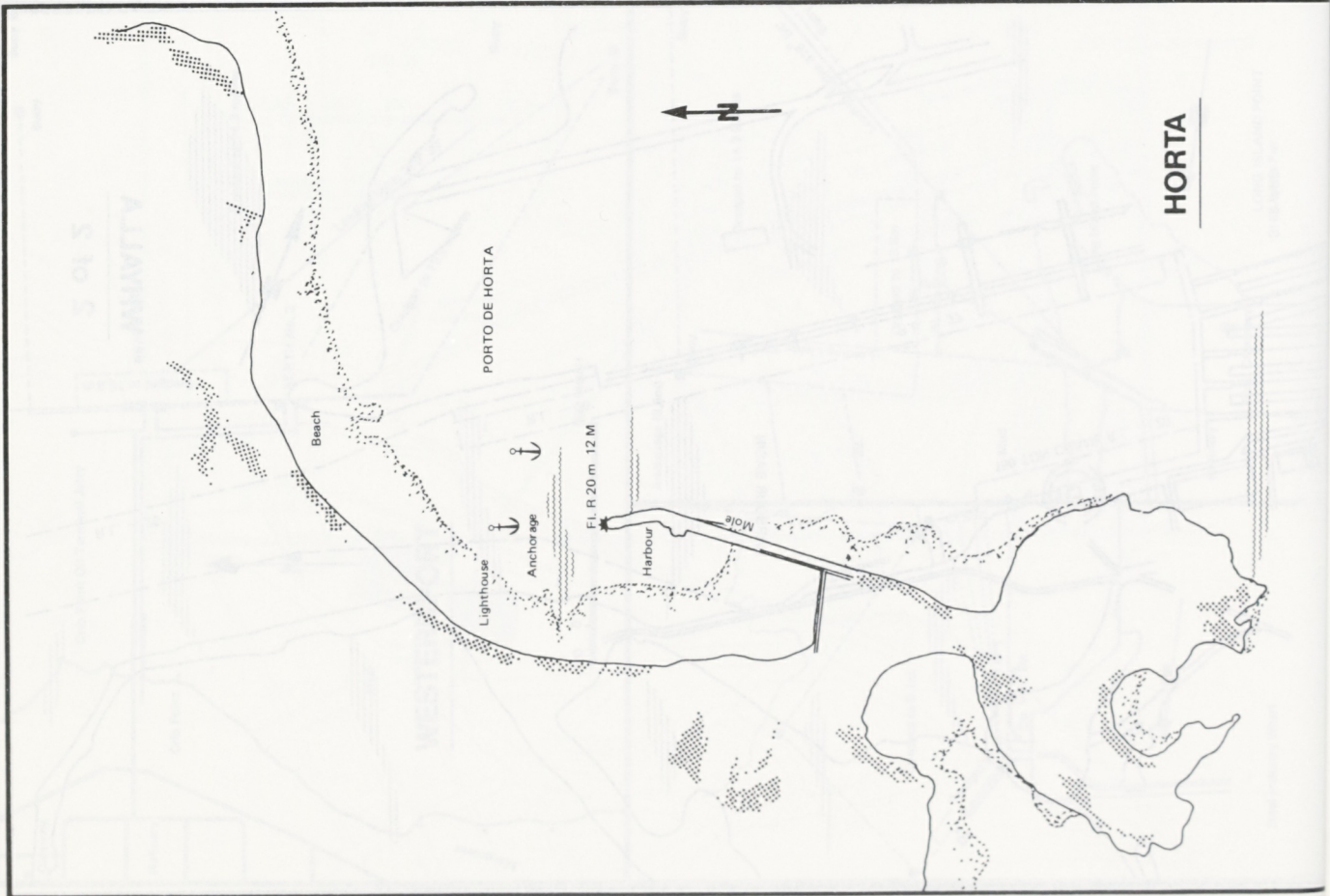


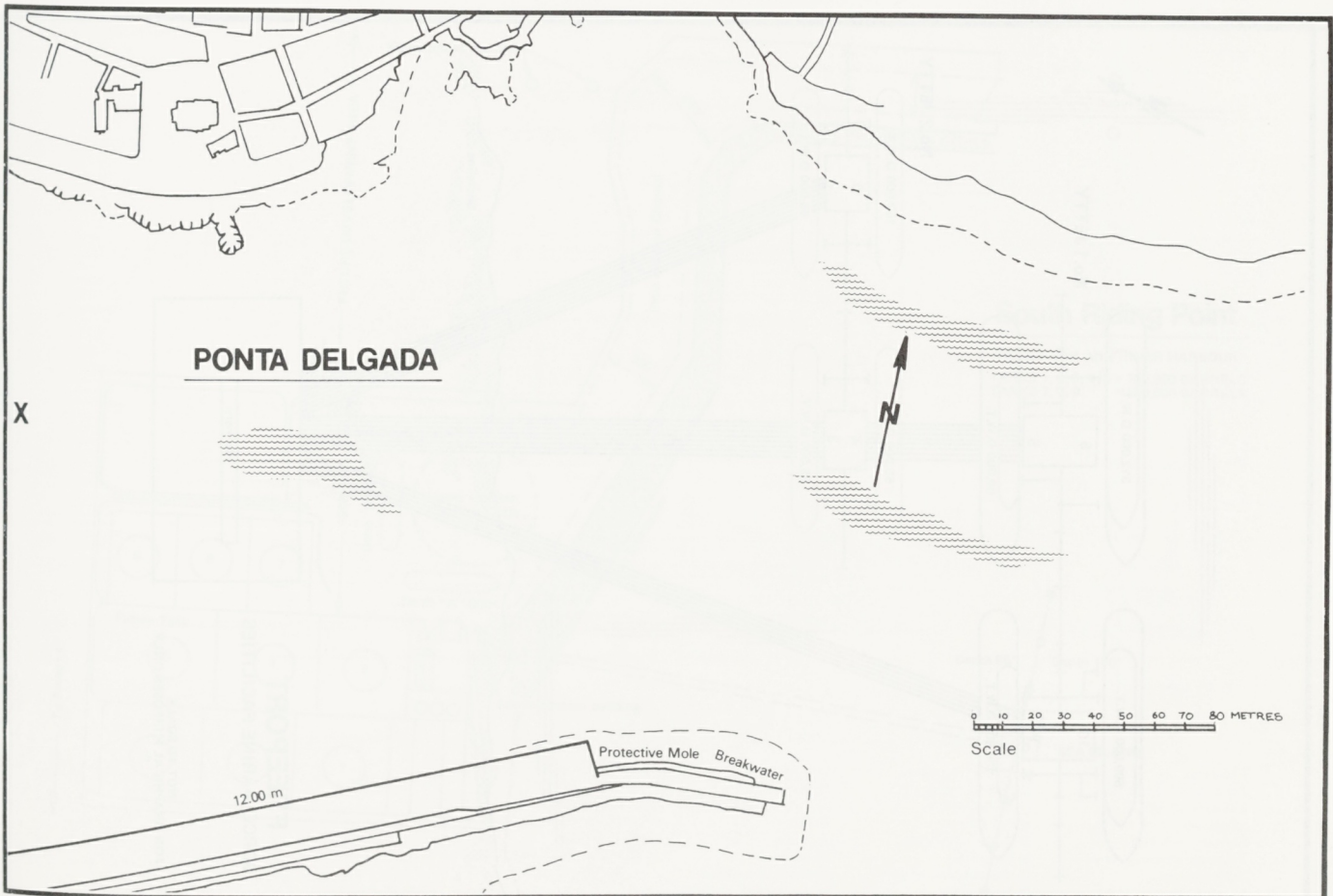
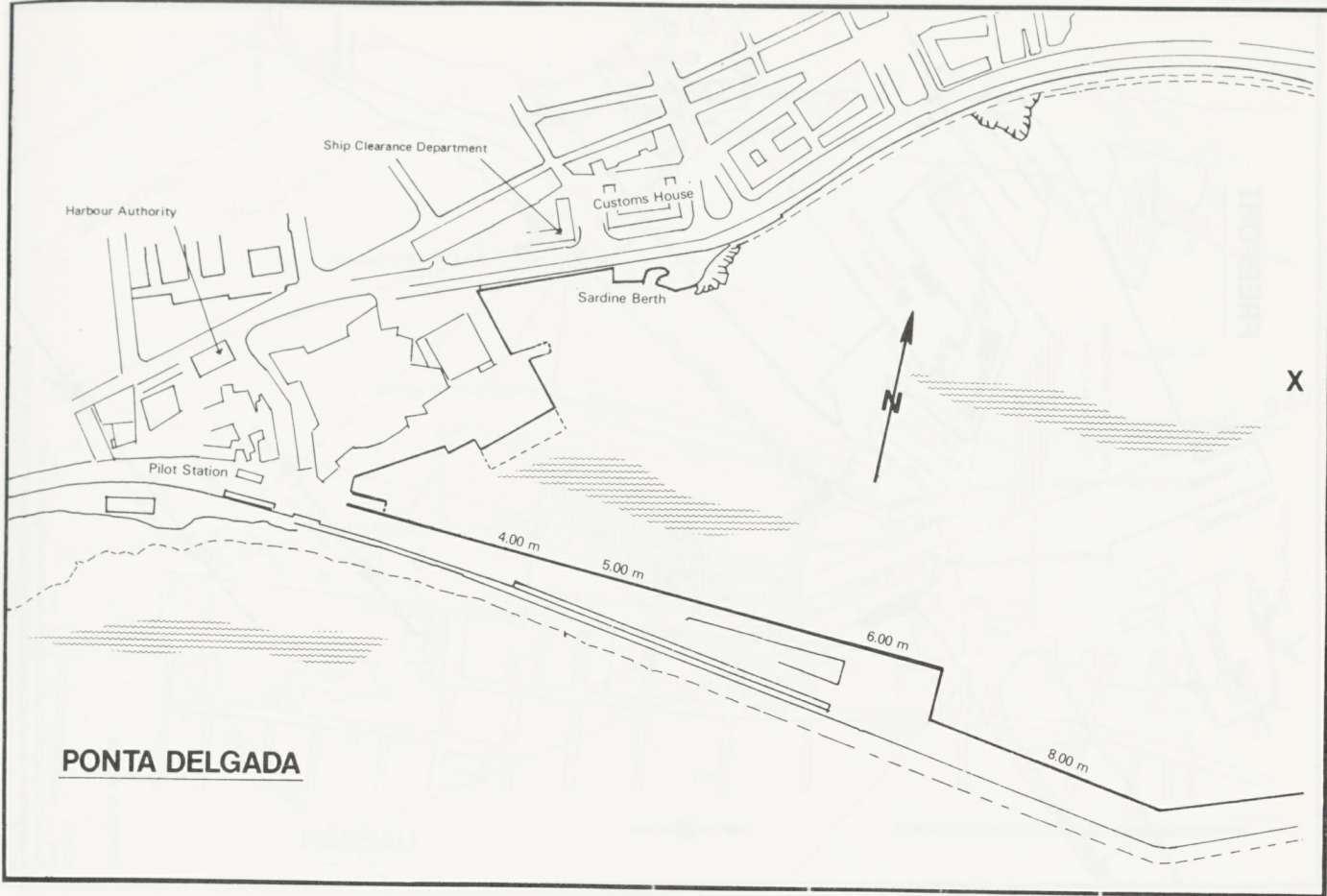
WHYALLA
2 of 2

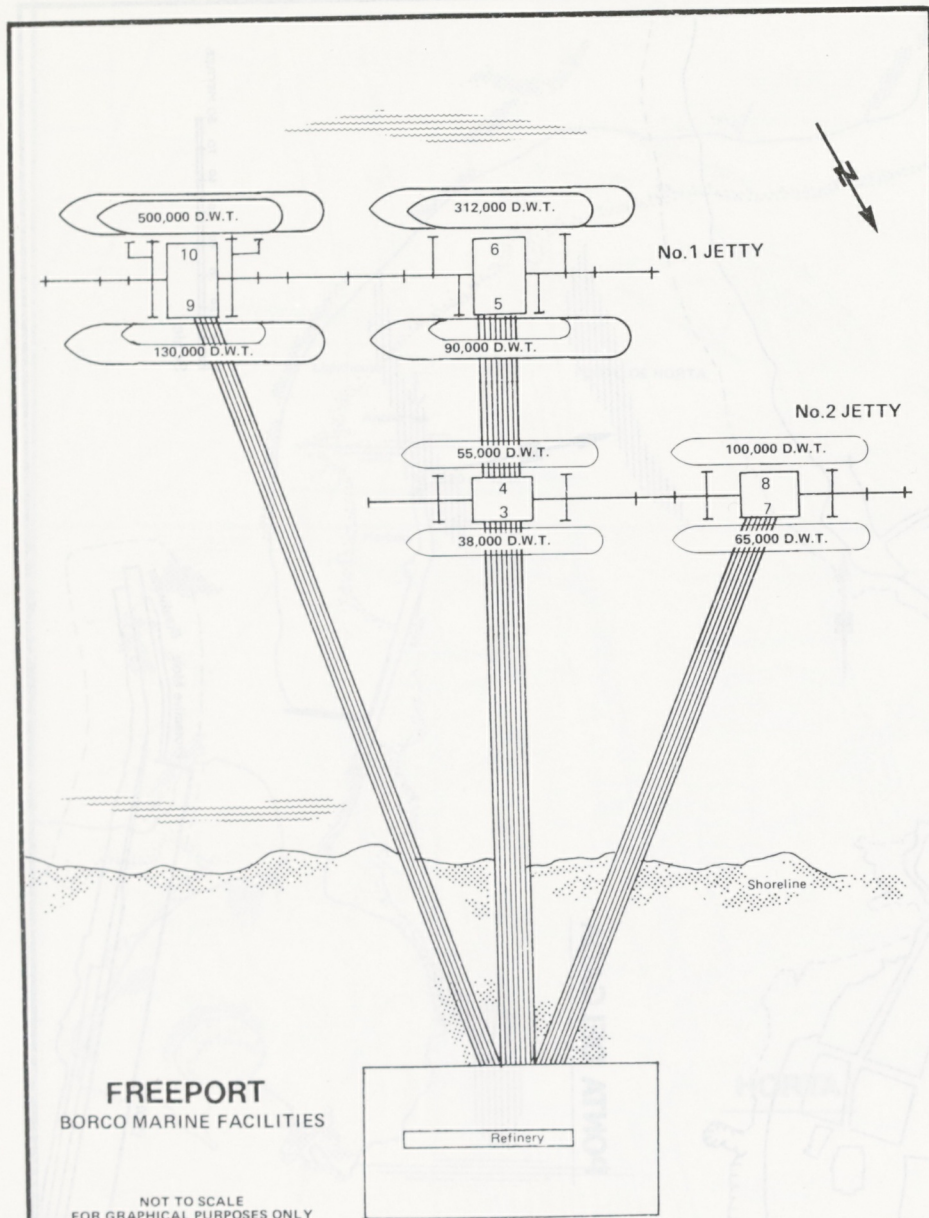
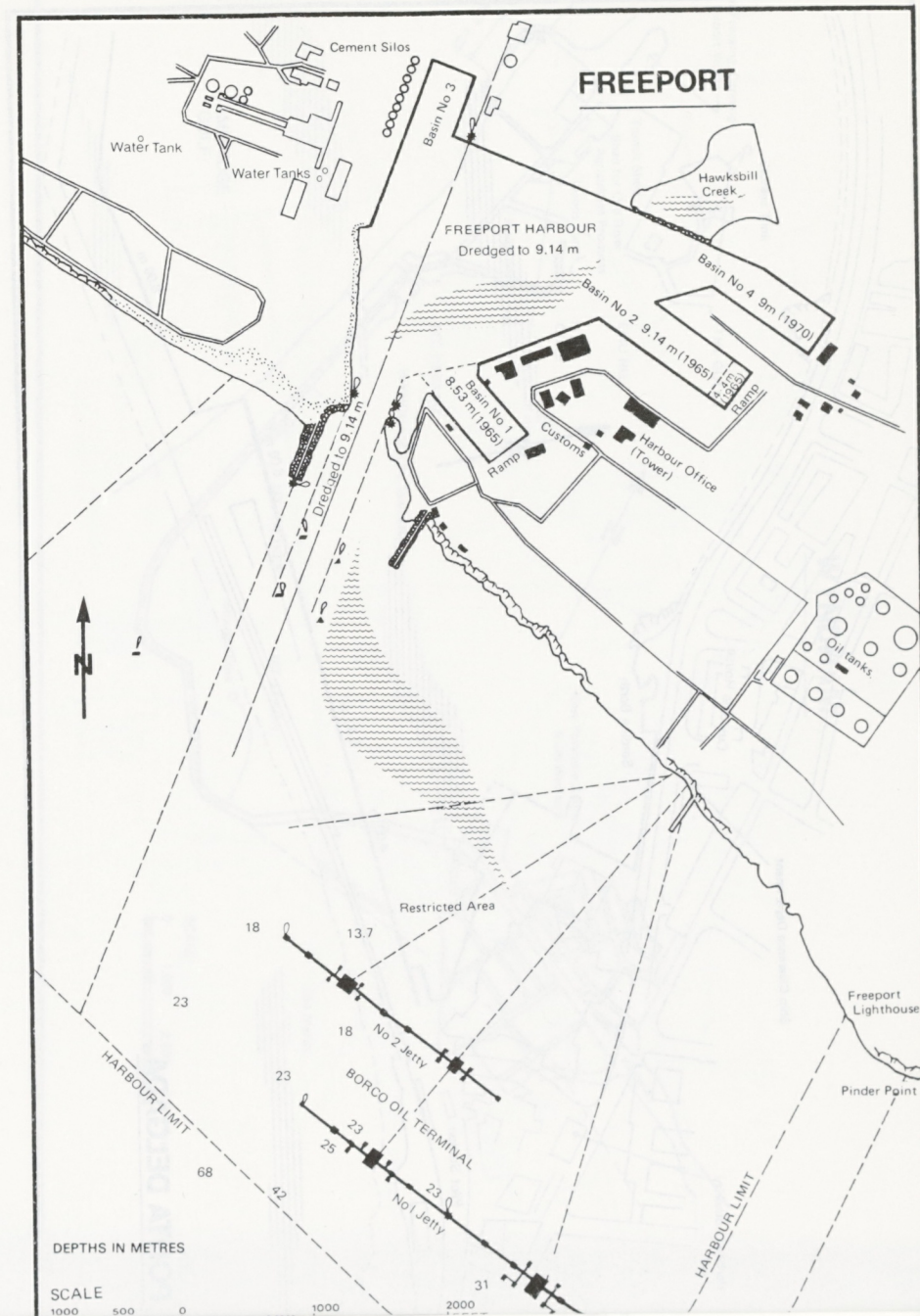
WYNDHAM

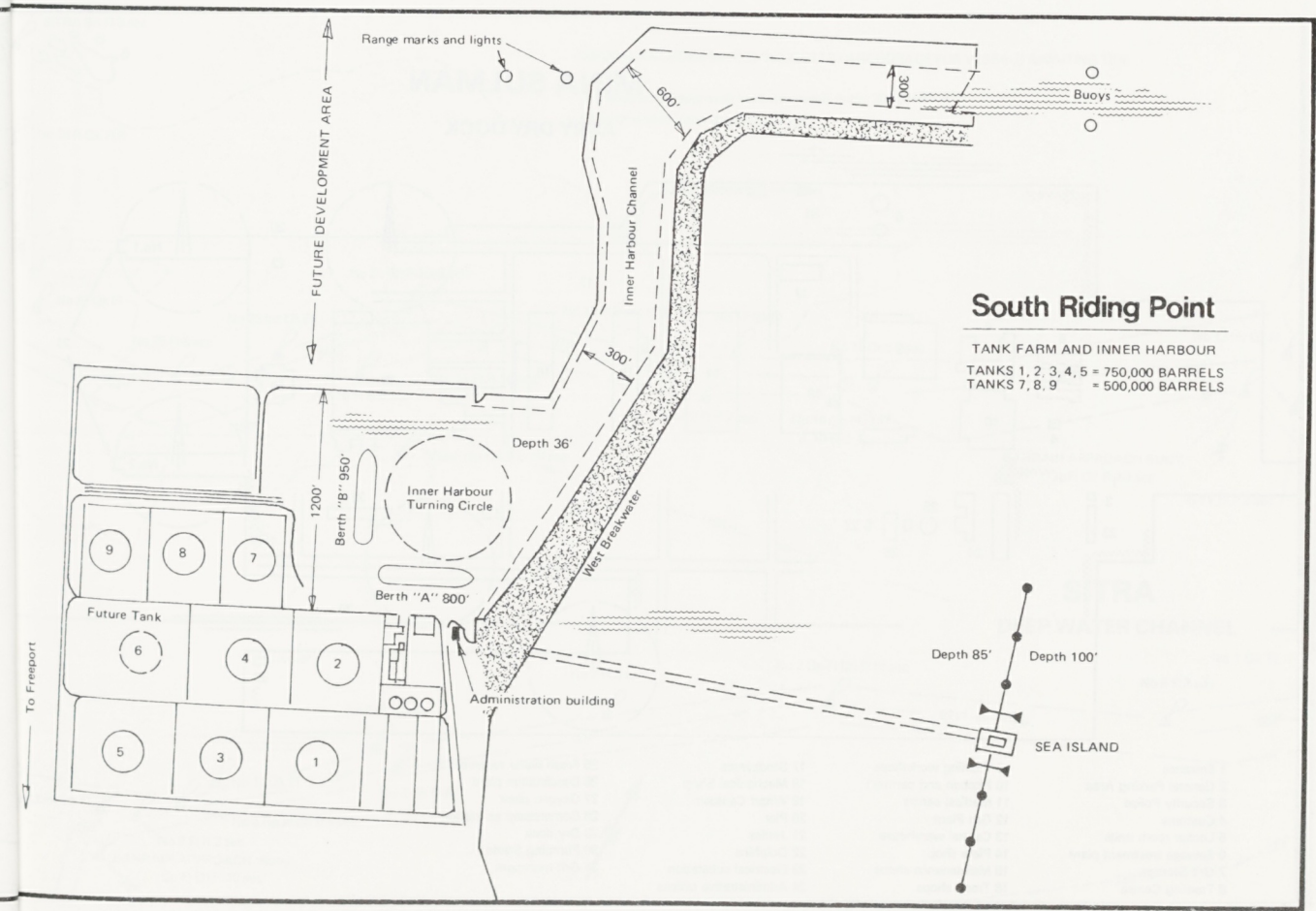
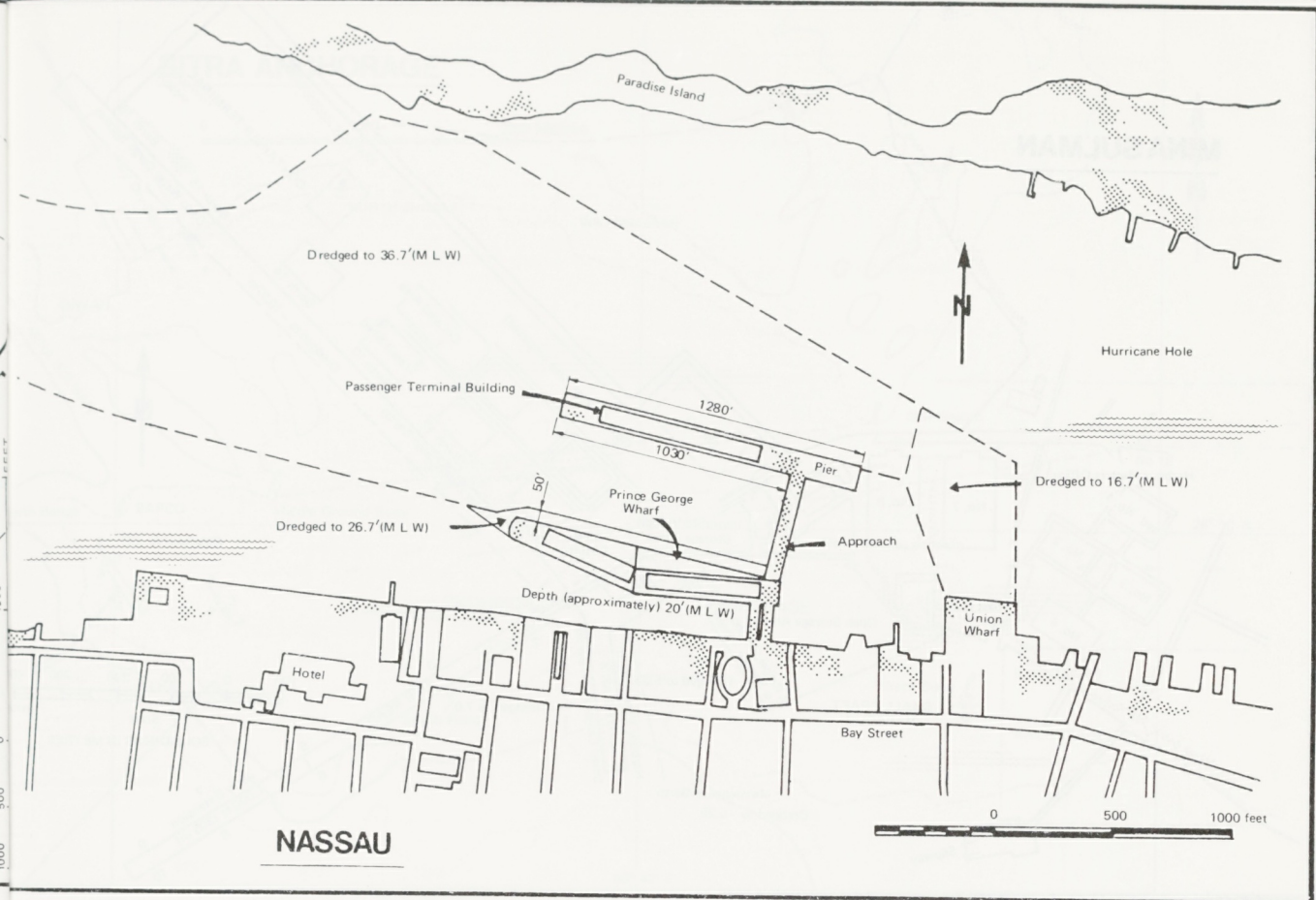


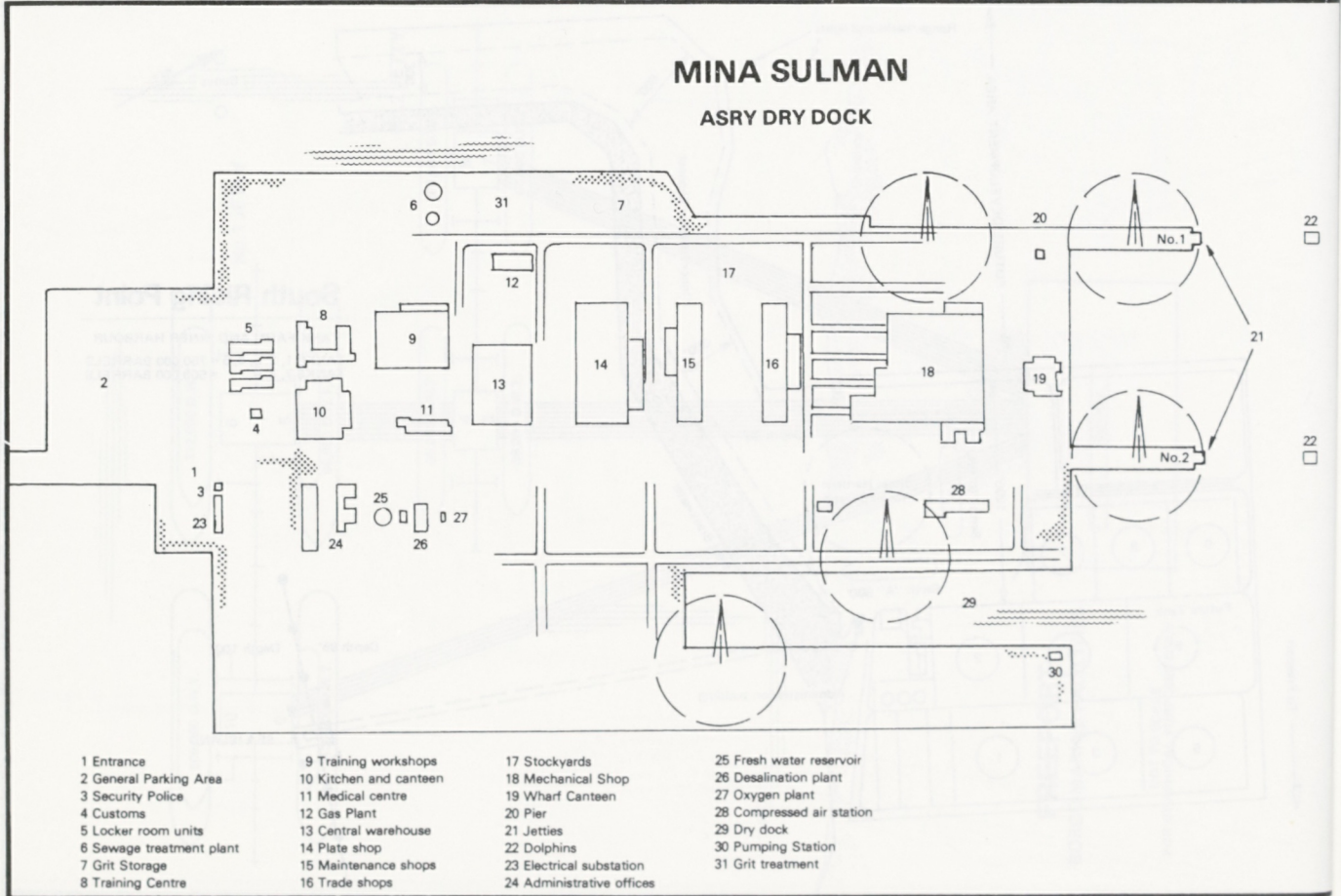
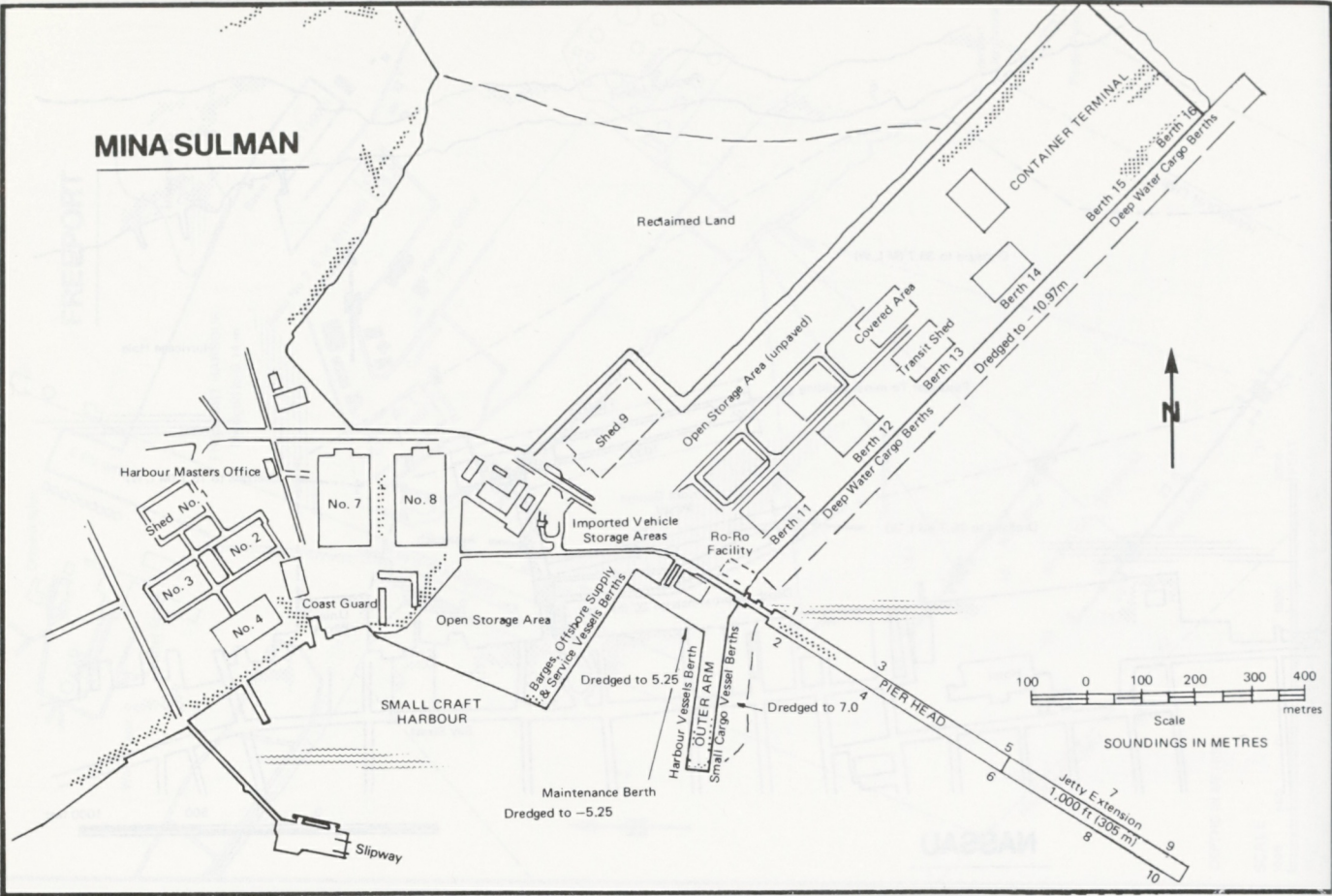
HORTA



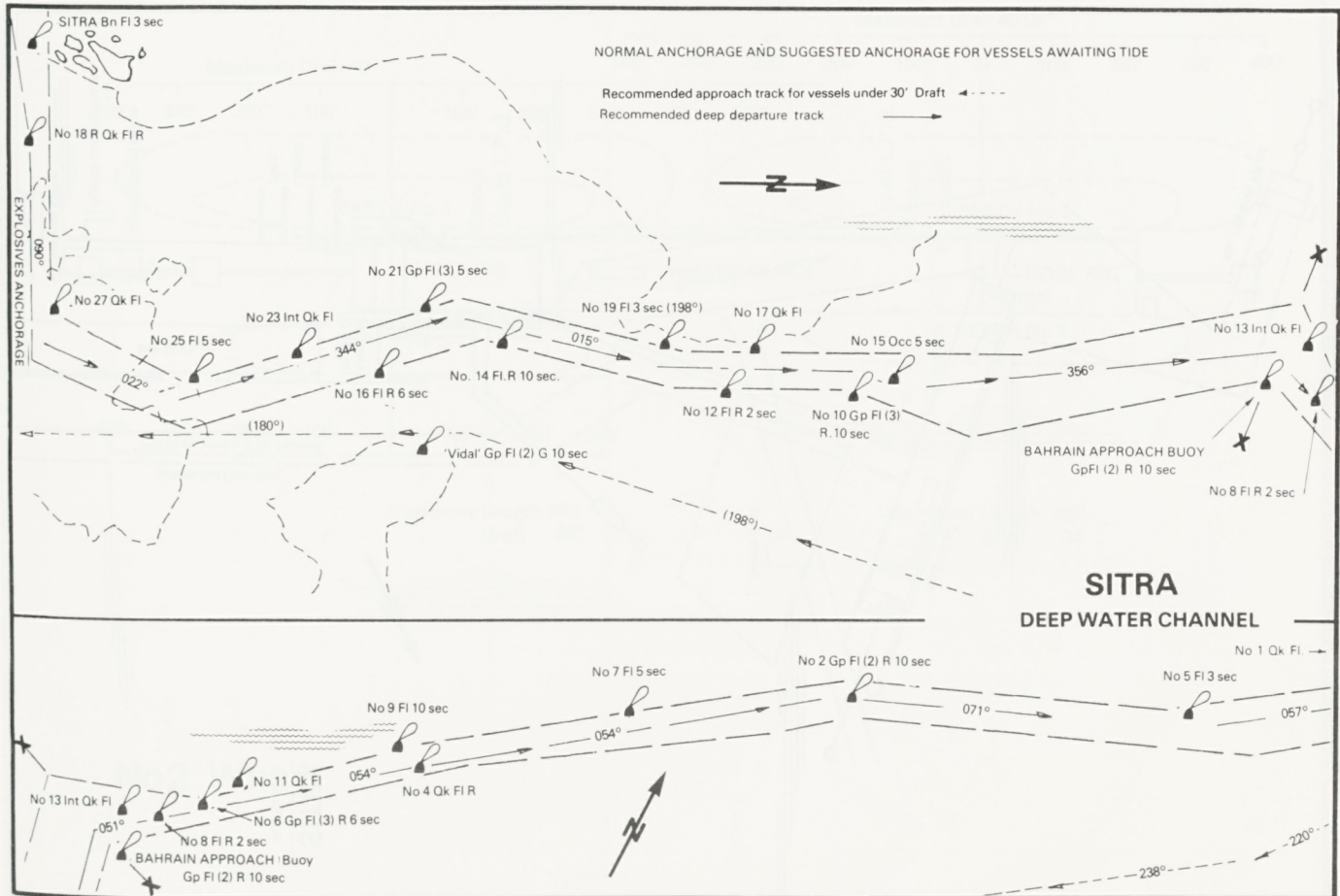
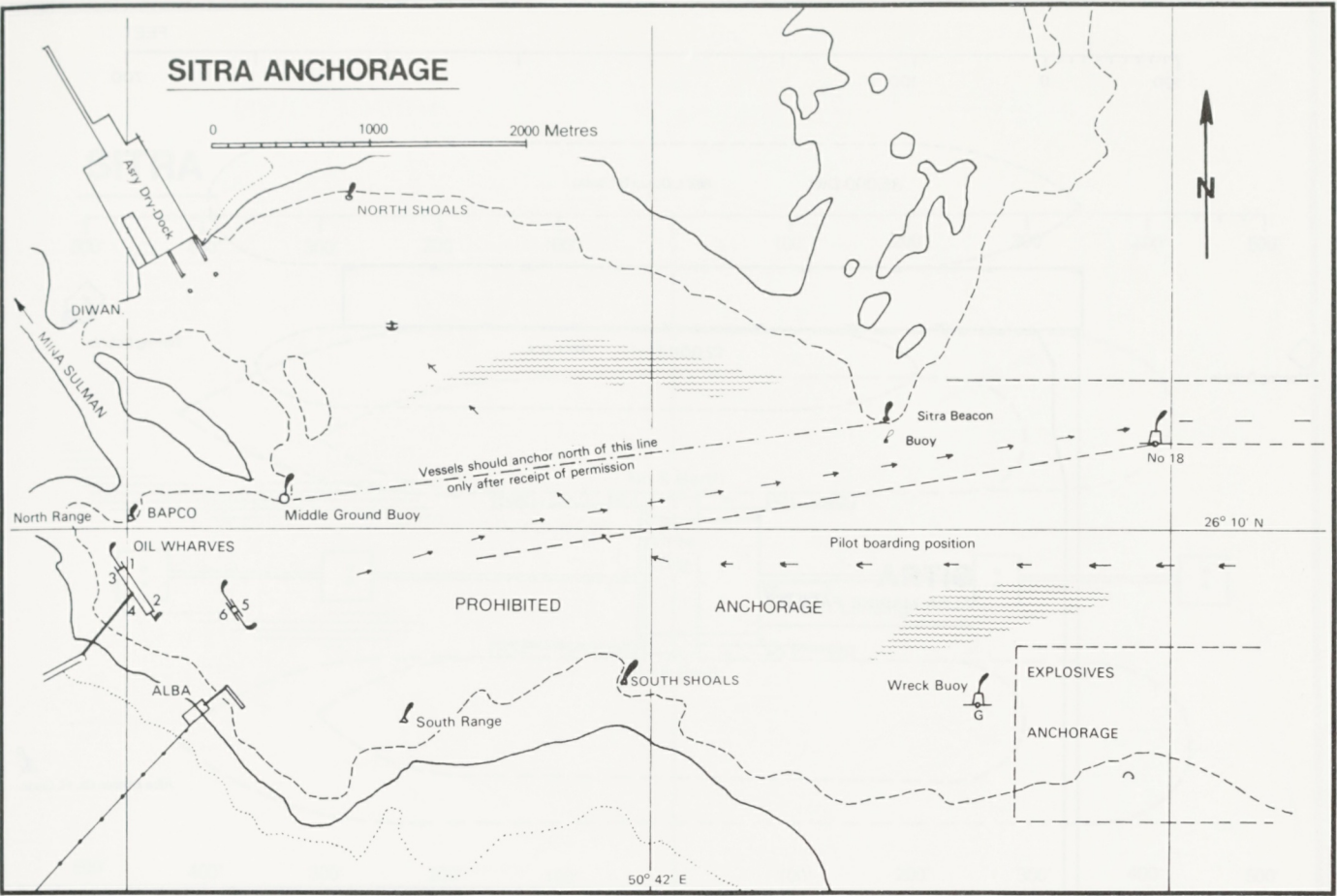


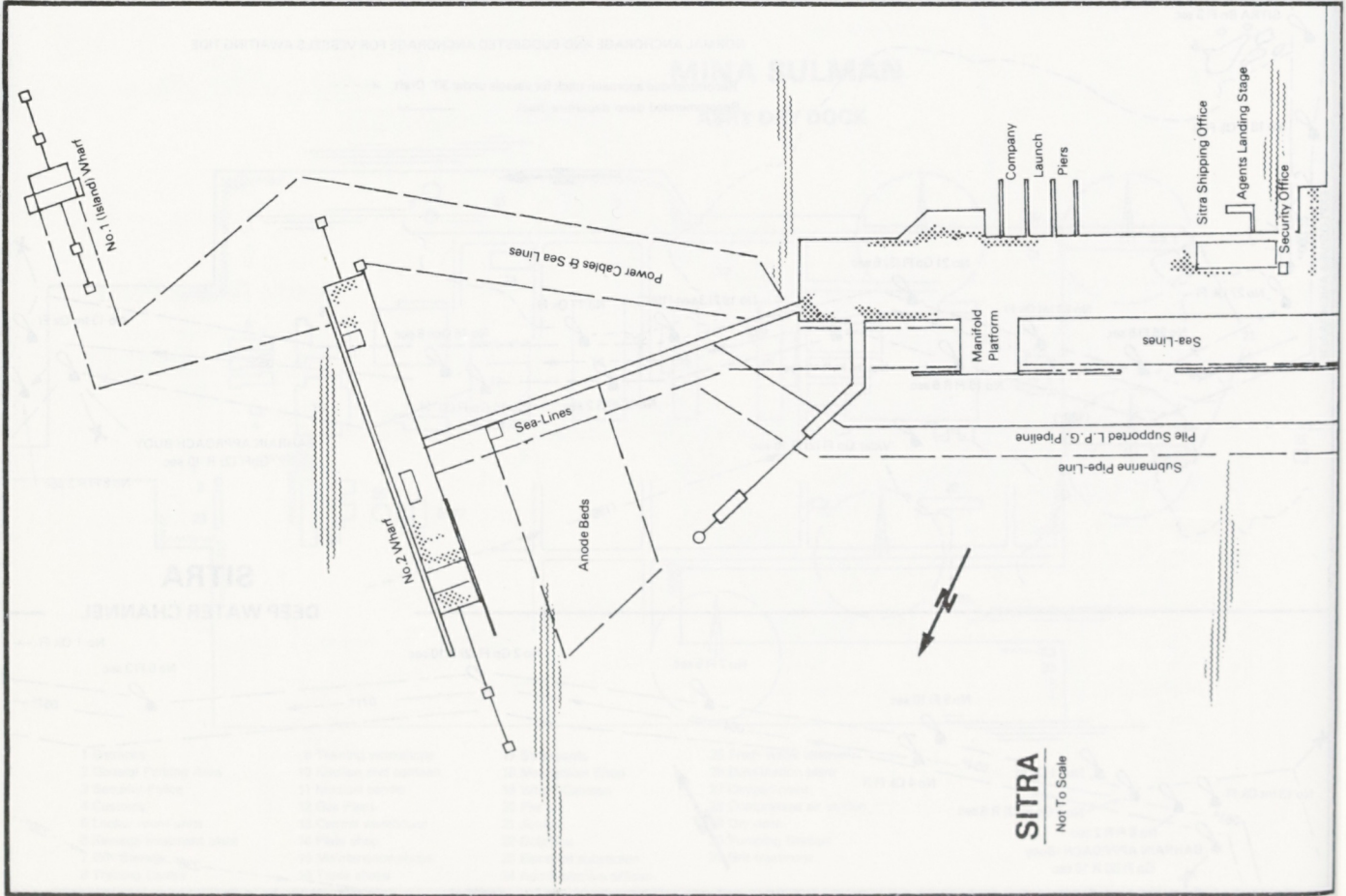
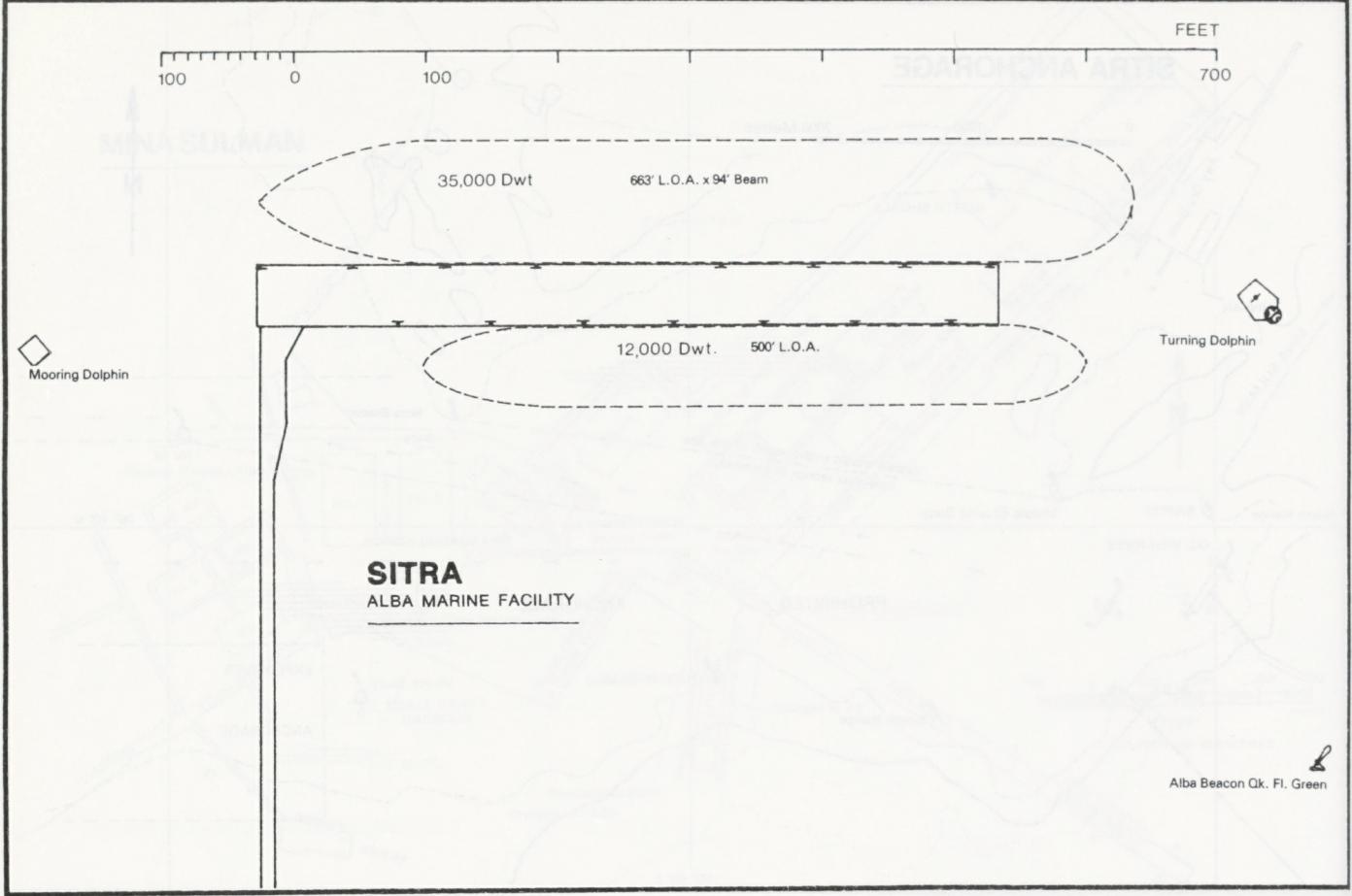




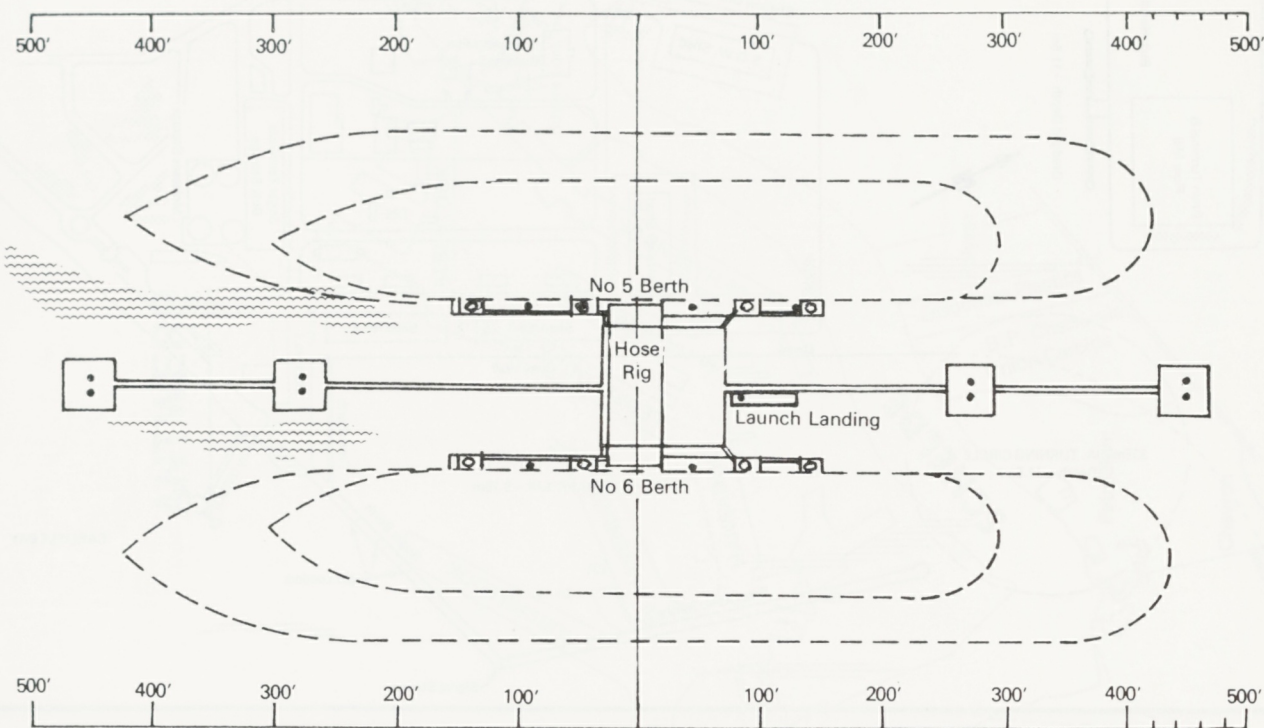


SITRA ANCHORAGE

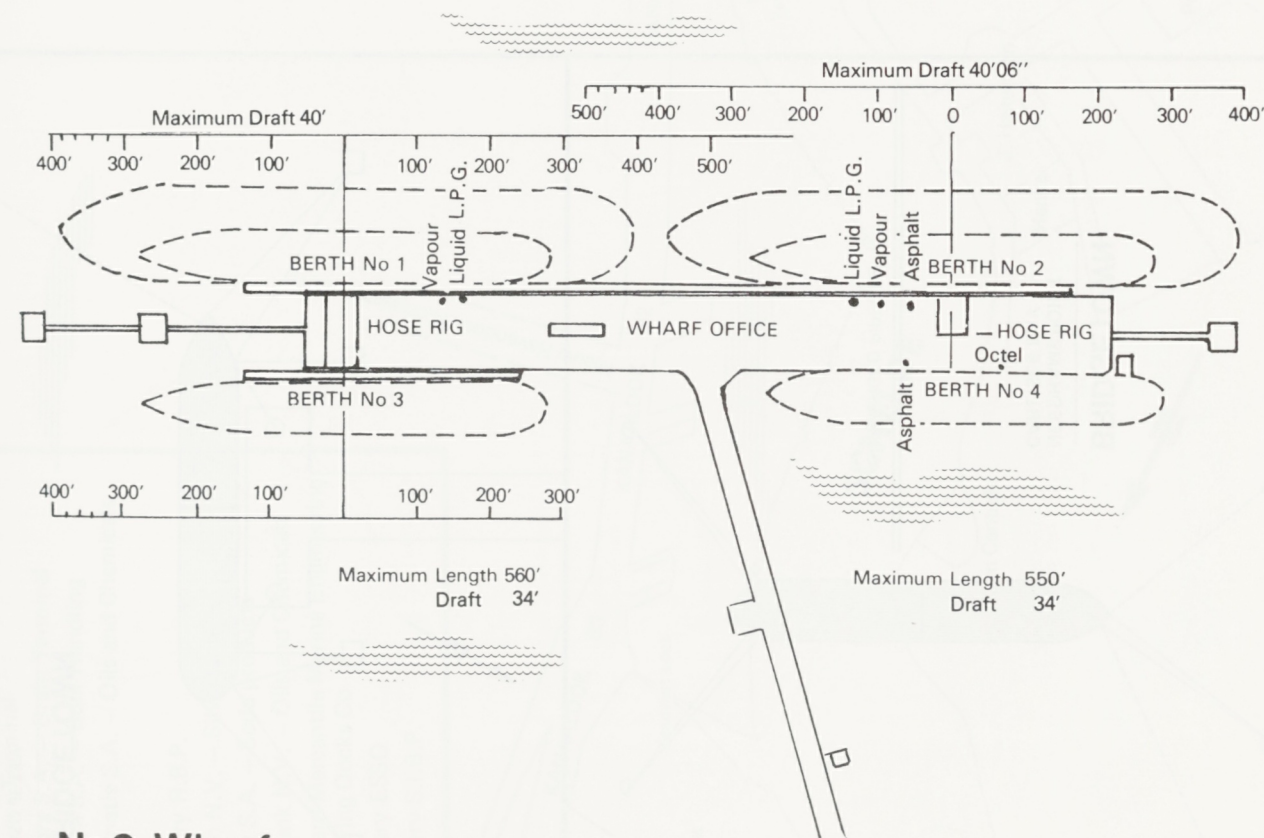




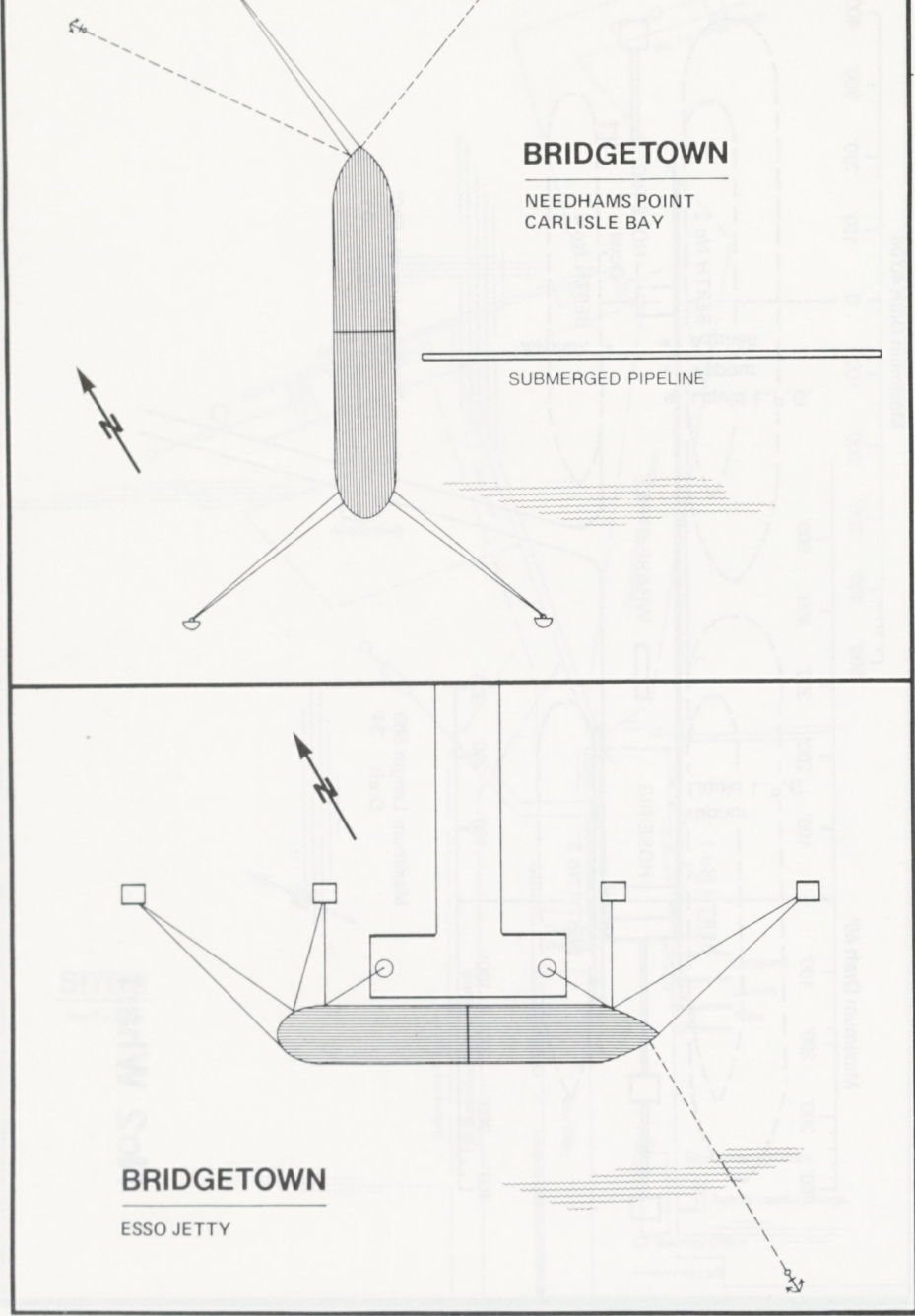
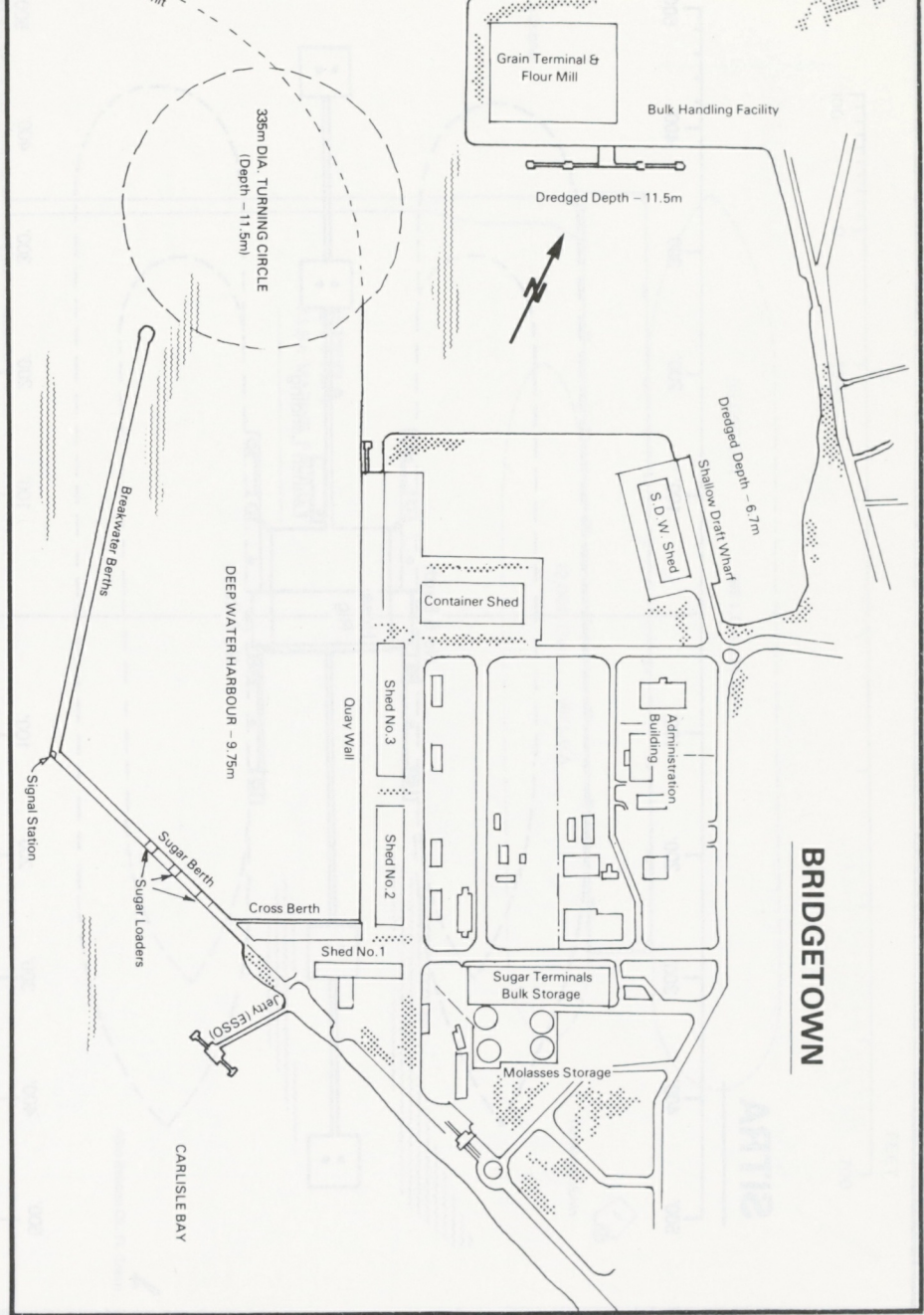
SITRA



No1 Island Wharf



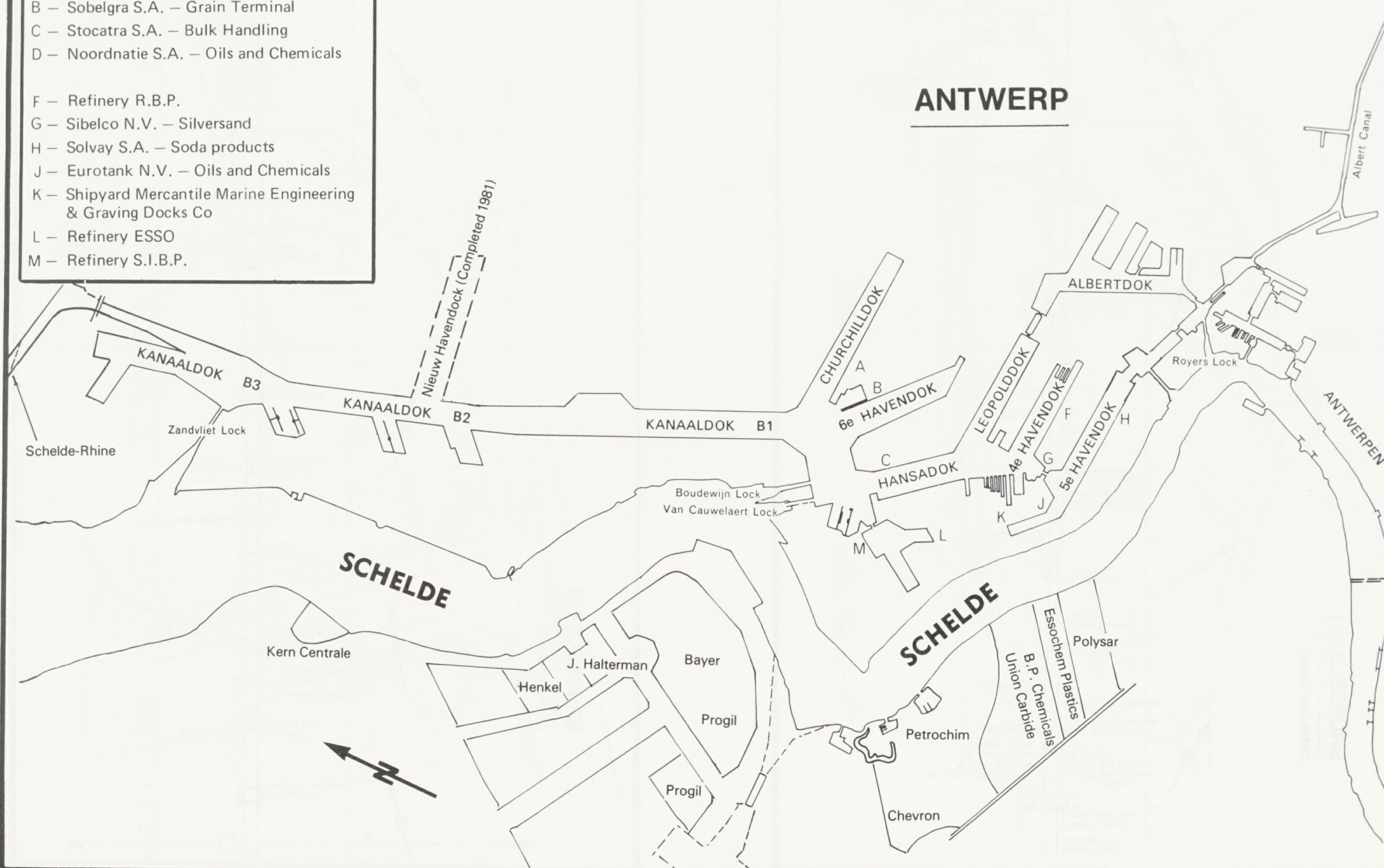
No2 Wharf



- A — Container Terminal
- B — Sobelgra S.A. — Grain Terminal
- C — Stocatra S.A. — Bulk Handling
- D — Noordnatie S.A. — Oils and Chemicals

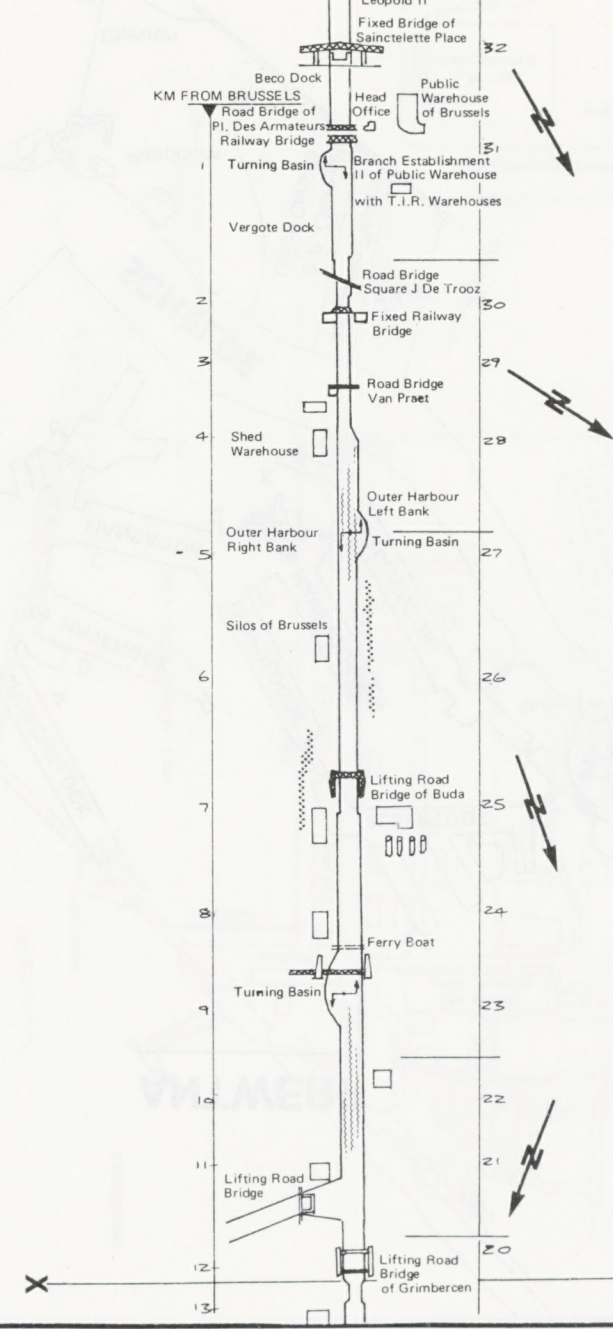
- F — Refinery R.B.P.
- G — Sibelco N.V. — Silversand
- H — Solvay S.A. — Soda products
- J — Eurotank N.V. — Oils and Chemicals
- K — Shipyard Mercantile Marine Engineering & Graving Docks Co
- L — Refinery ESSO
- M — Refinery S.I.B.P.

ANTWERP



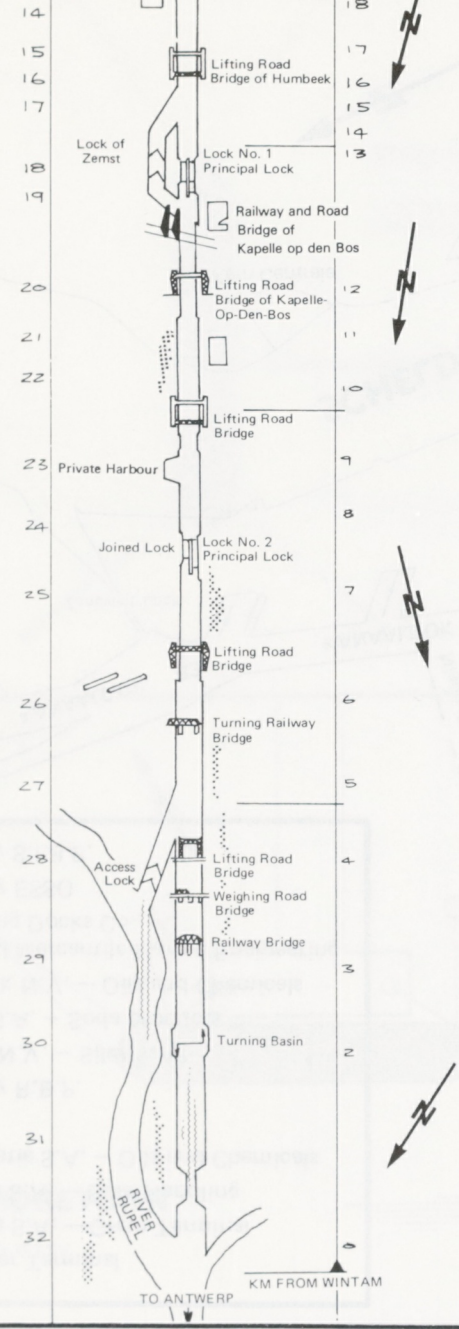
BRUSSELS (1)

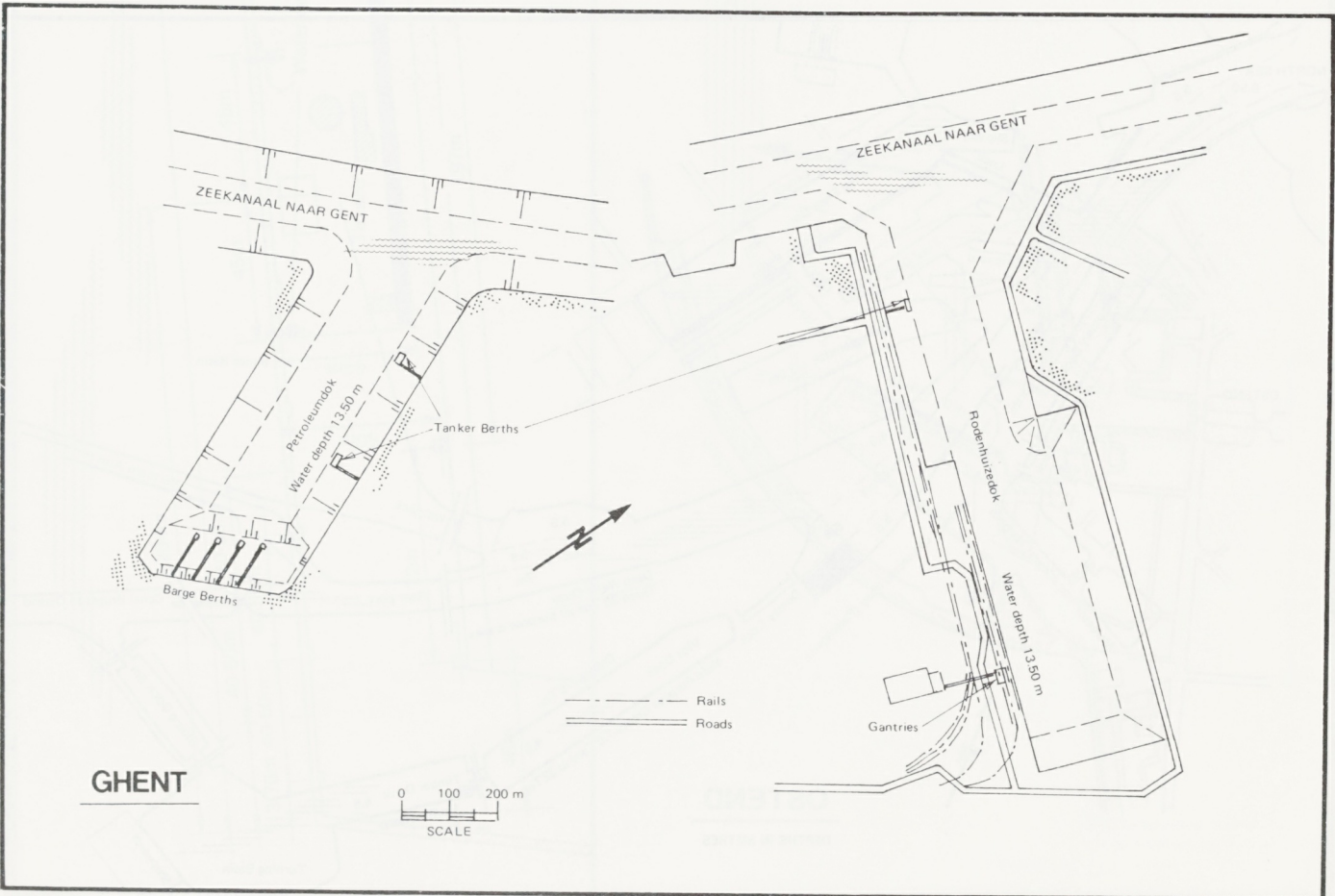
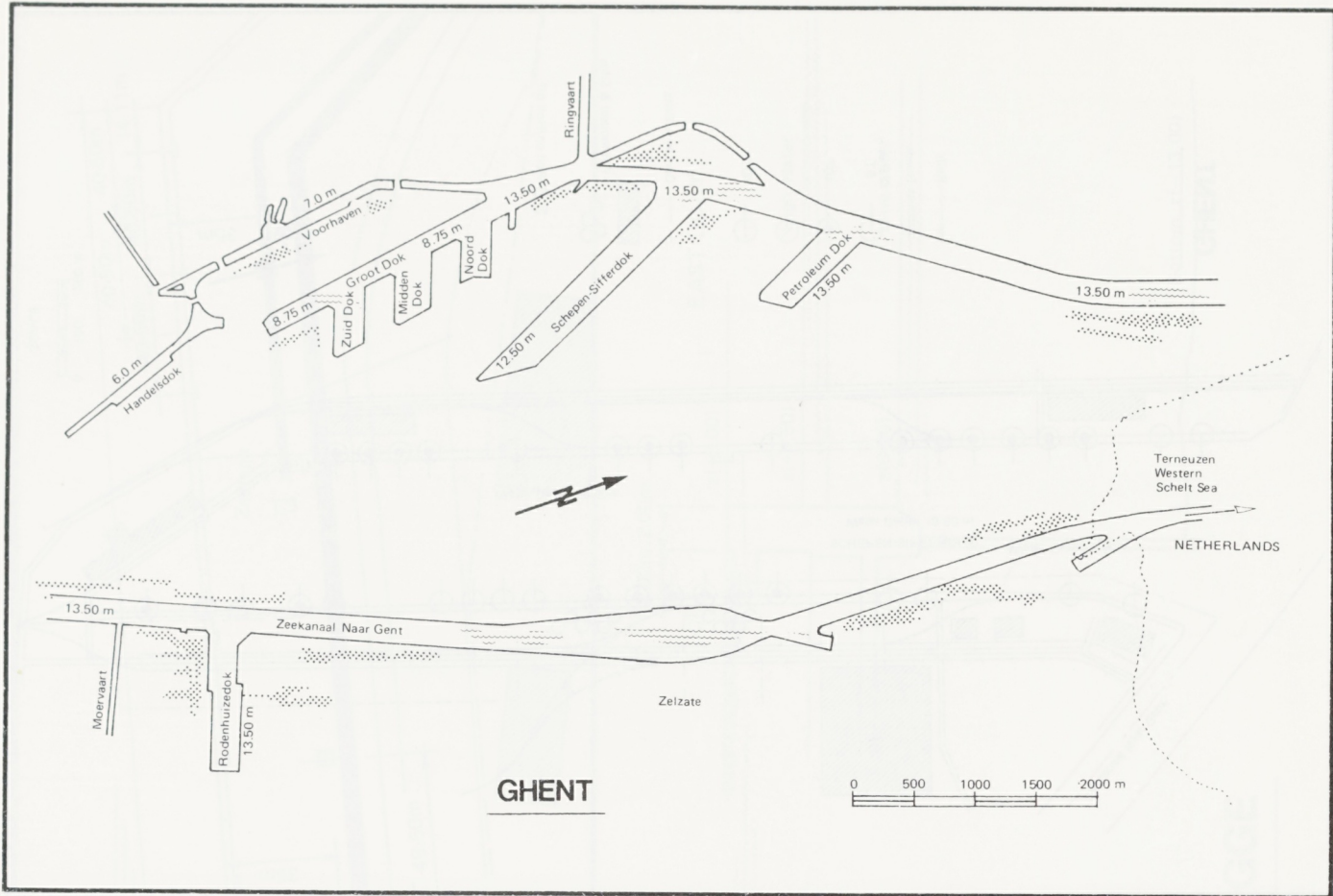
CHARLEROI CANAL



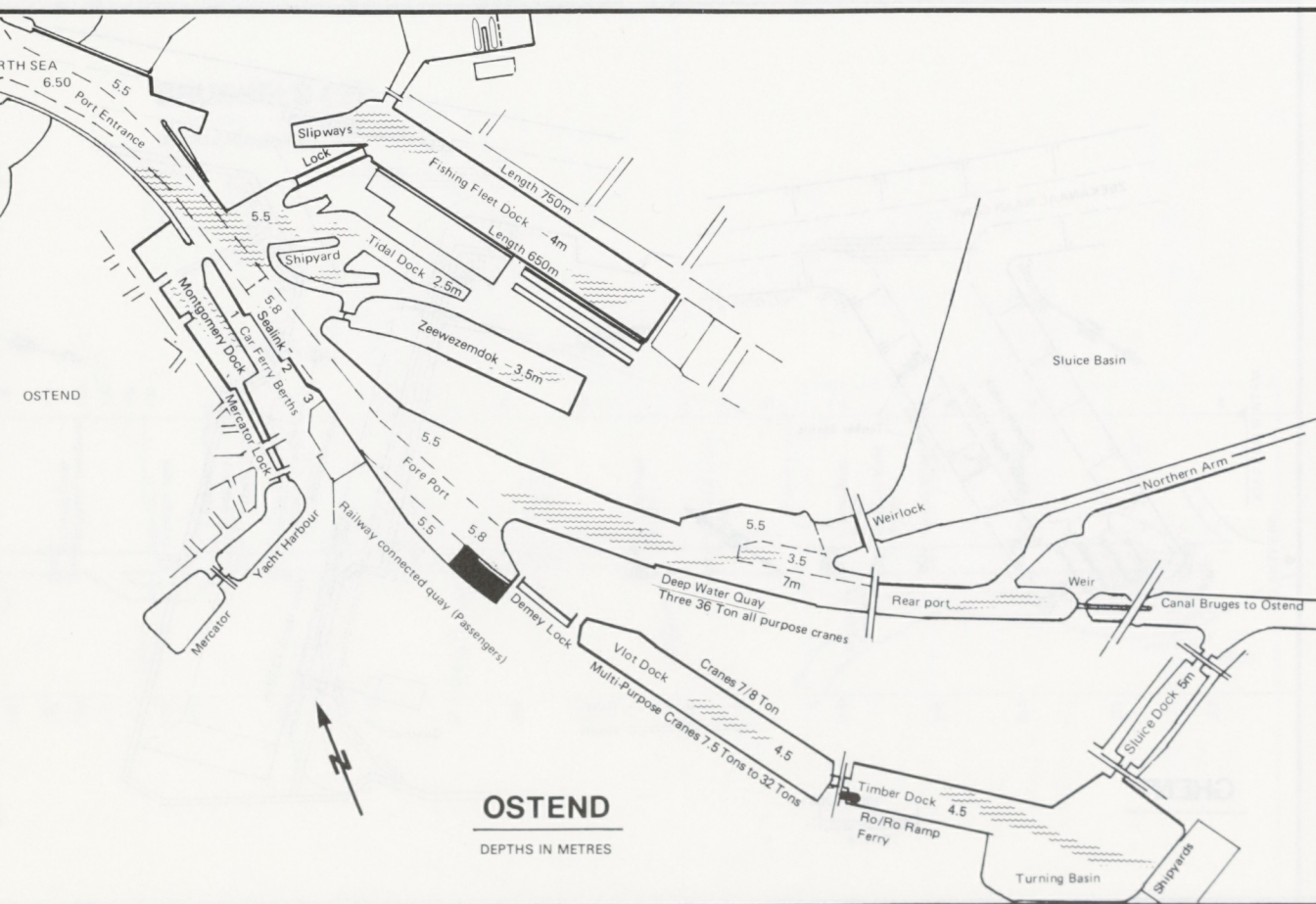
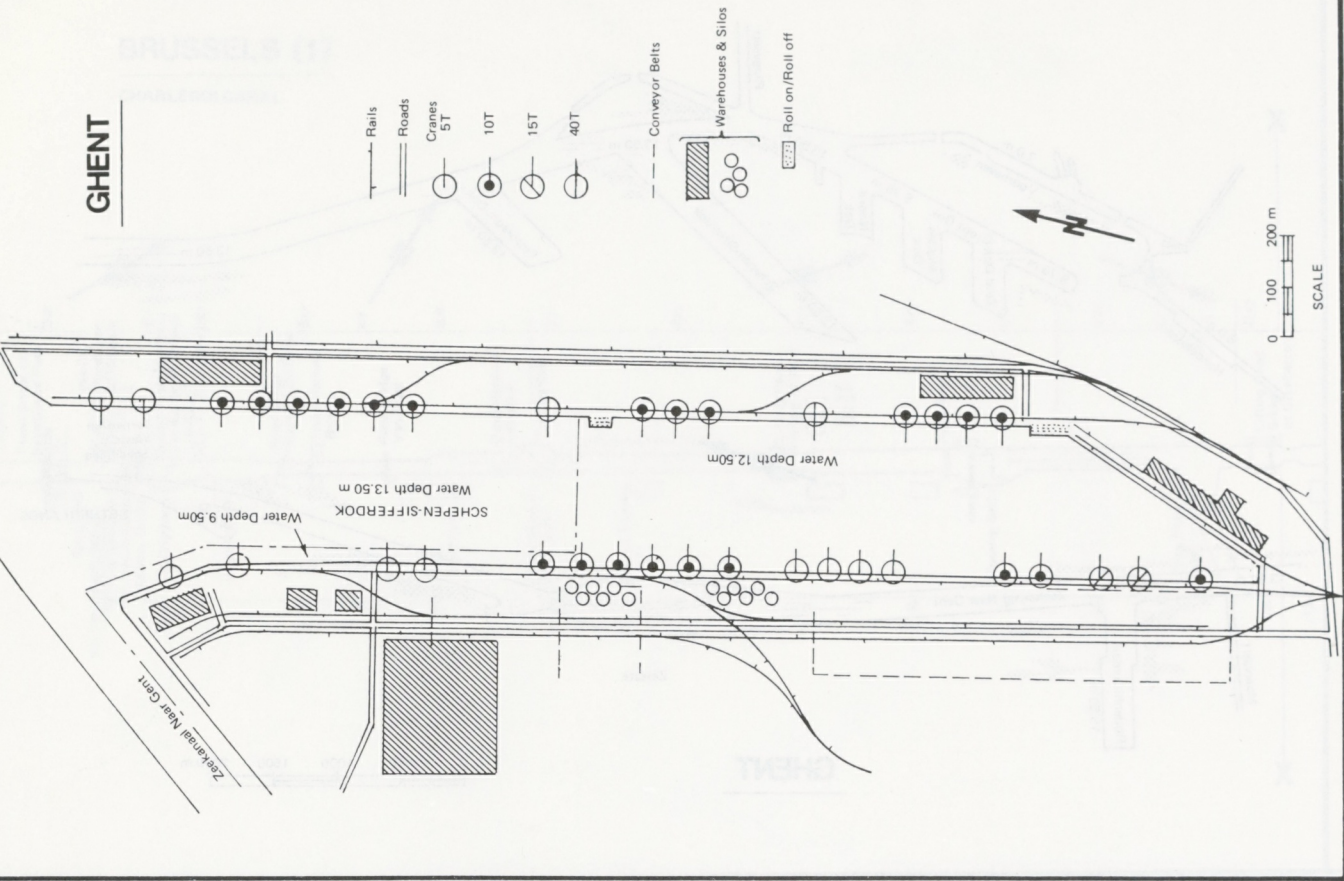
BRUSSELS (2)

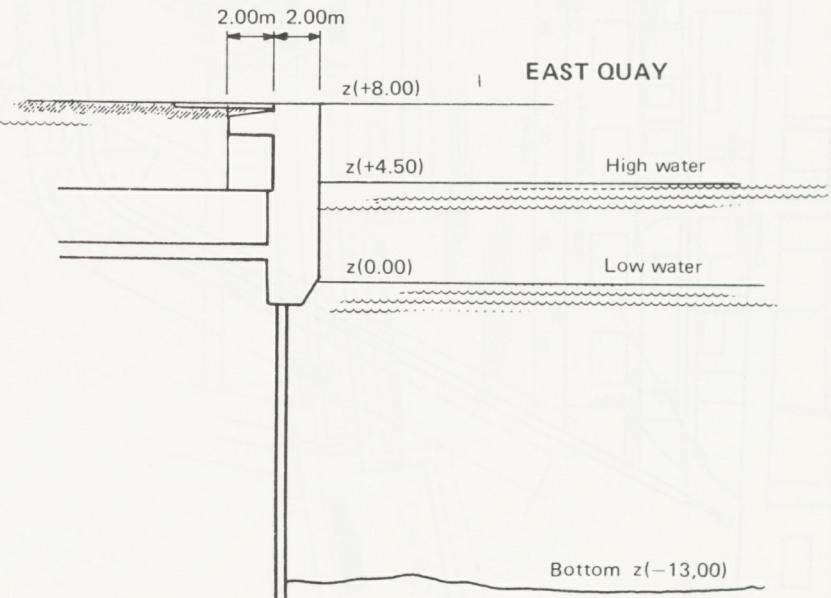
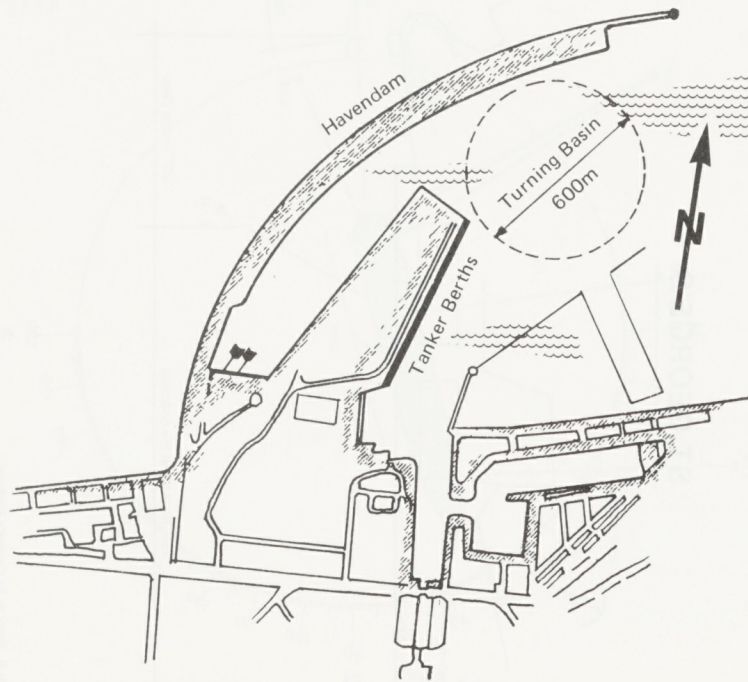
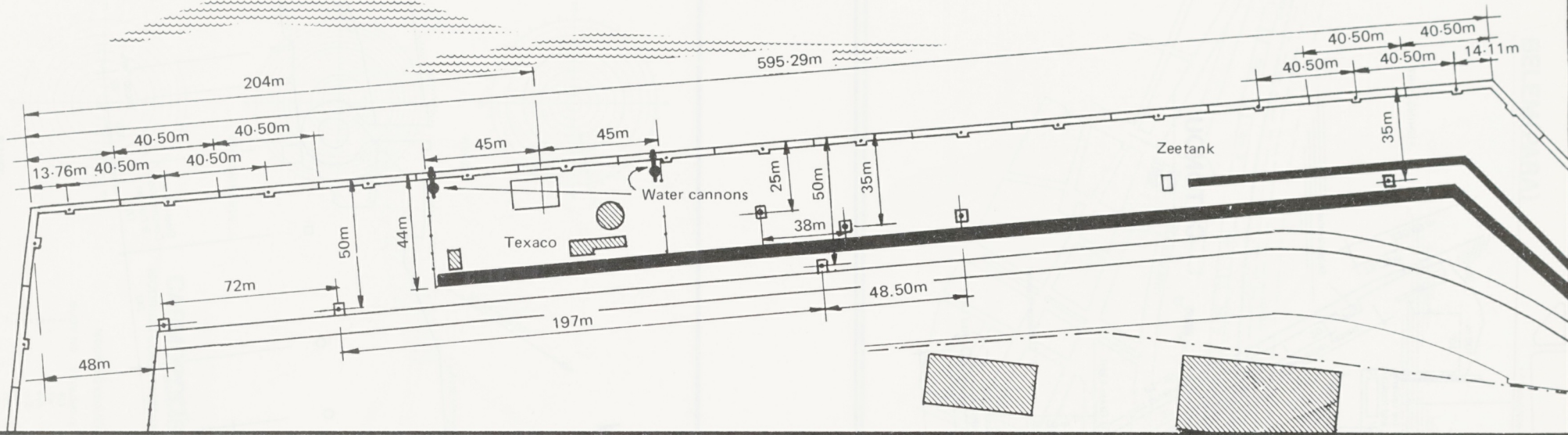
CHARLEROI CANAL



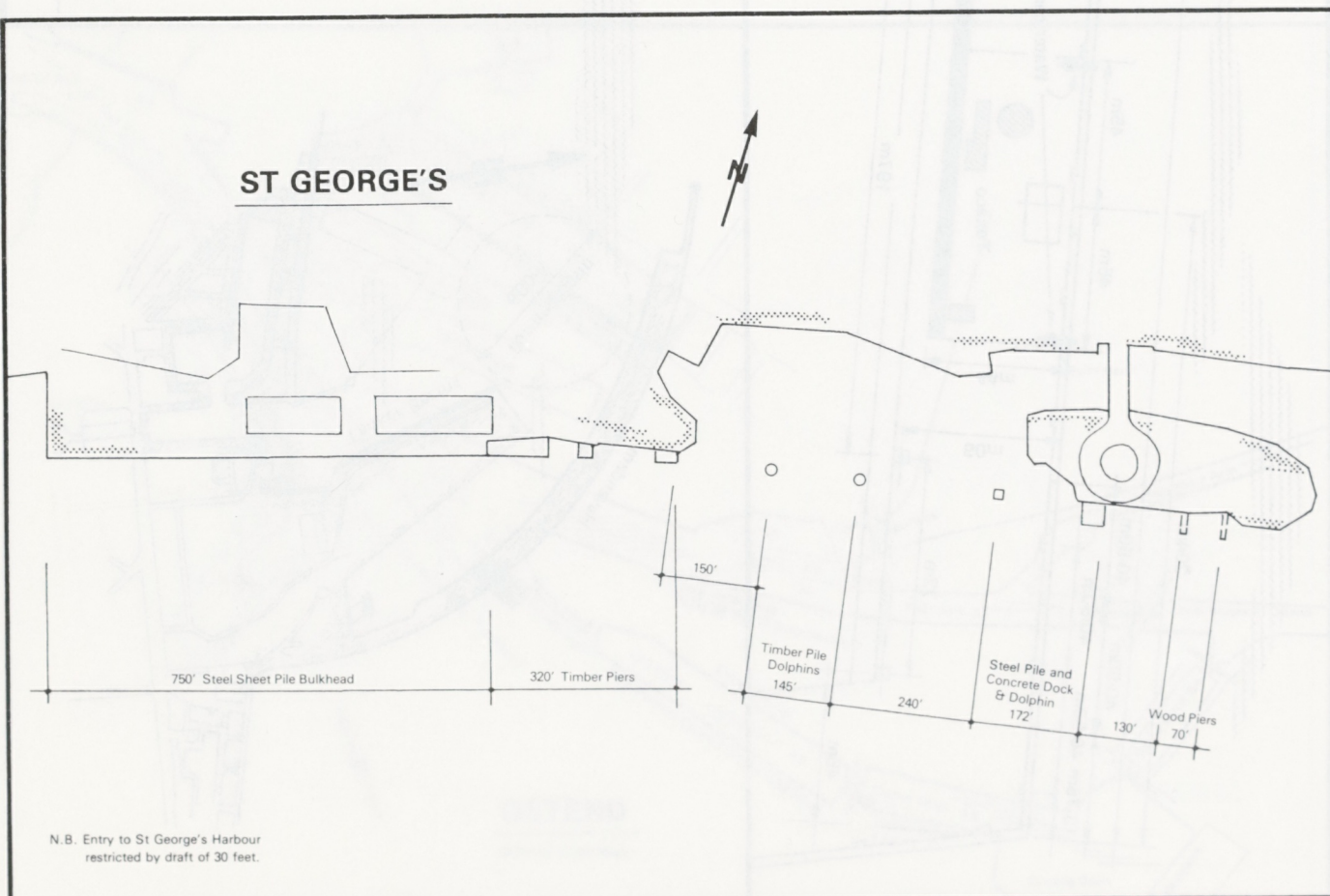
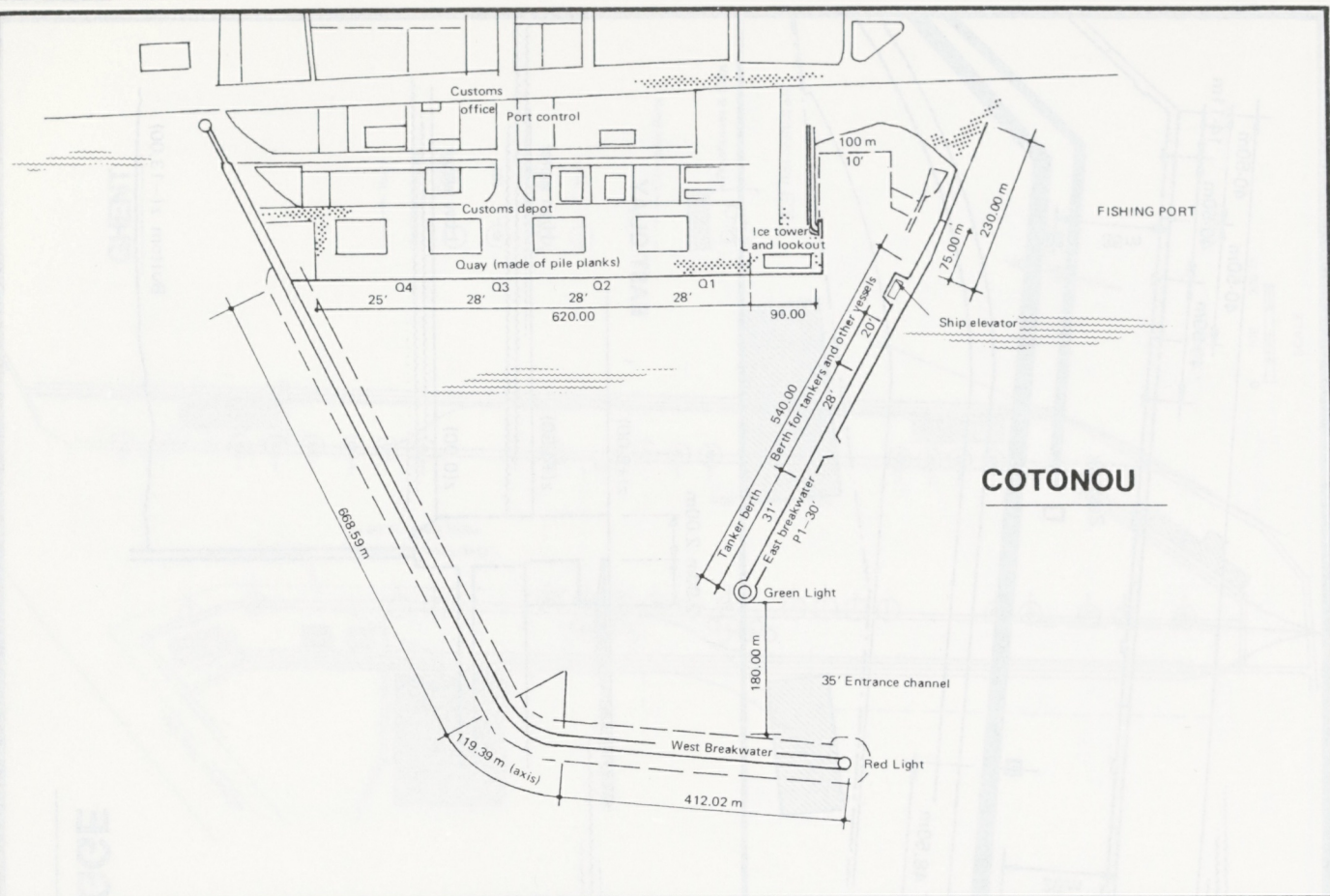


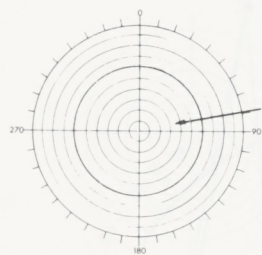
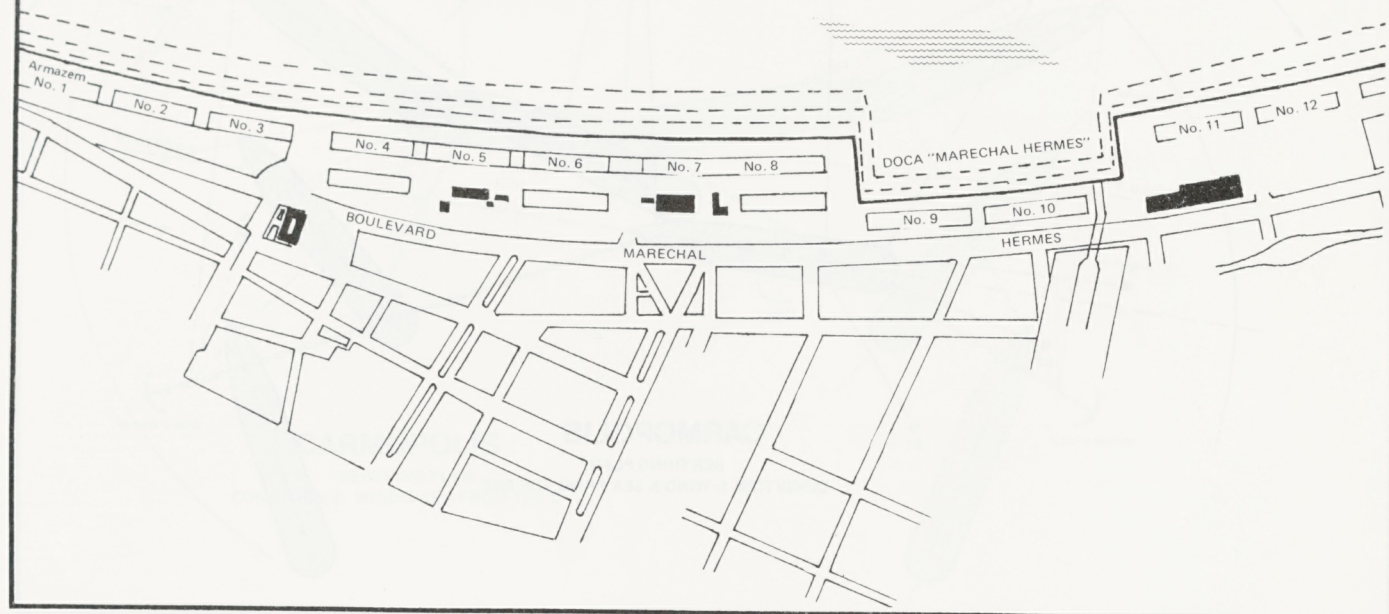
GHENT



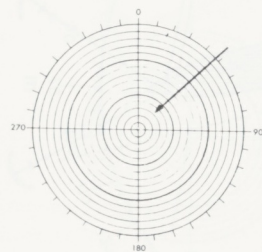


ZEEBRUGGE

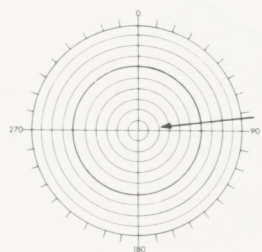




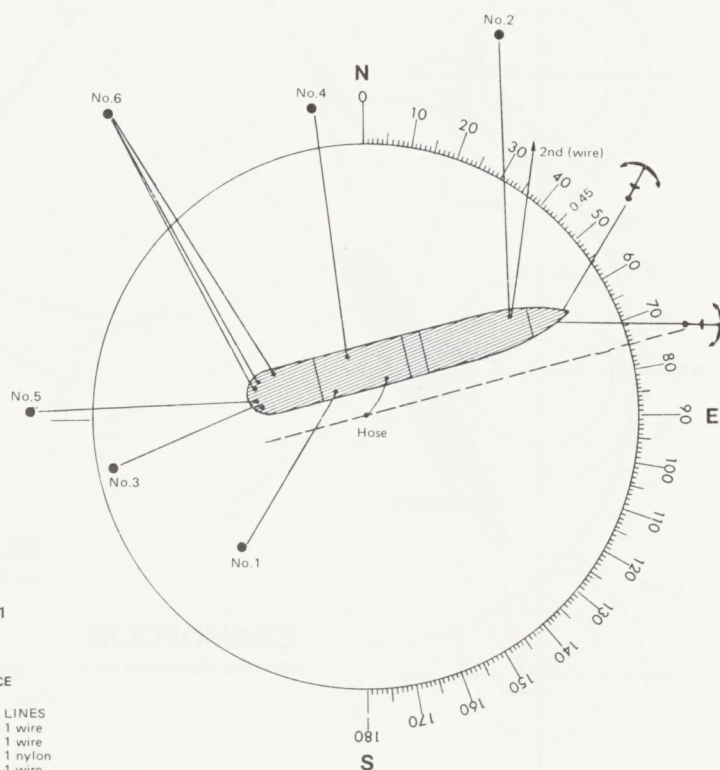
WINDS



SEA CURRENTS



WAVES



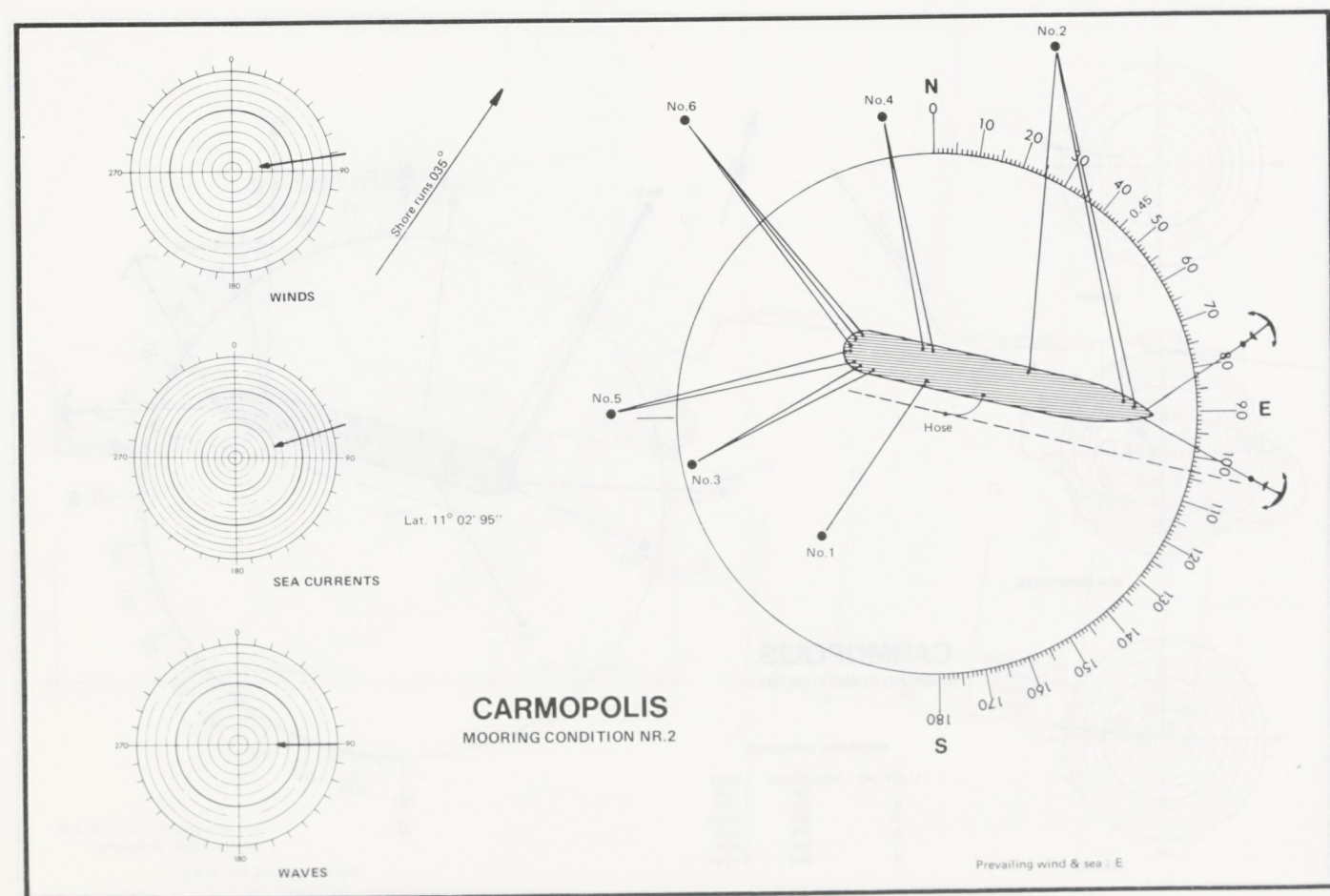
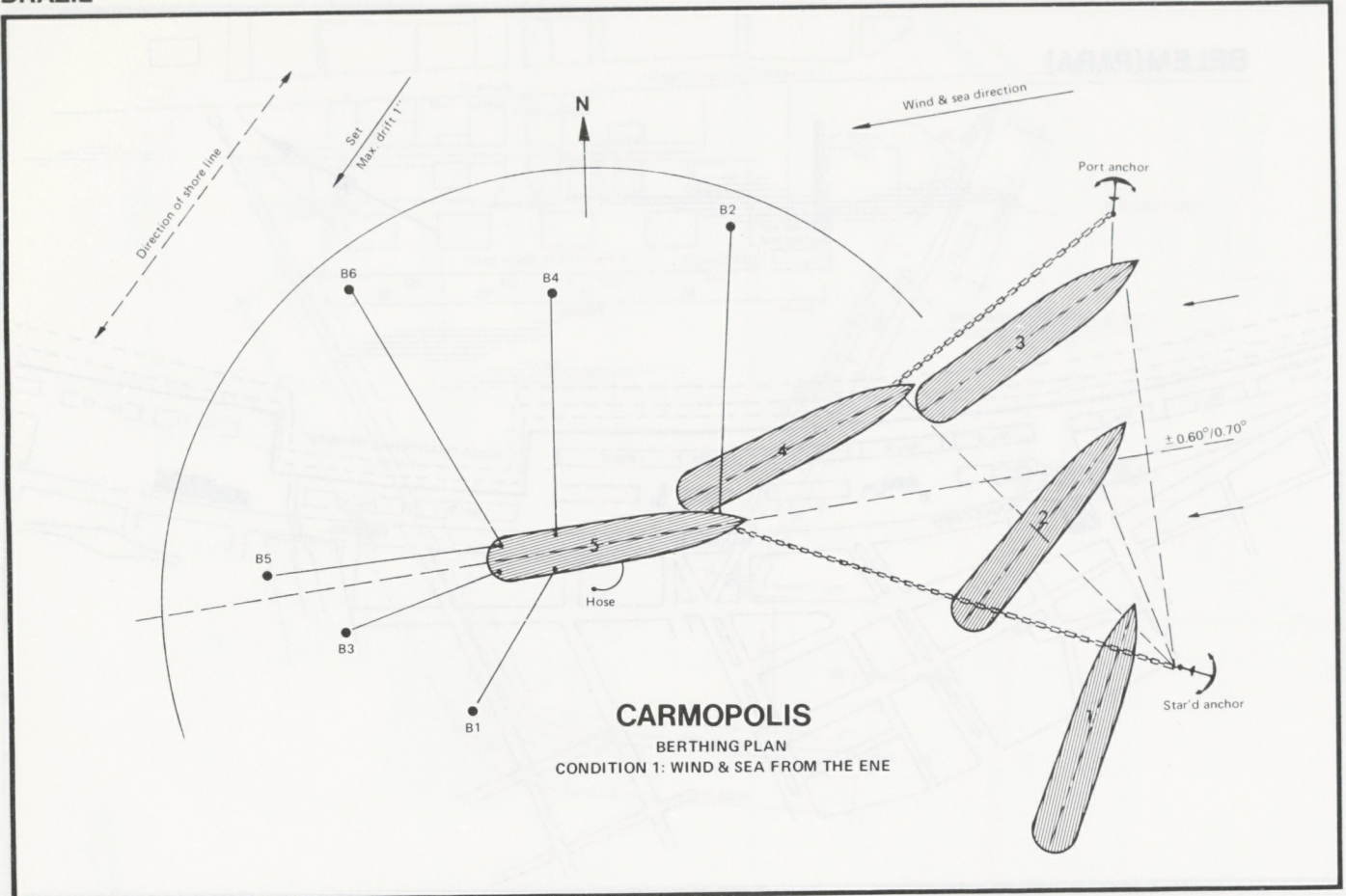
Prevailing wind & sea : E N E

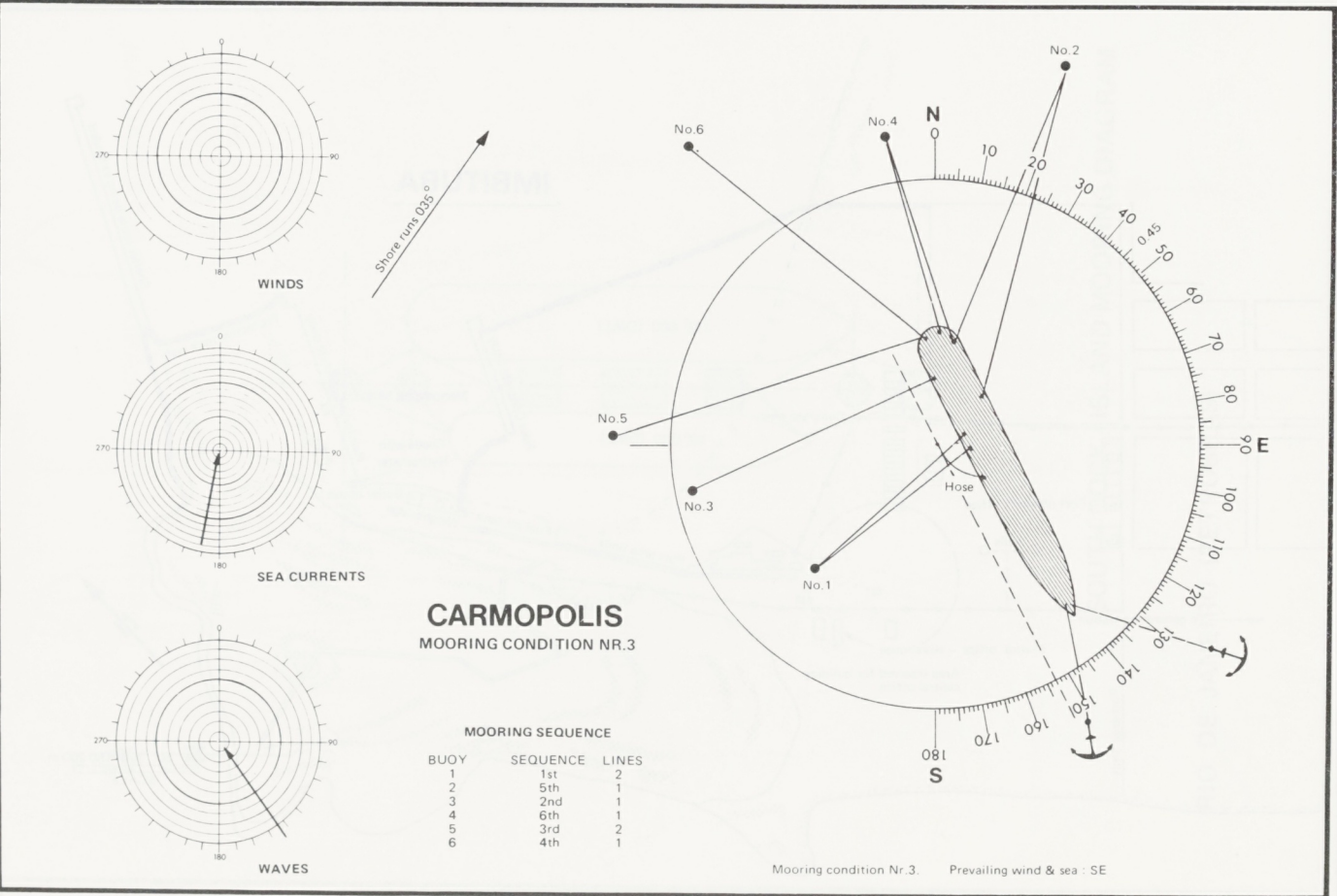
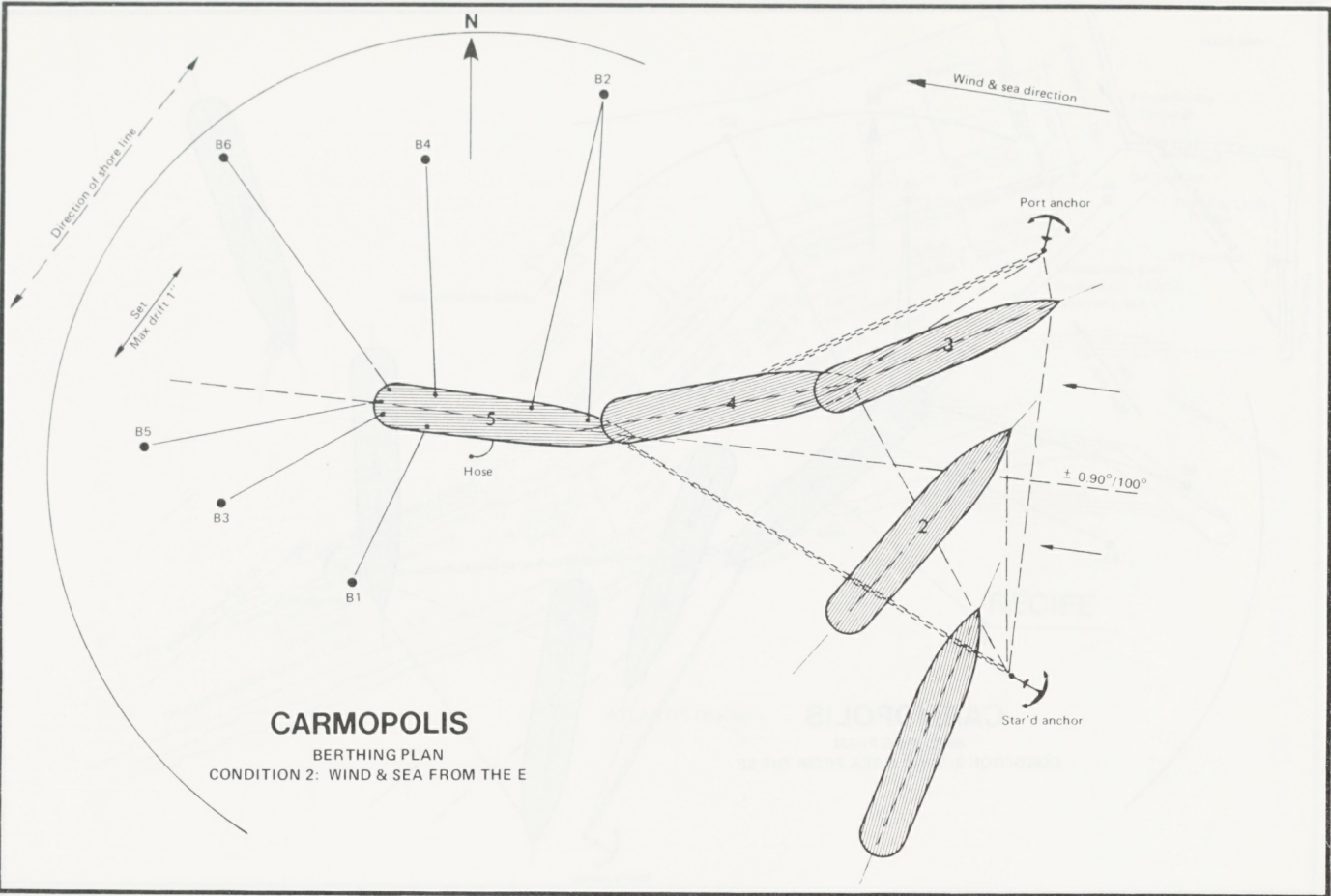
CARMOPOLIS

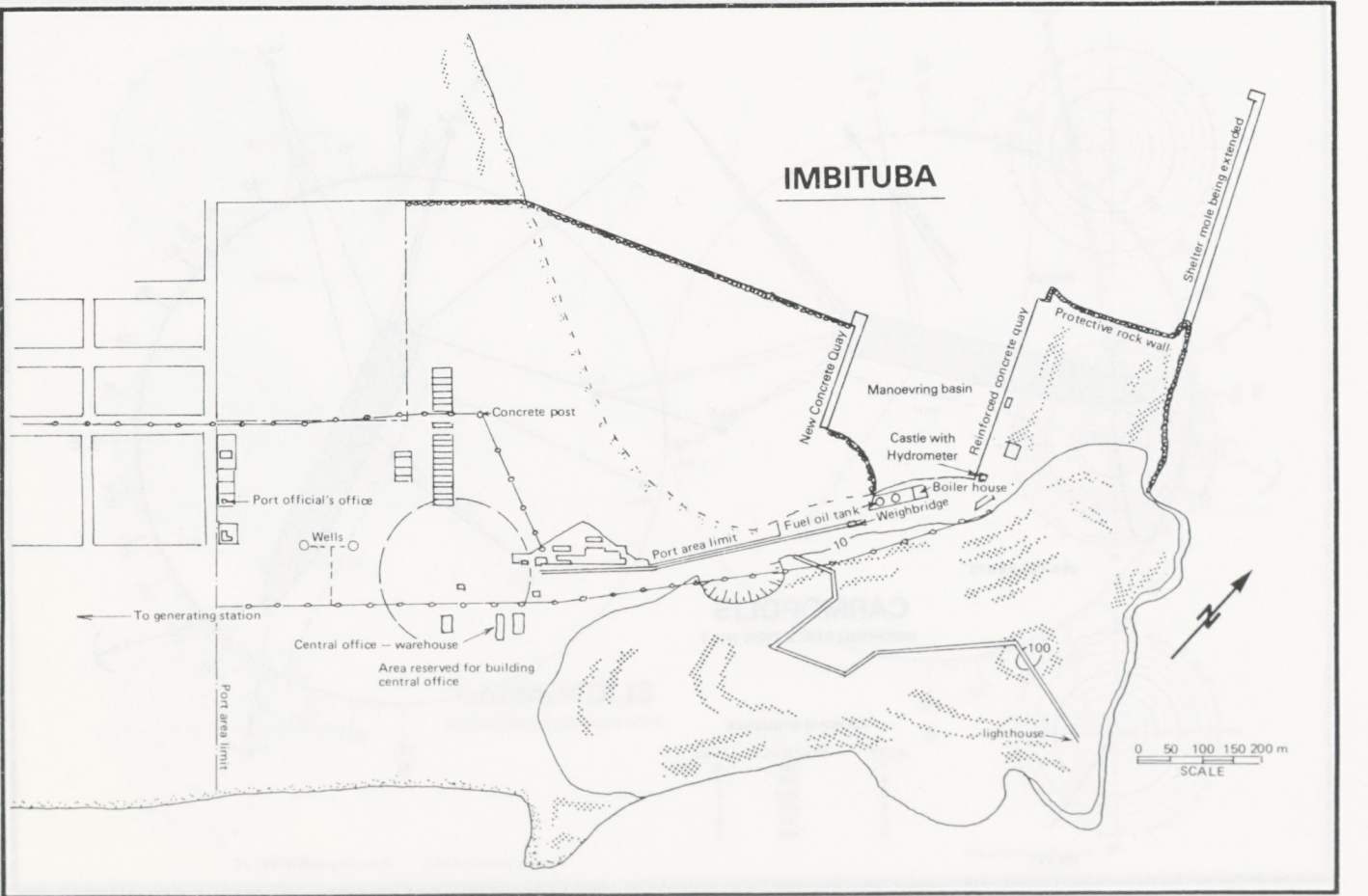
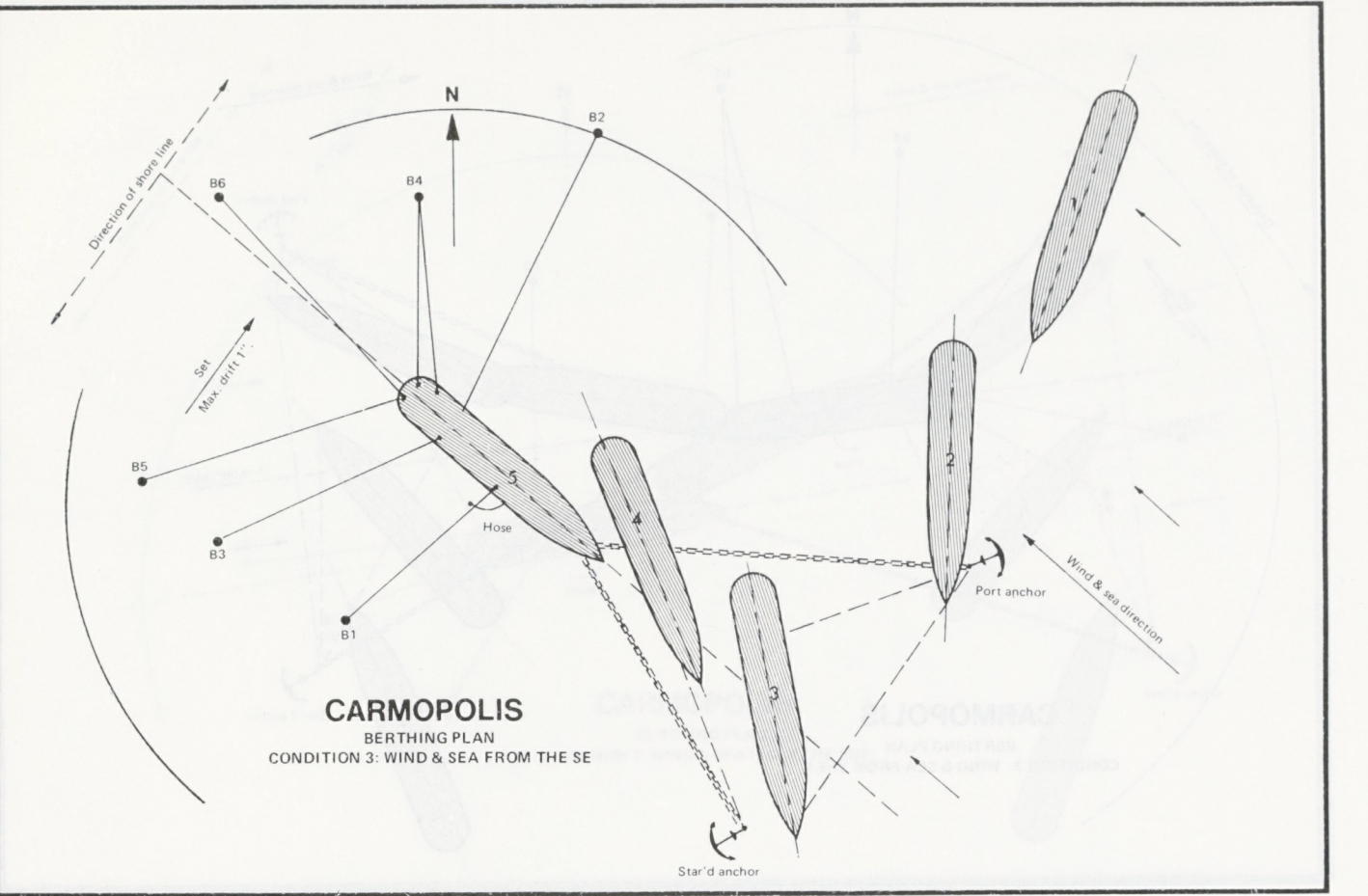
MOORING CONDITION NR.1

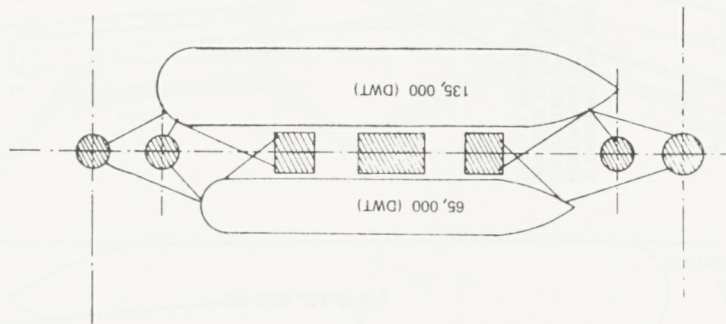
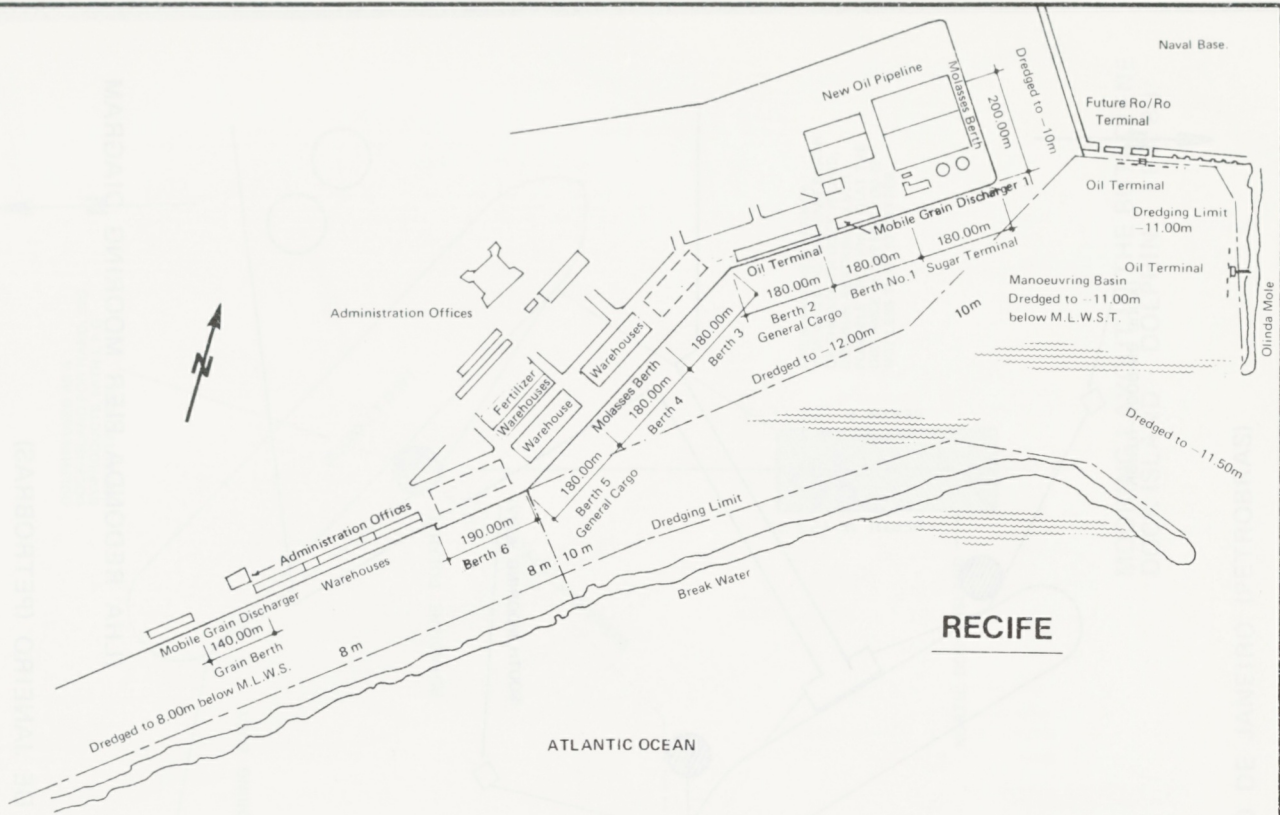
MOORING SEQUENCE

BUOY NO	SEQUENCE	LINES
1	4th	1 wire
2	1st	1 wire
3	5th	1 nylon
4	3rd	1 wire
5	6th	1 wire
6	2nd	3 nylon



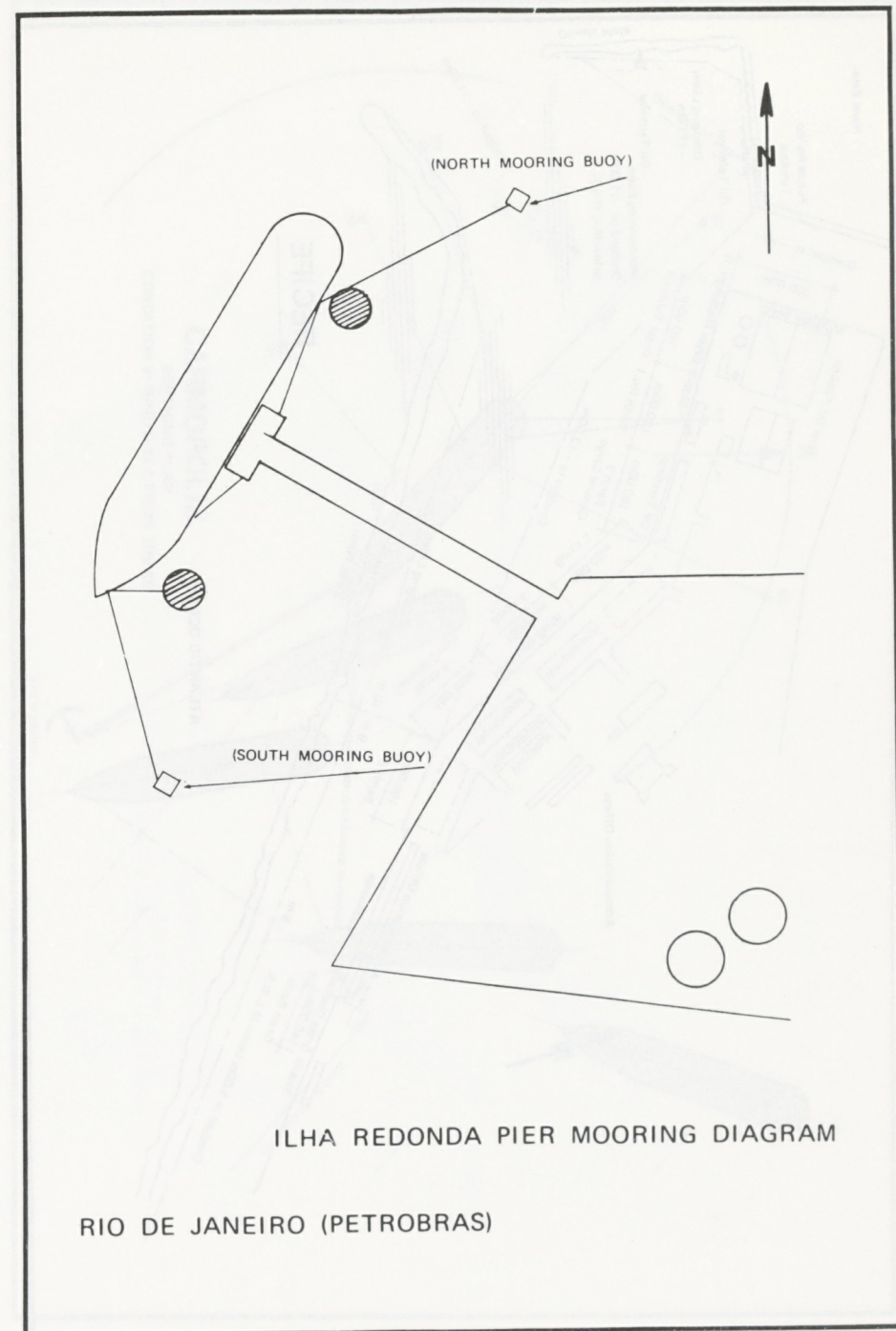
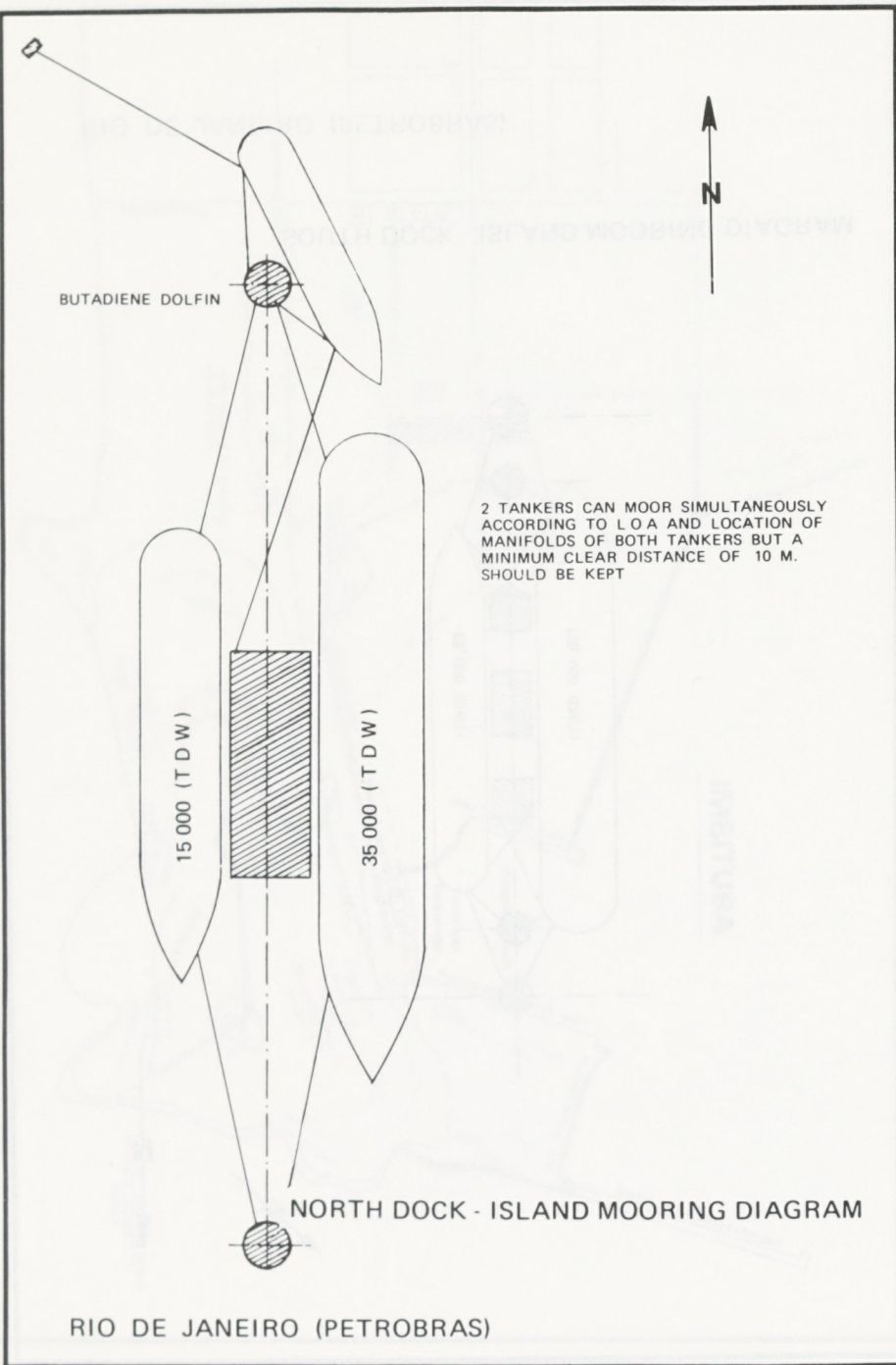


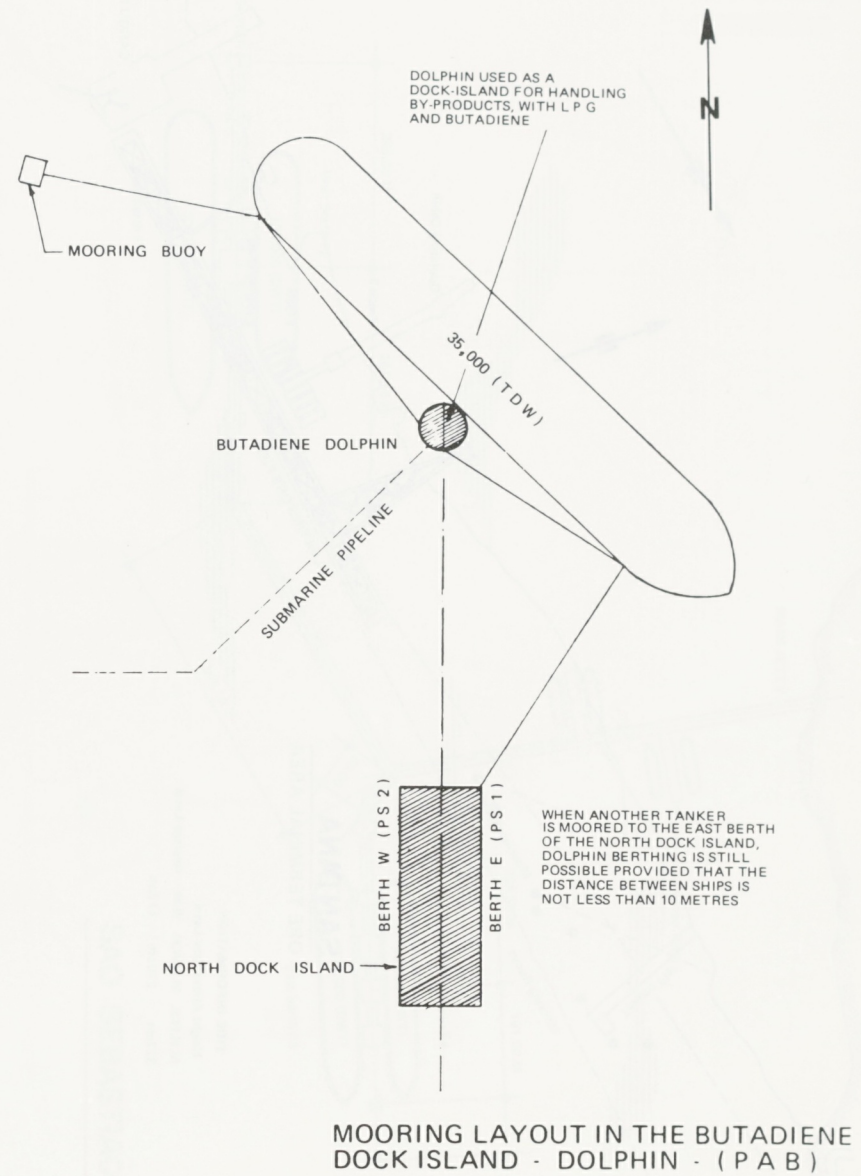




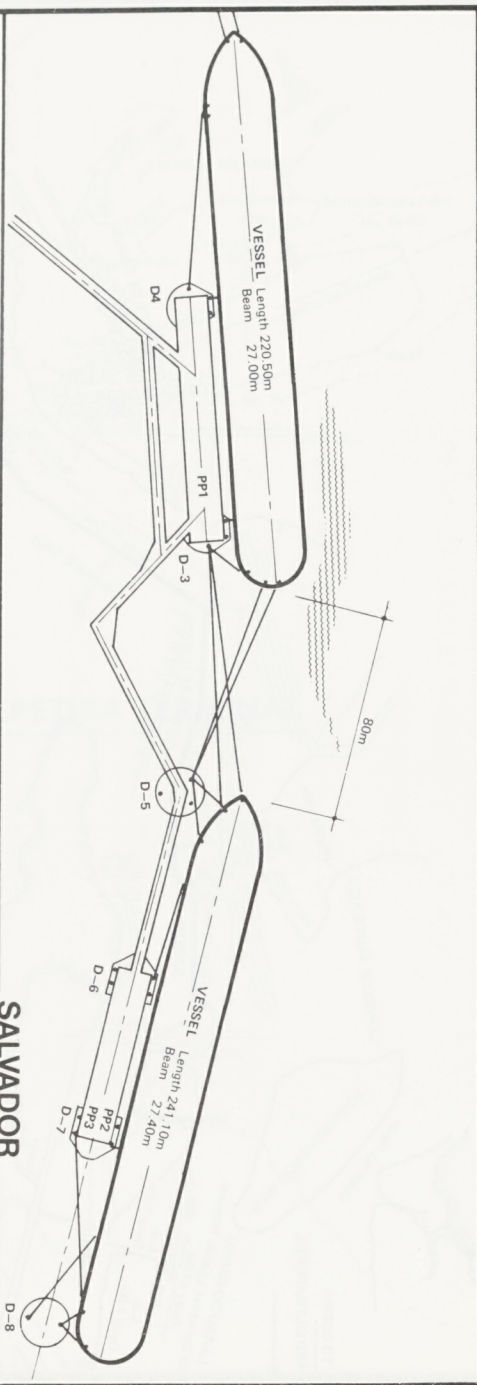
SOUTH DOCK - ISLAND MOORING DIAGRAM

RIO DE JANEIRO (PETROBRAS)

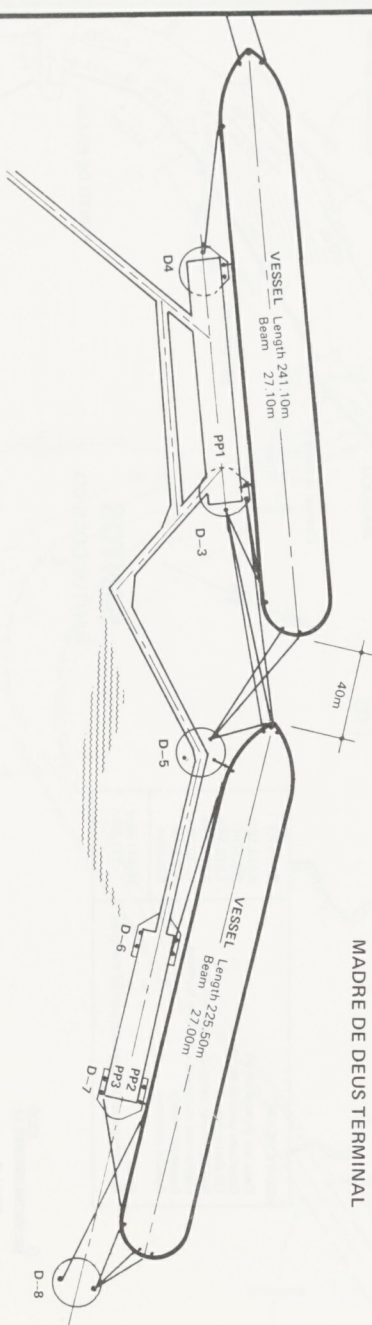


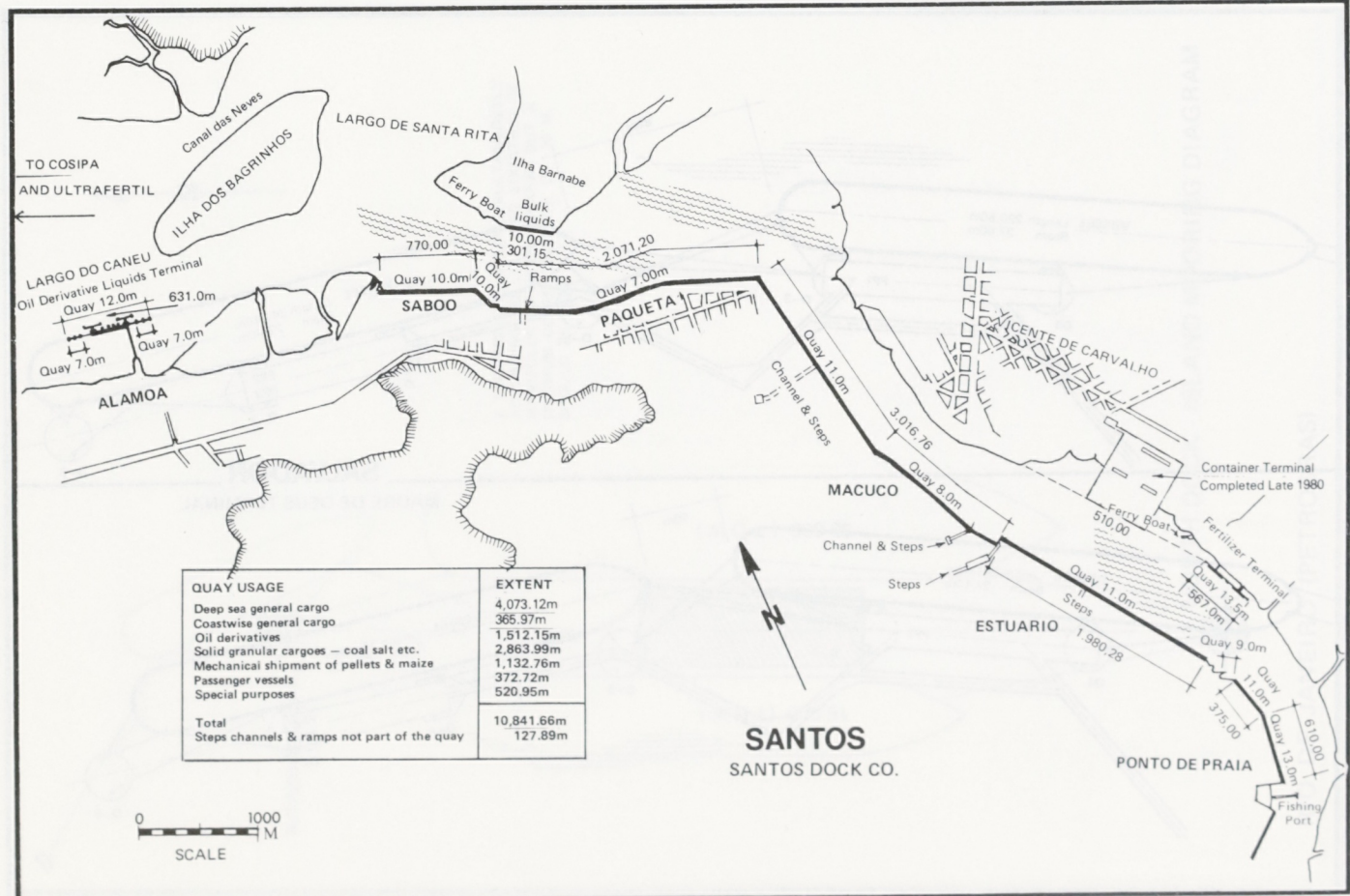
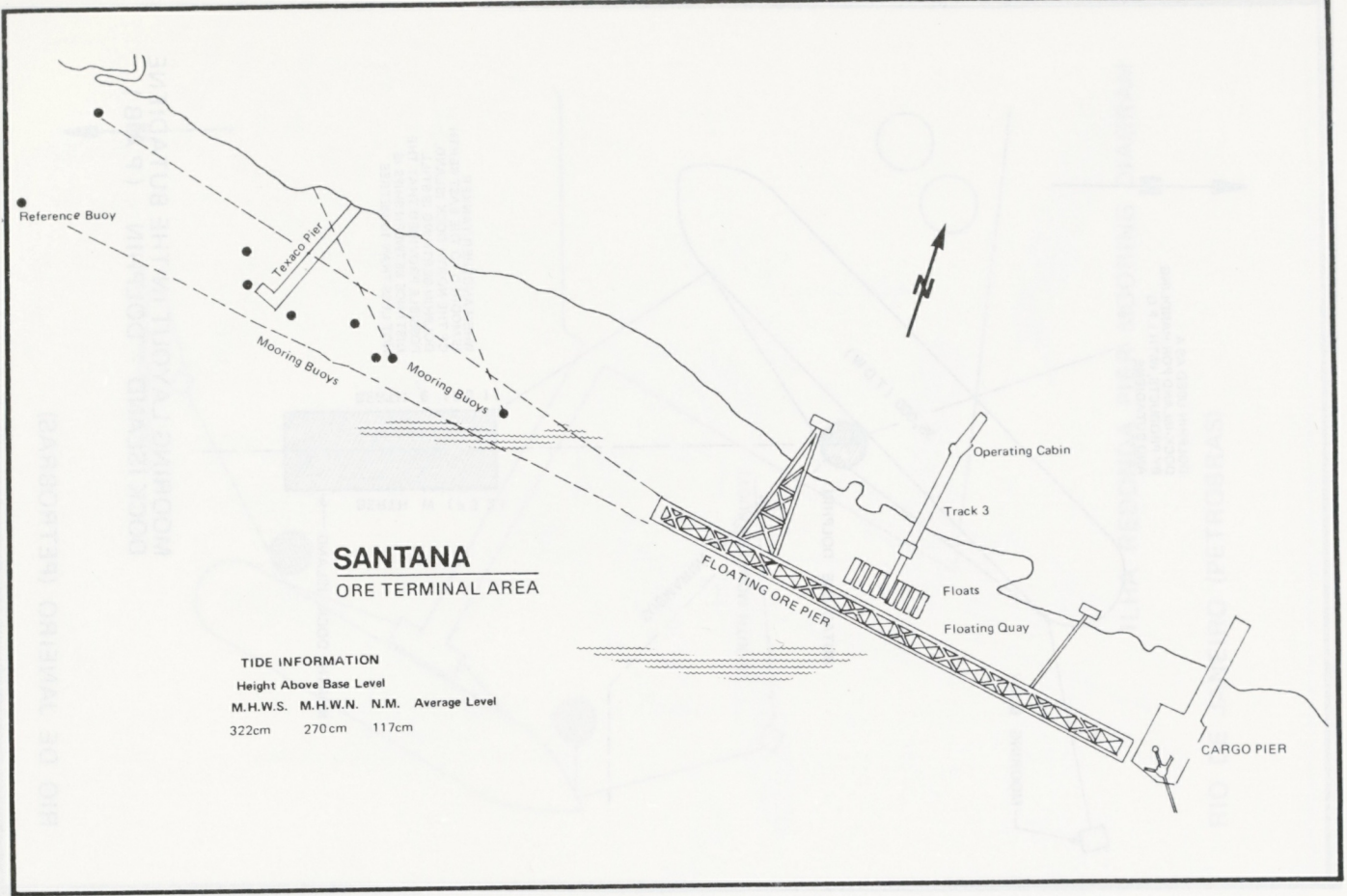


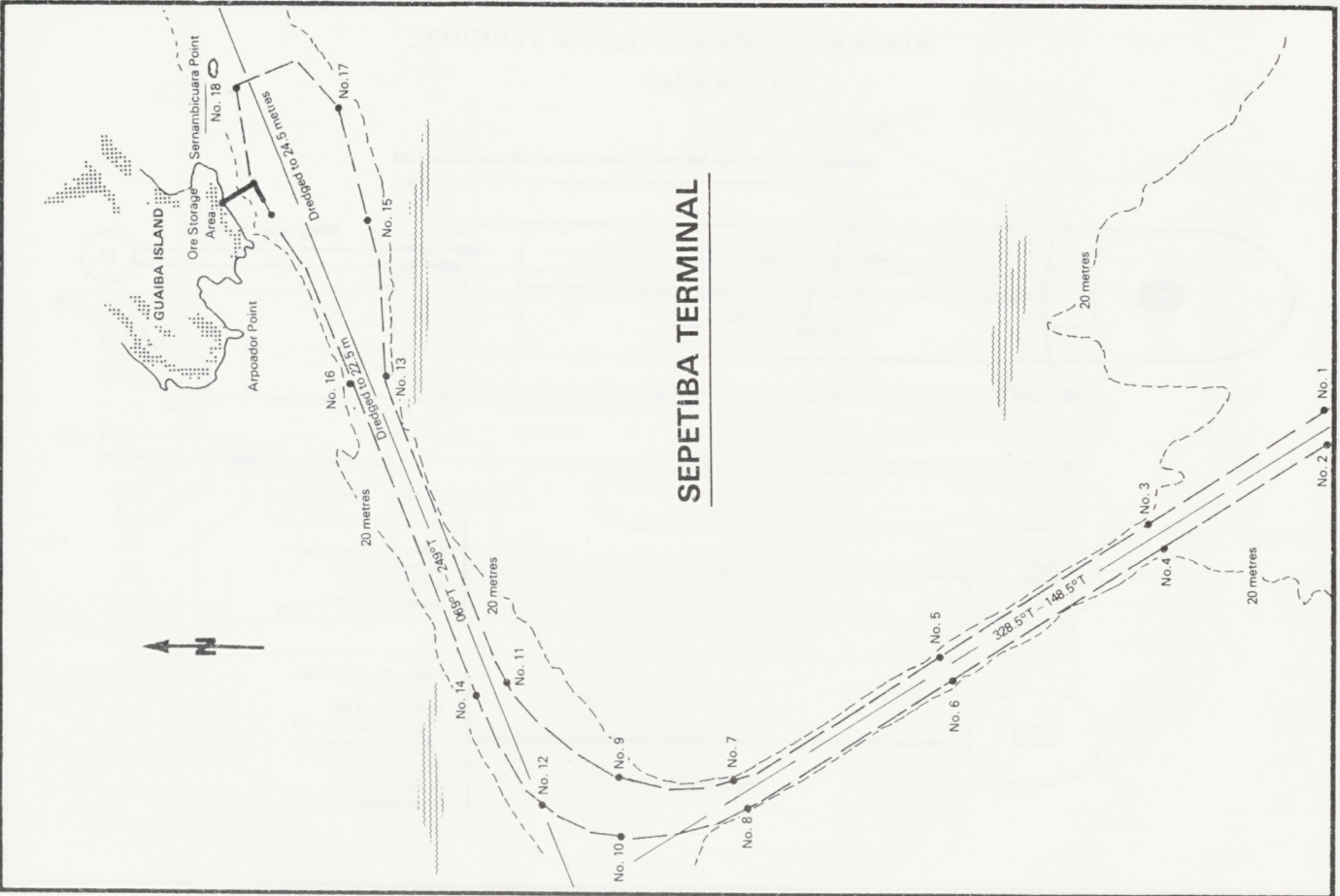
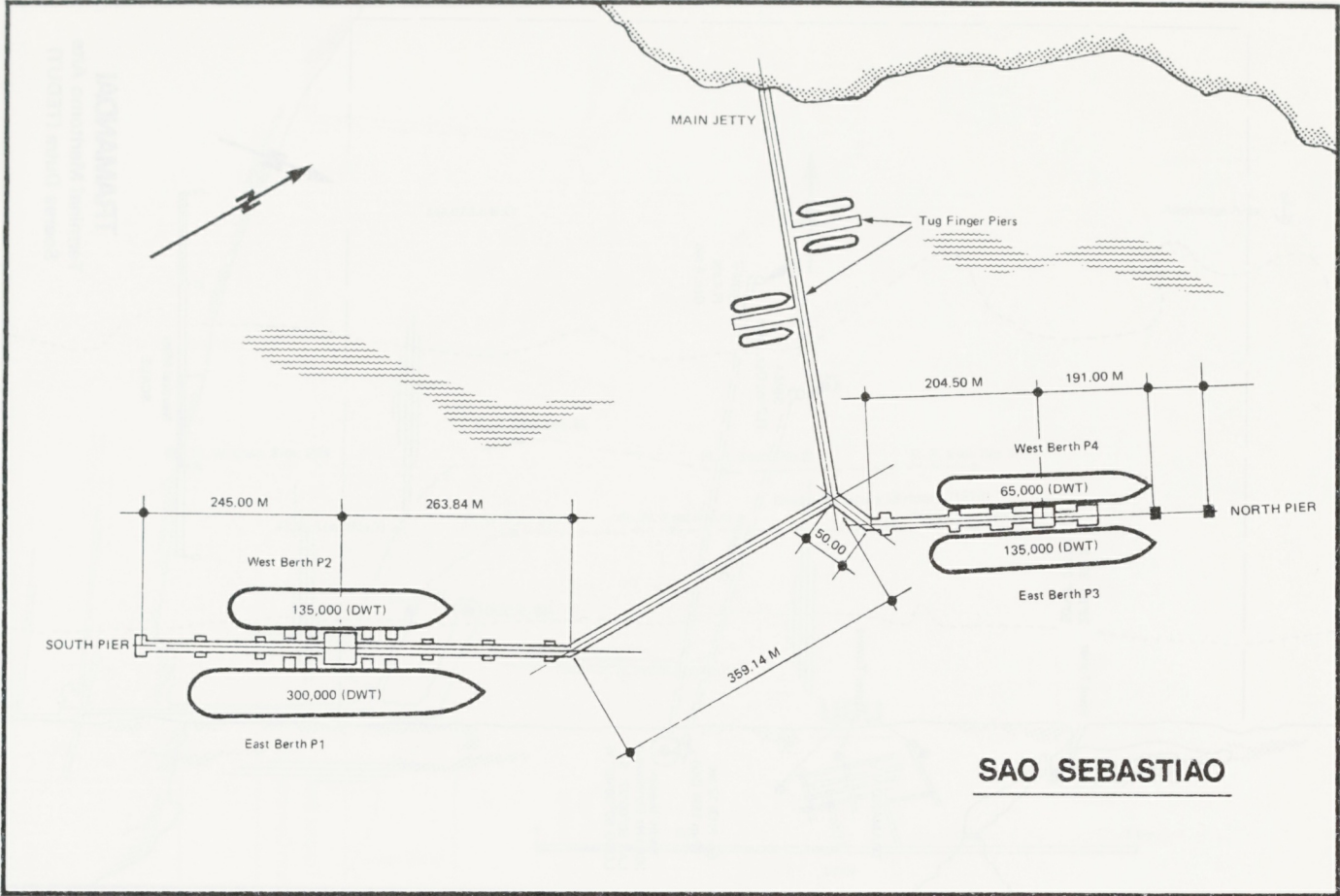
RIO DE JANEIRO (PETROBRAS)



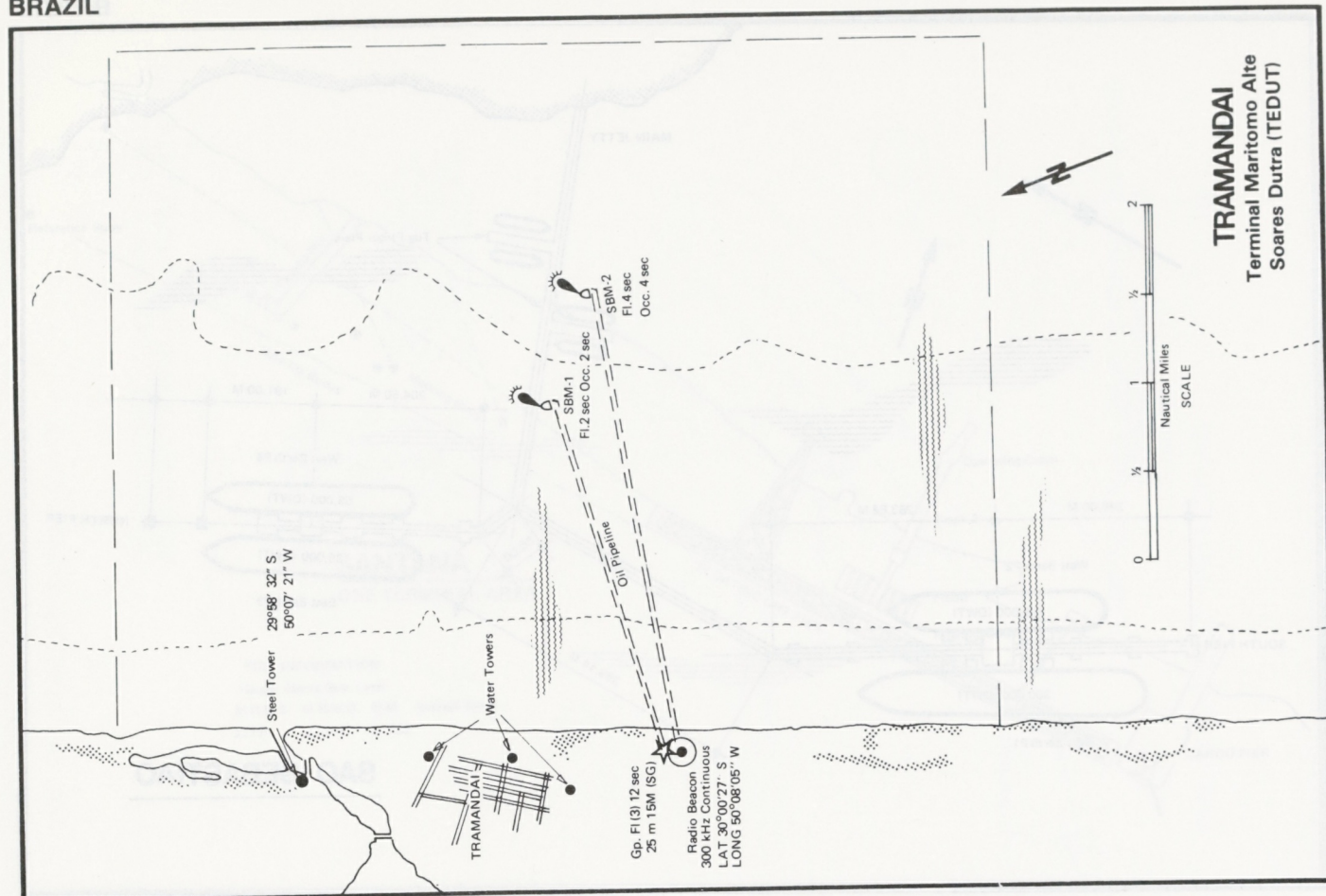
SALVADOR
MADRE DE DEUS TERMINAL



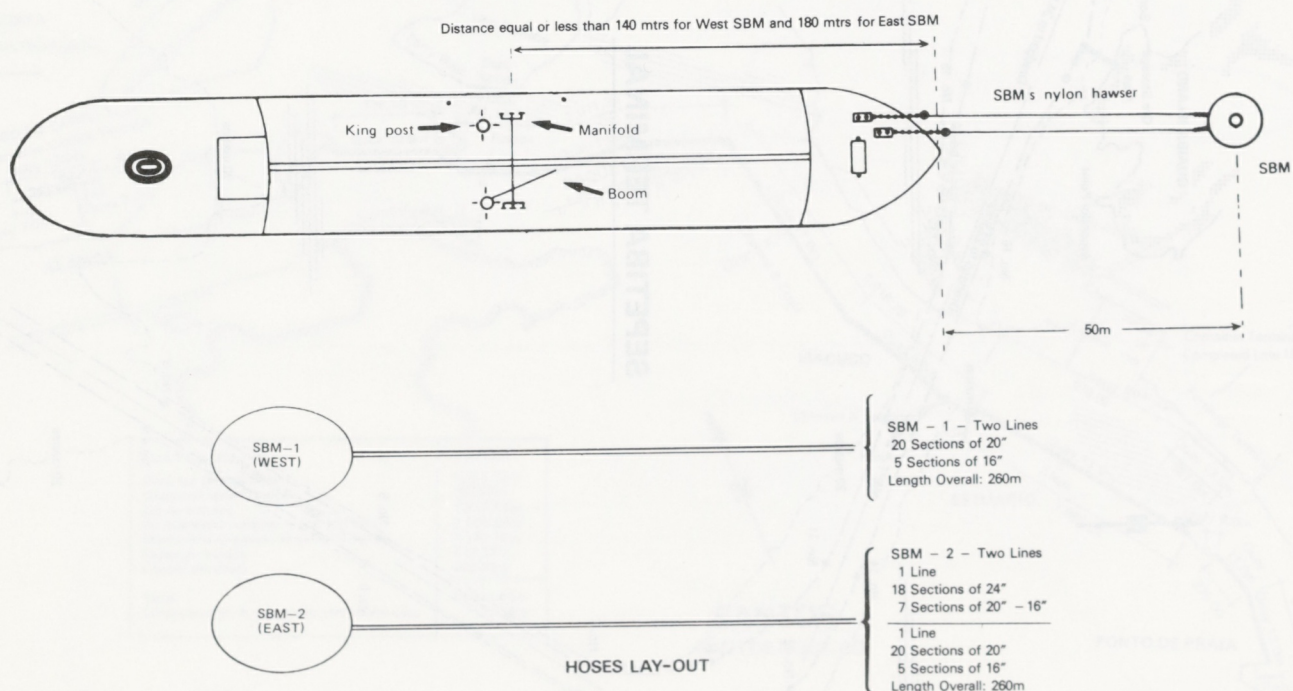


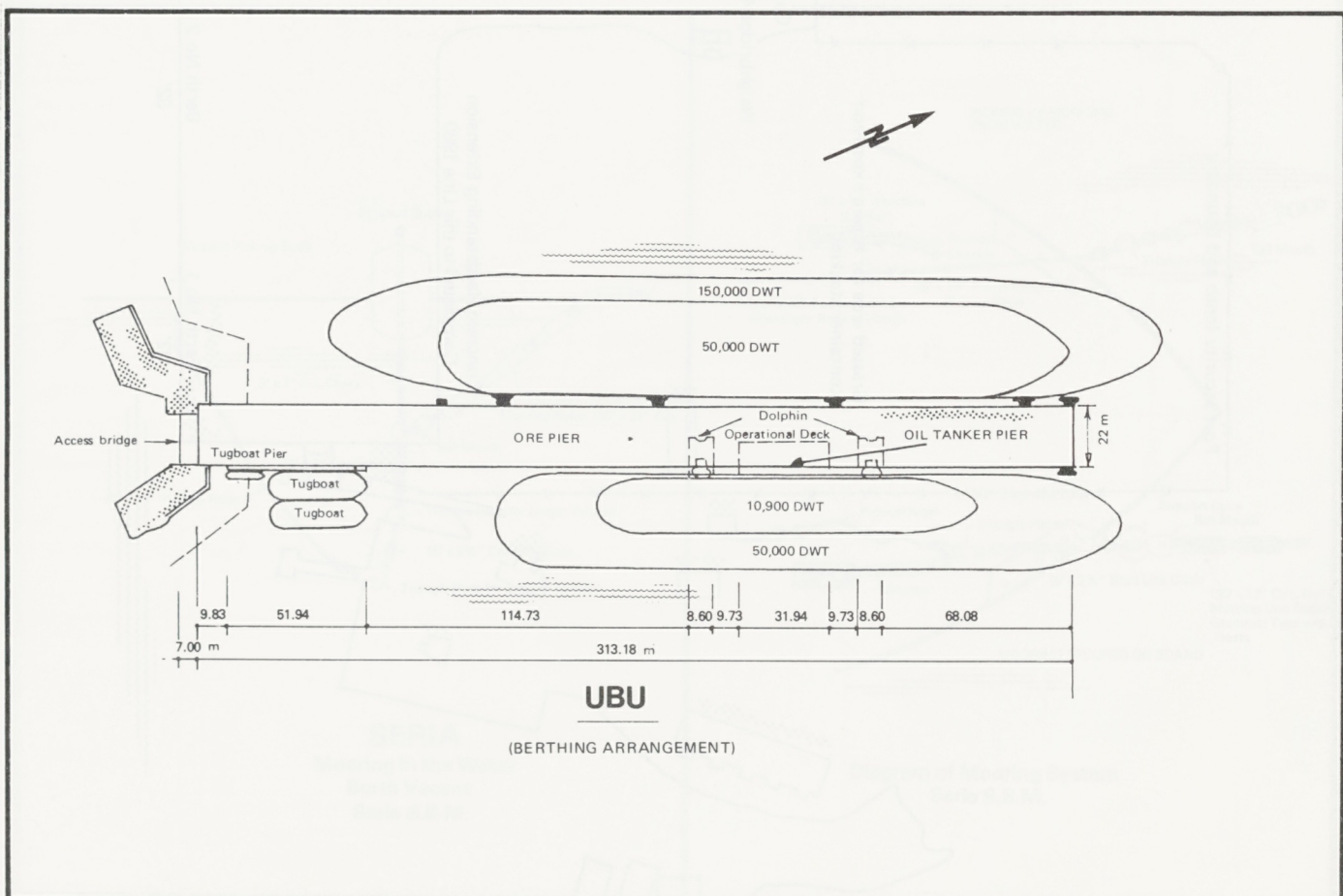
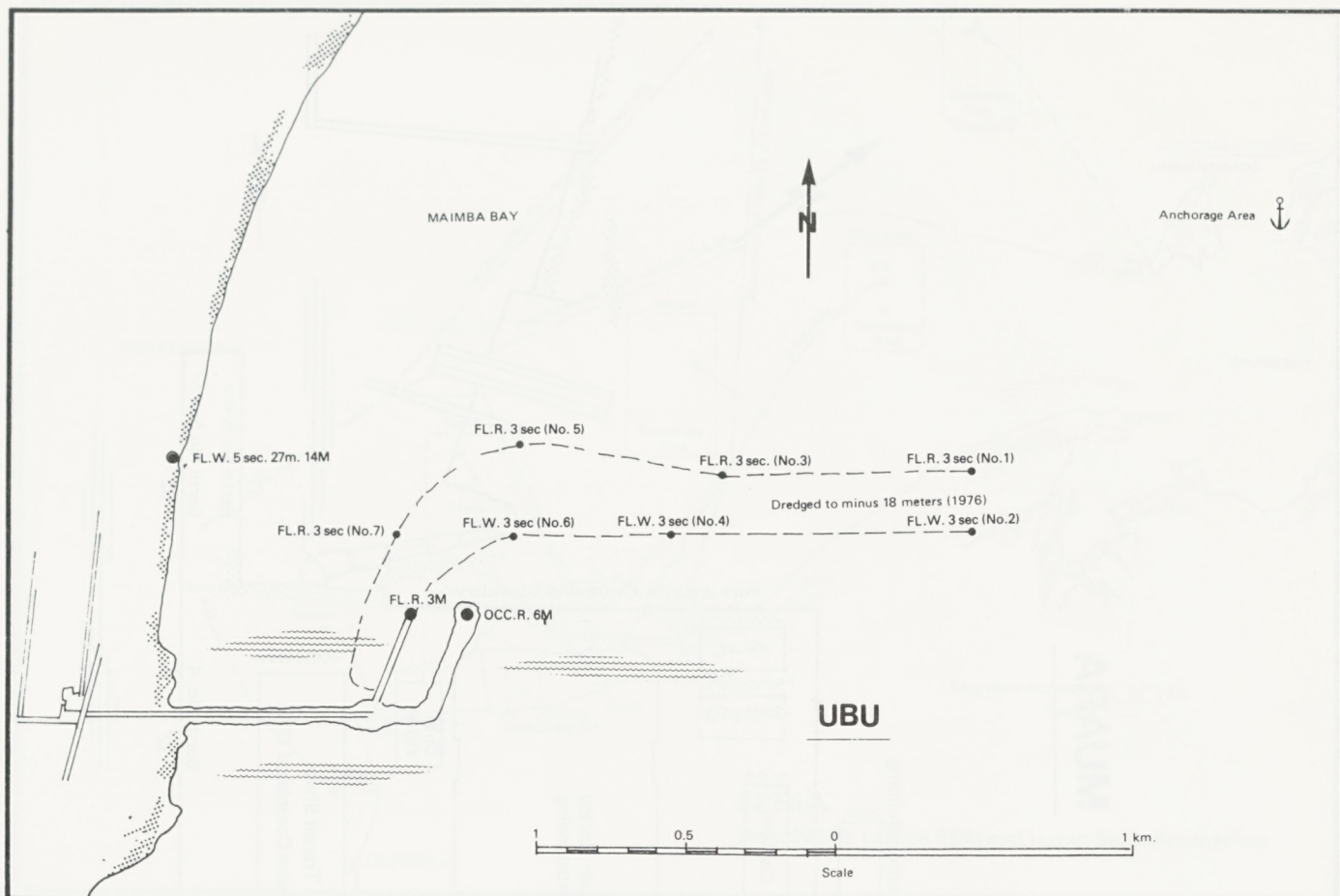


"Plan supplied by Ship's Master"

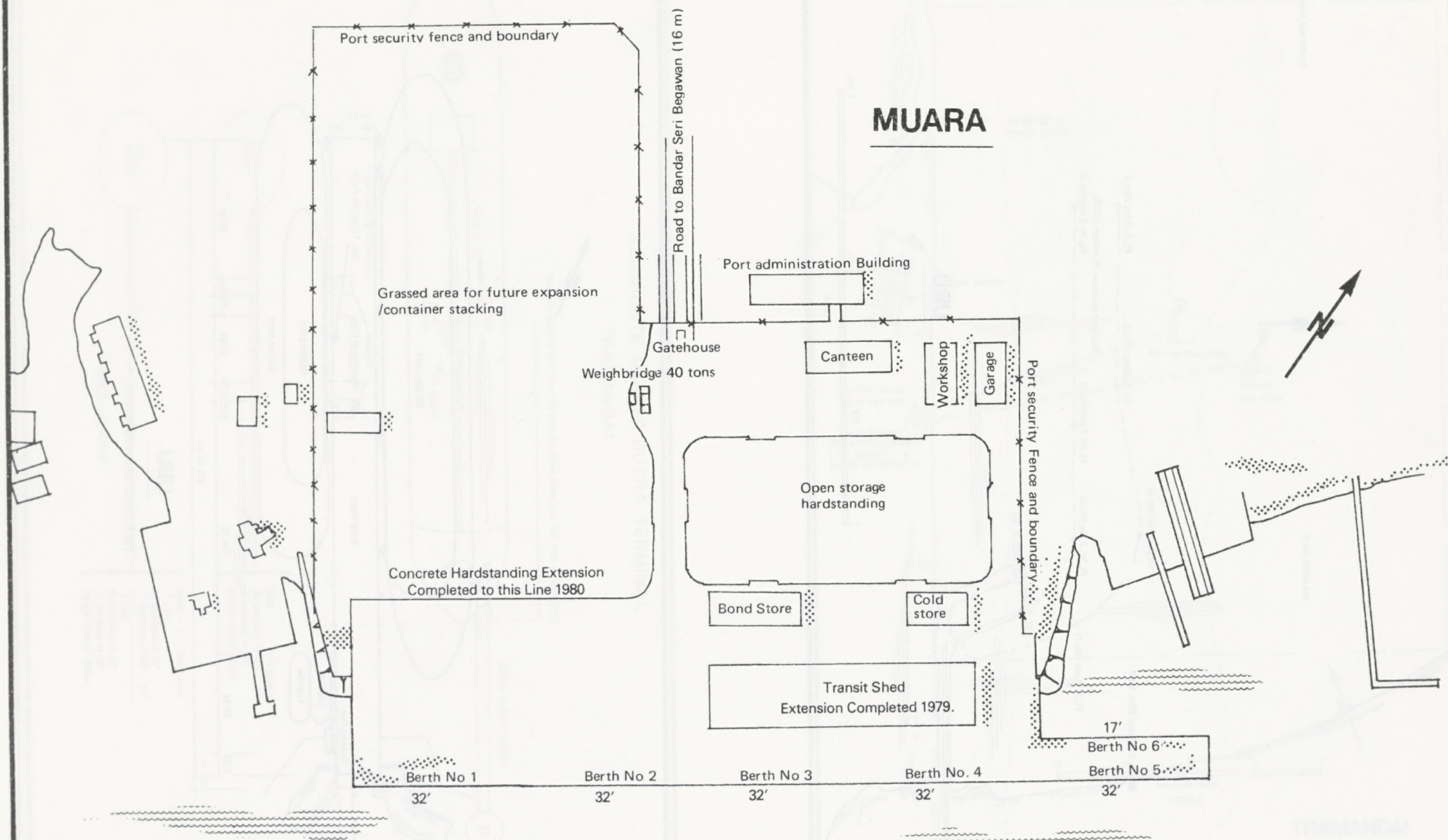


ALMIRANTE SOARES DUTRA TERMINAL TRAMANDAI

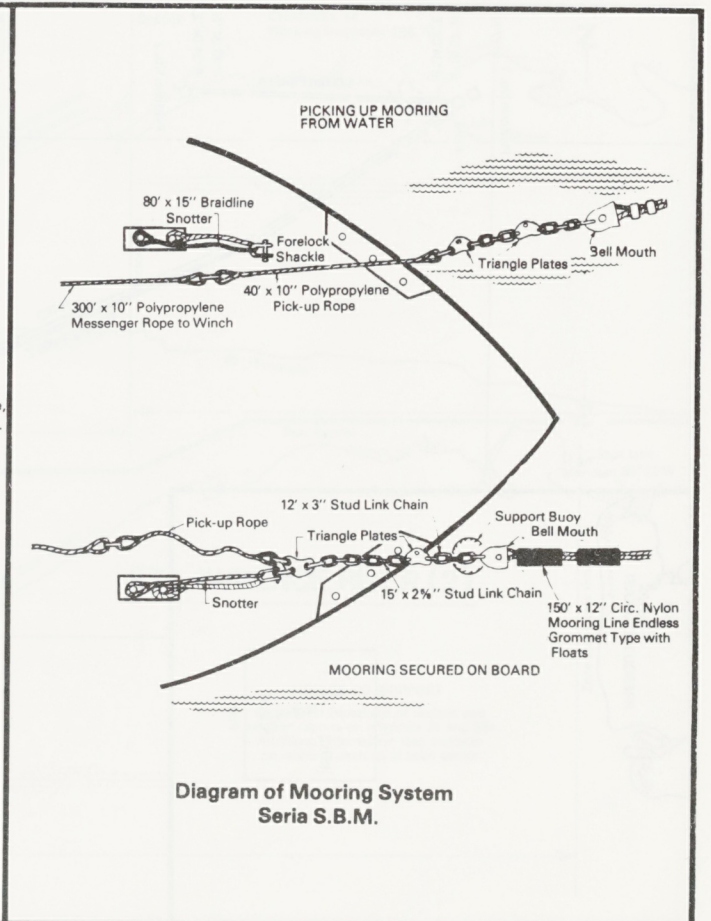
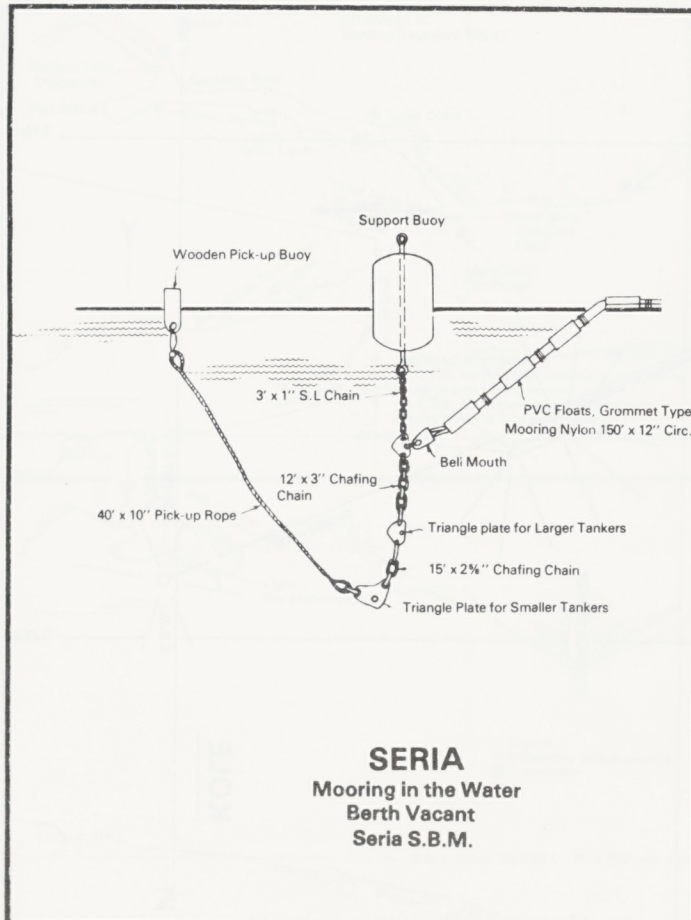
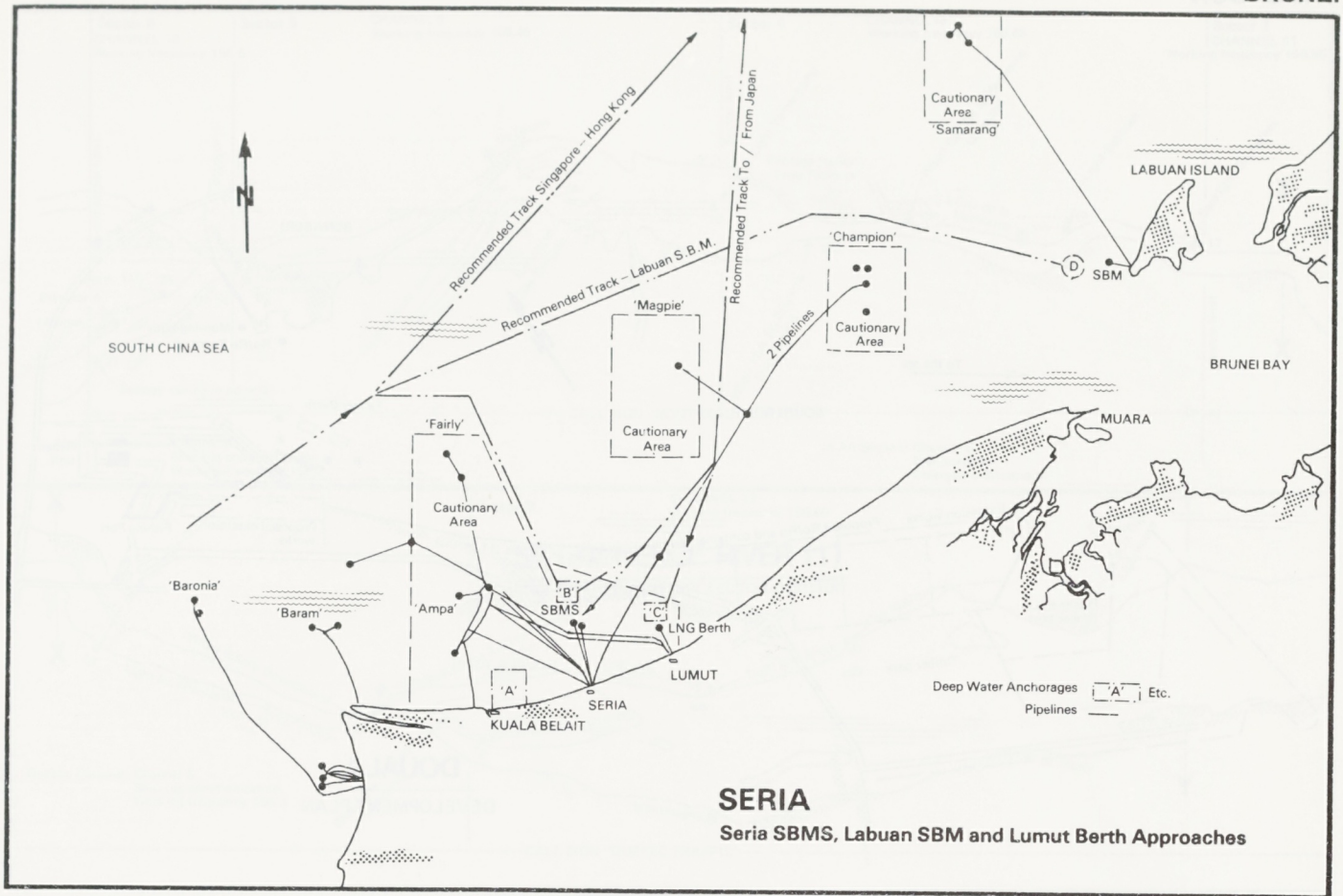


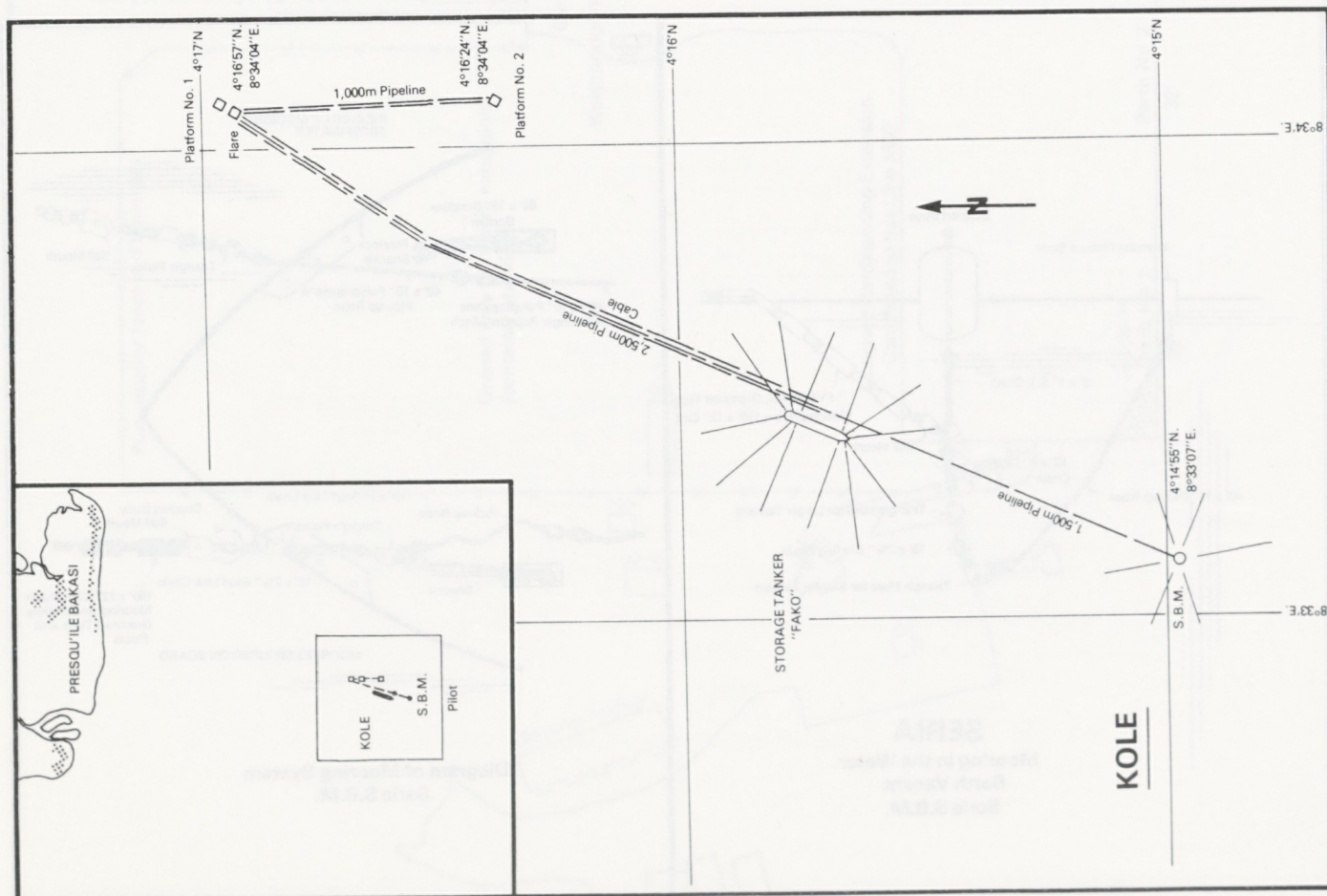
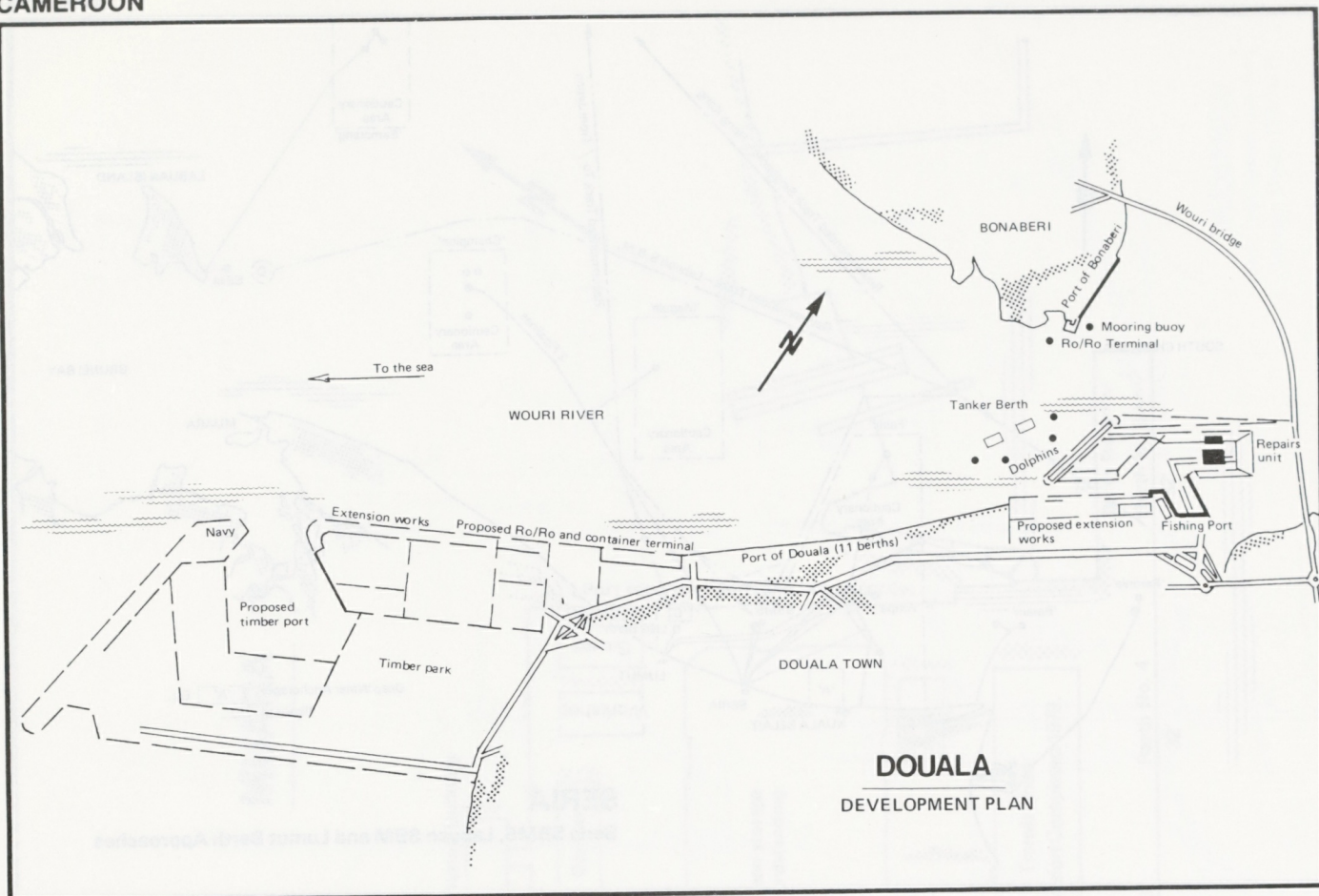


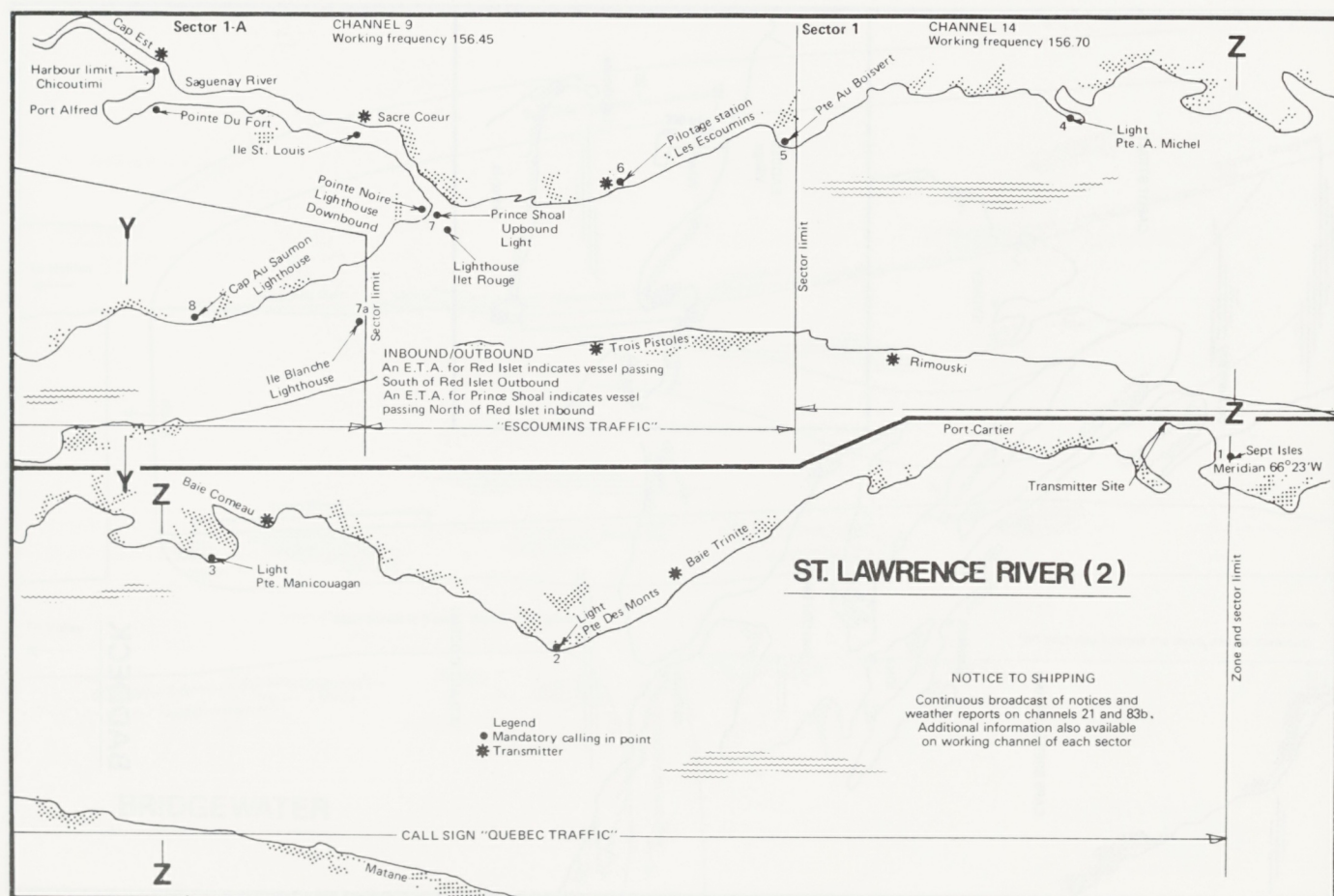
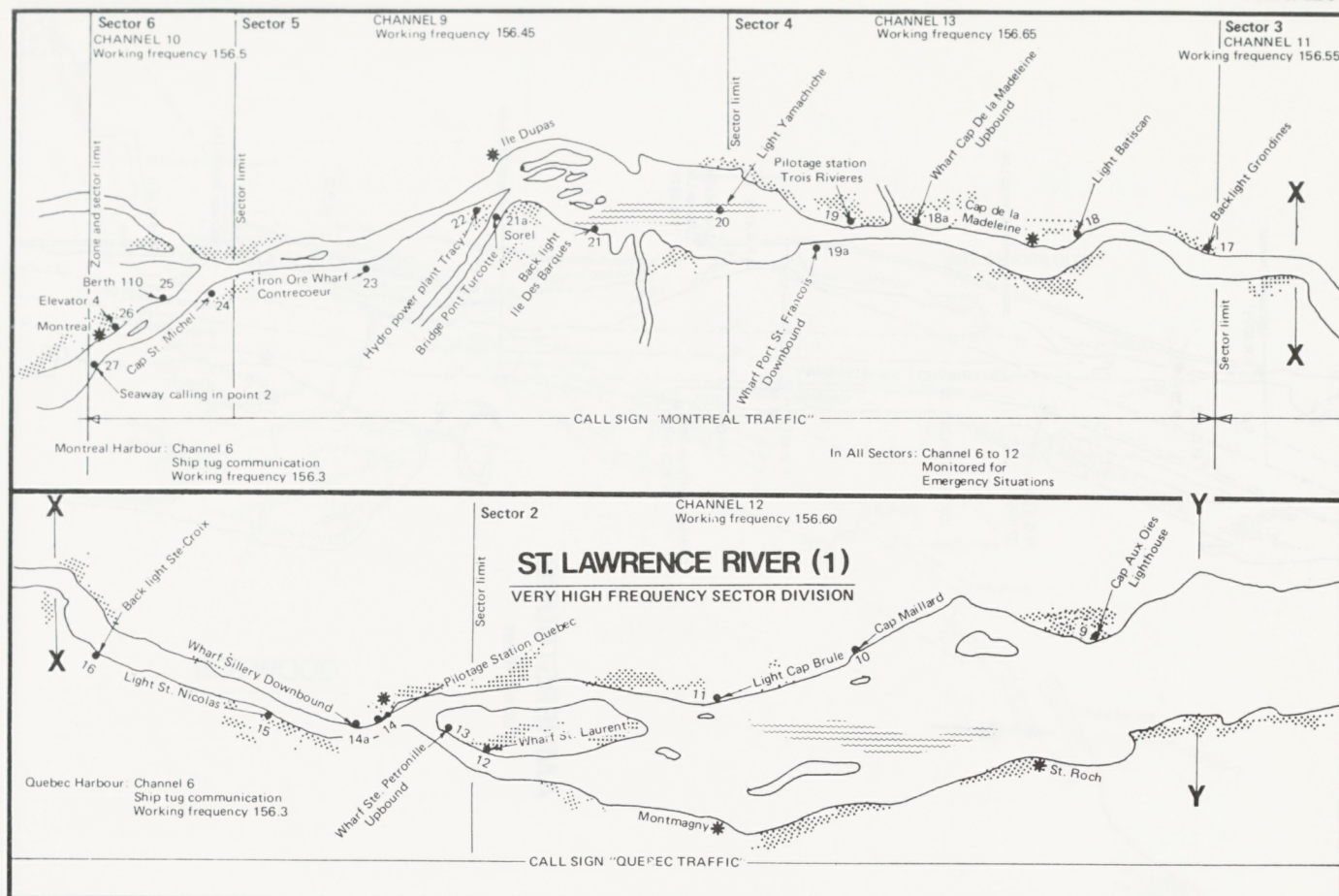
MUARA

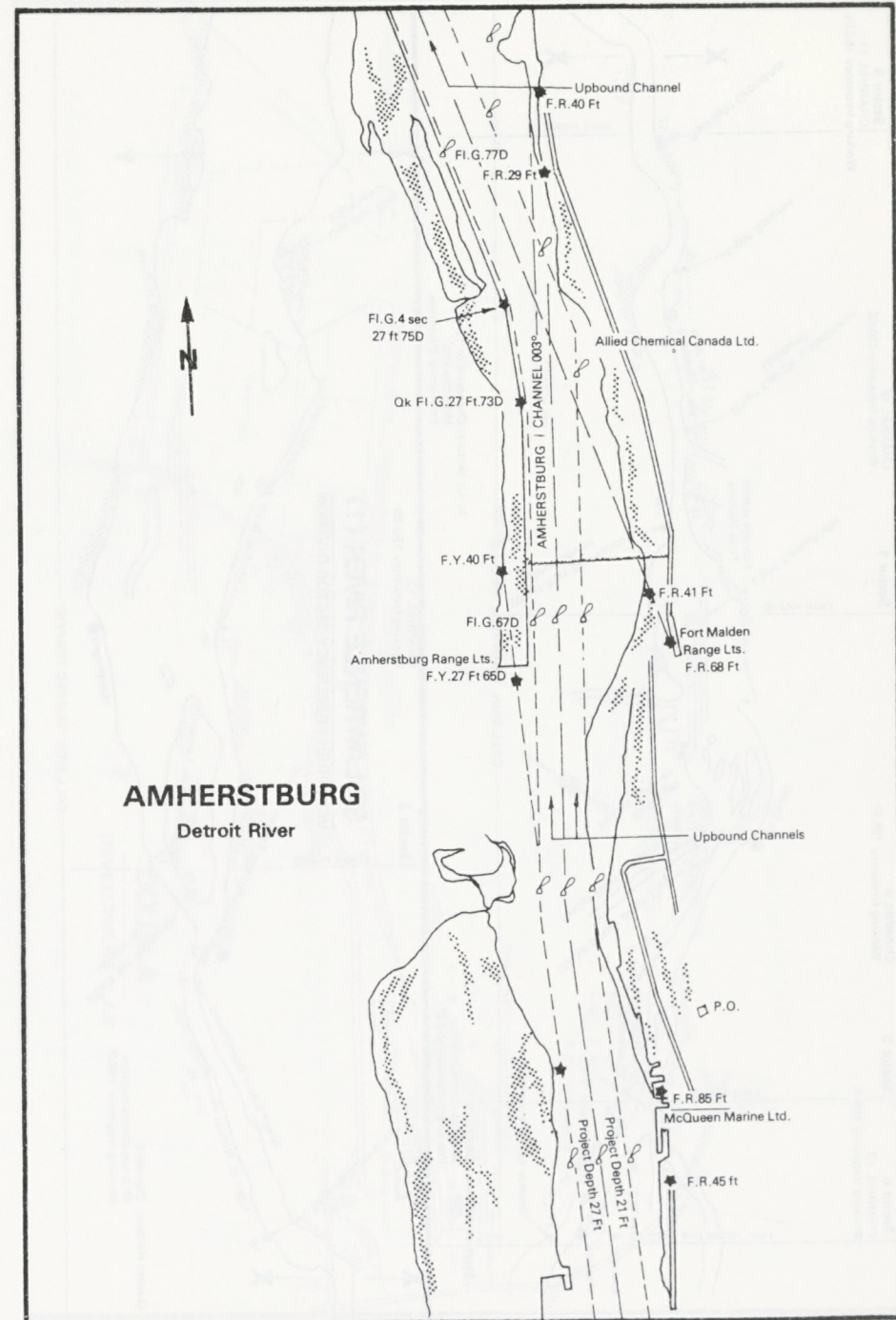
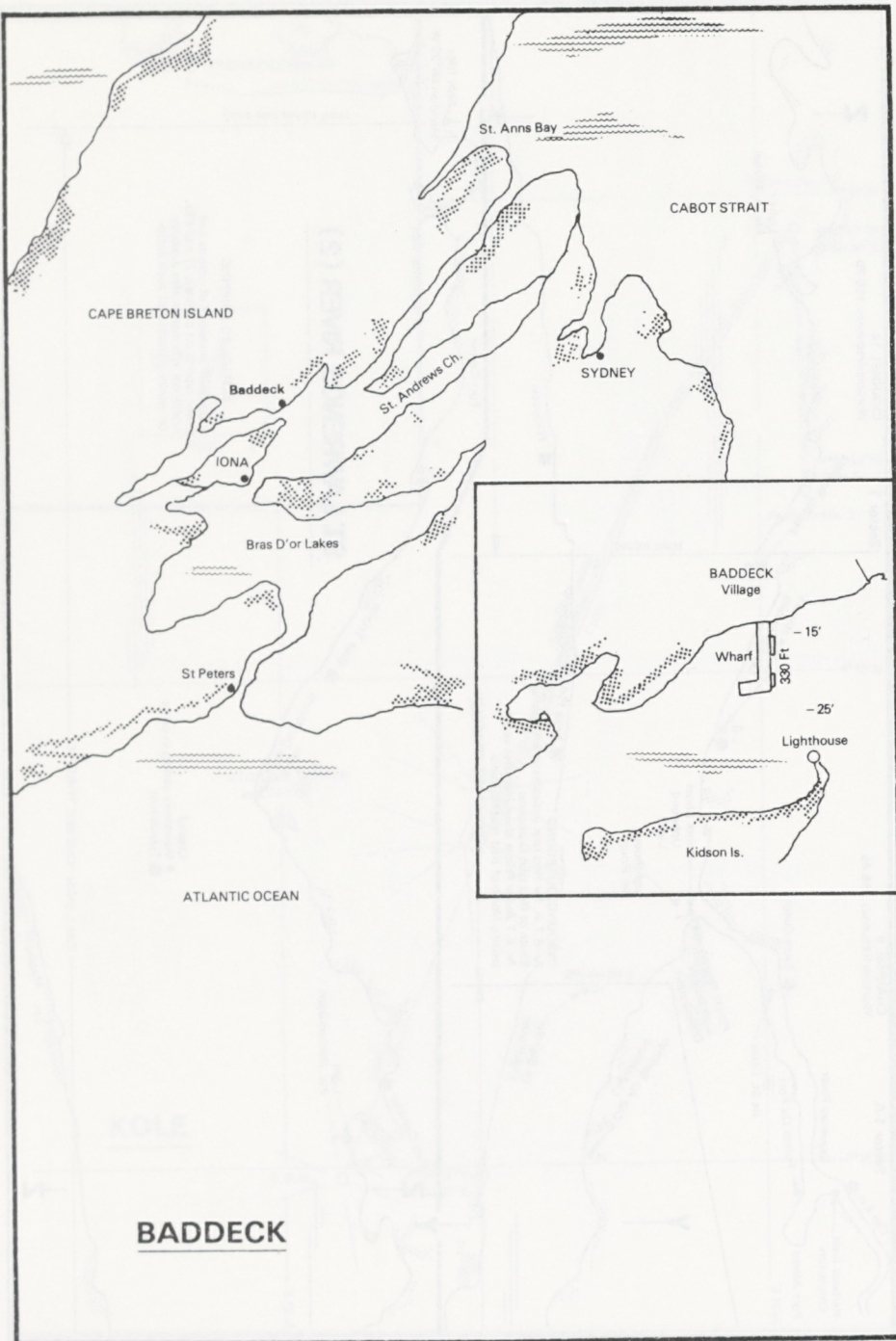


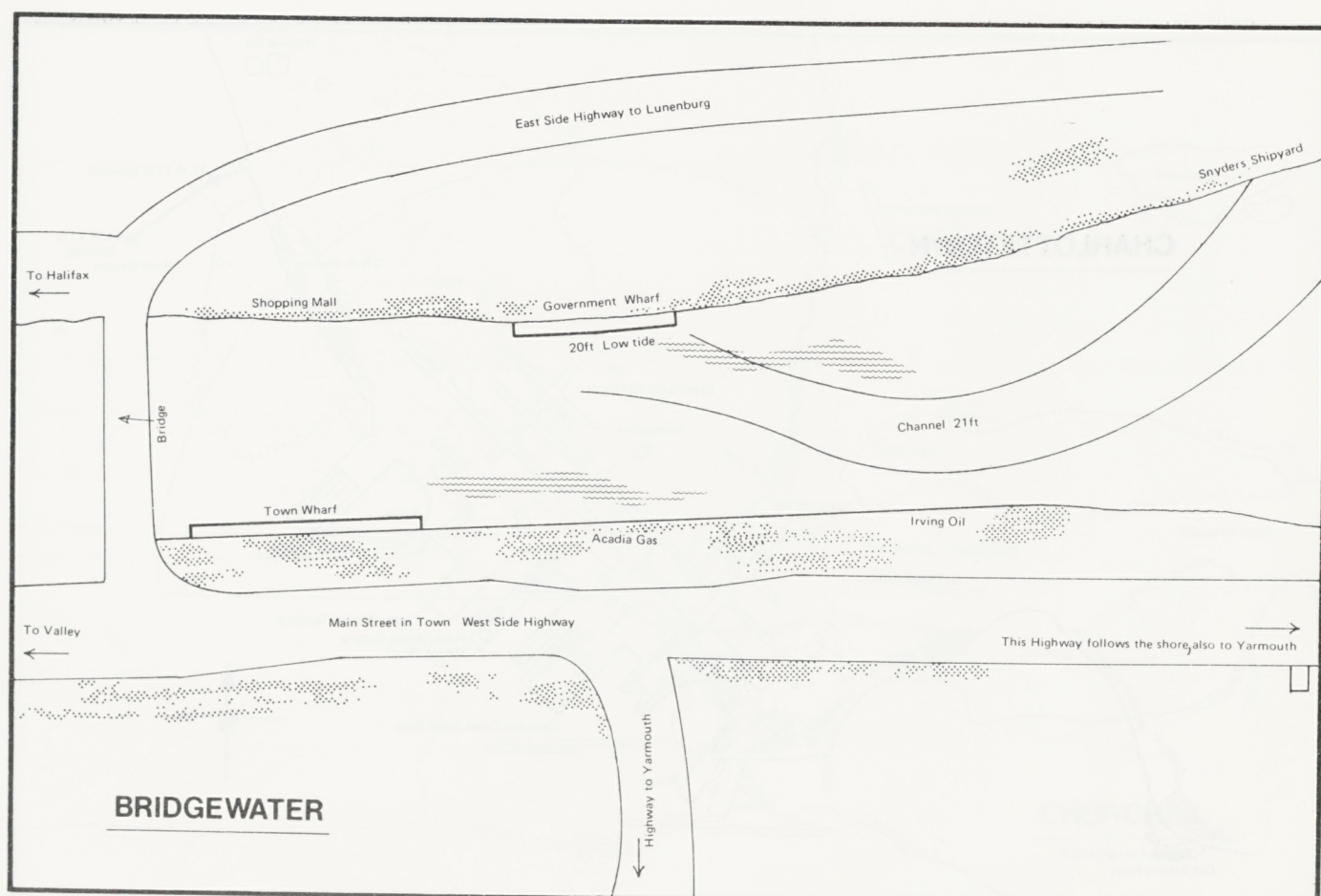
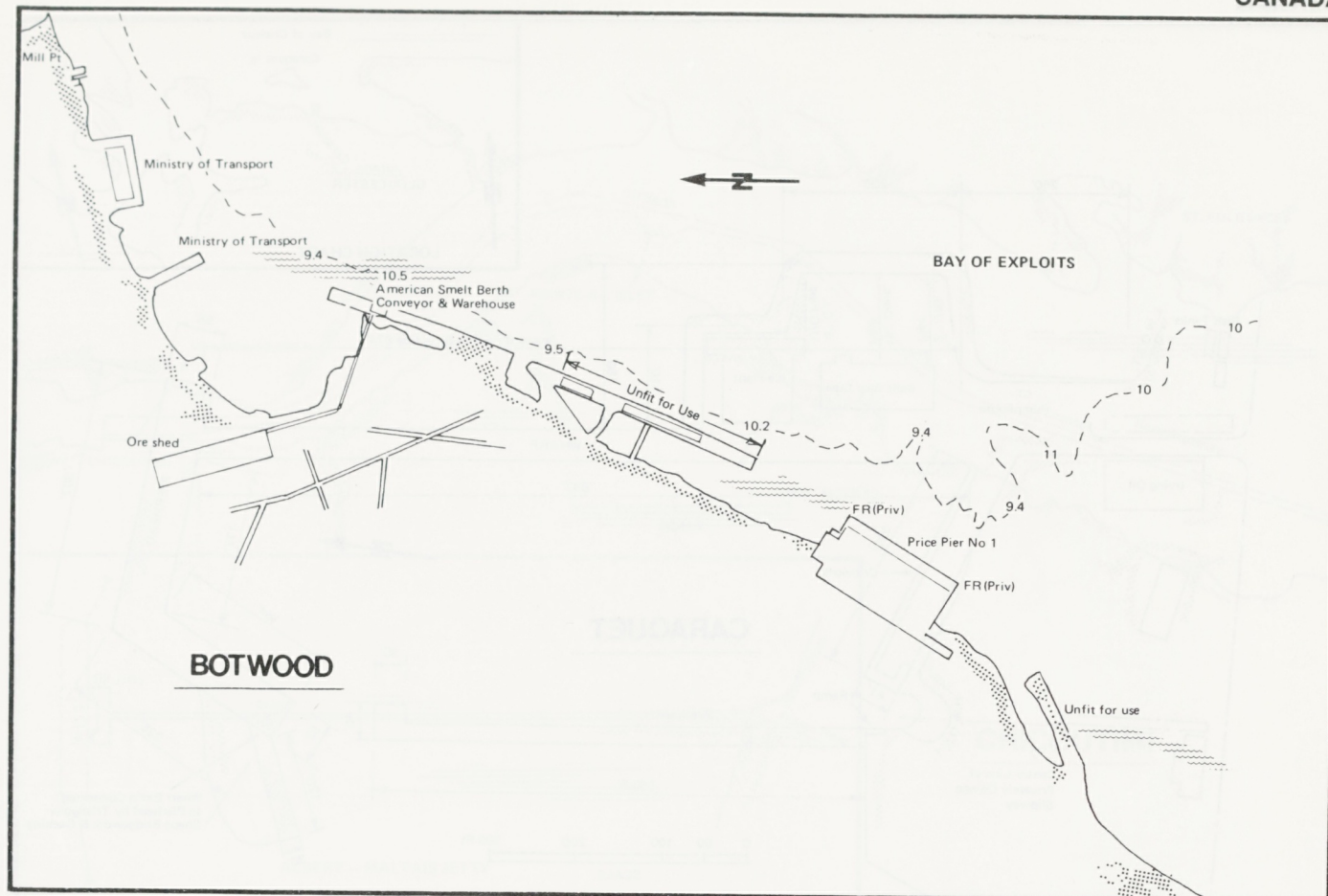
TRANSDATA
Terminal Systems Ltd
SINGAPORE (1987)

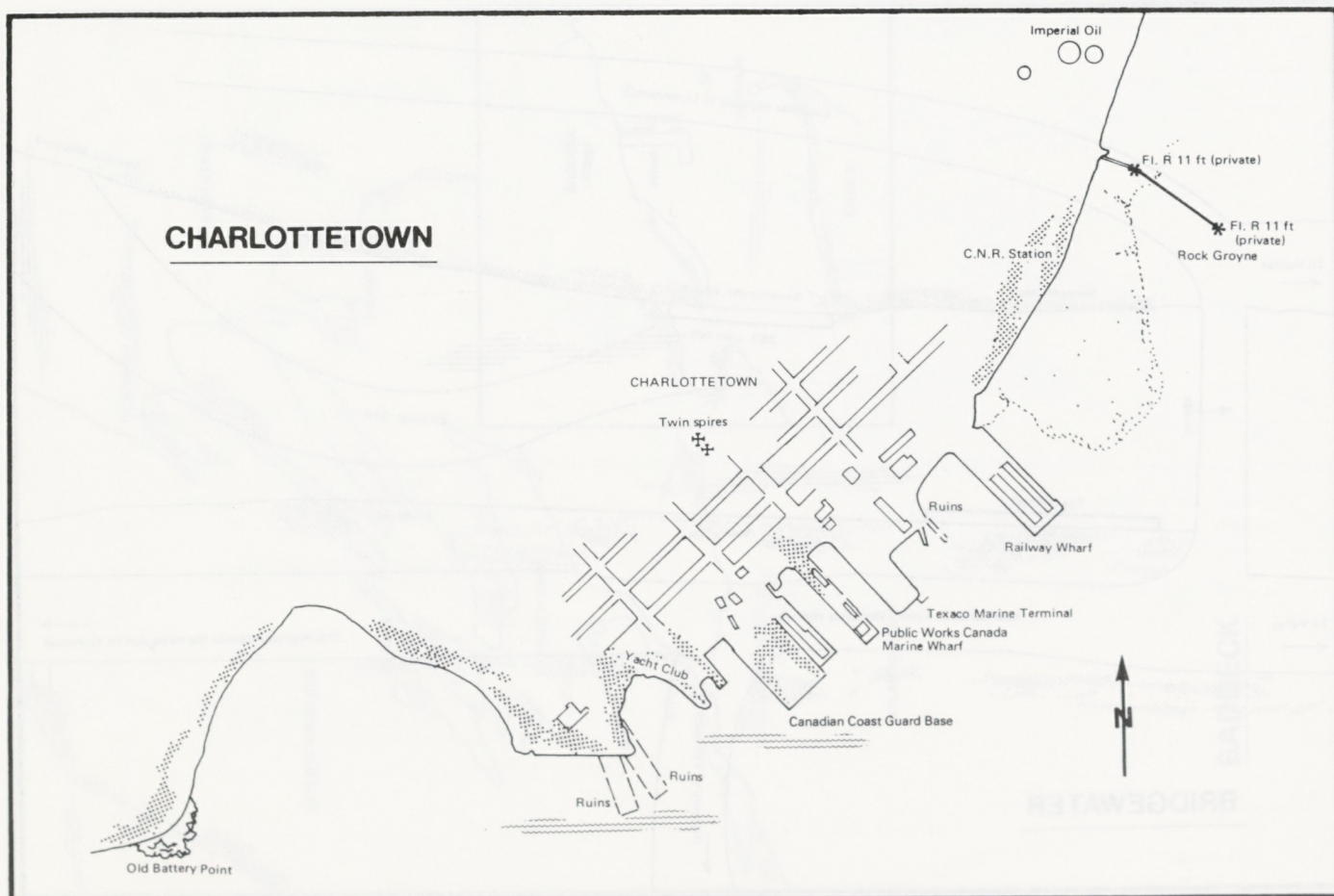
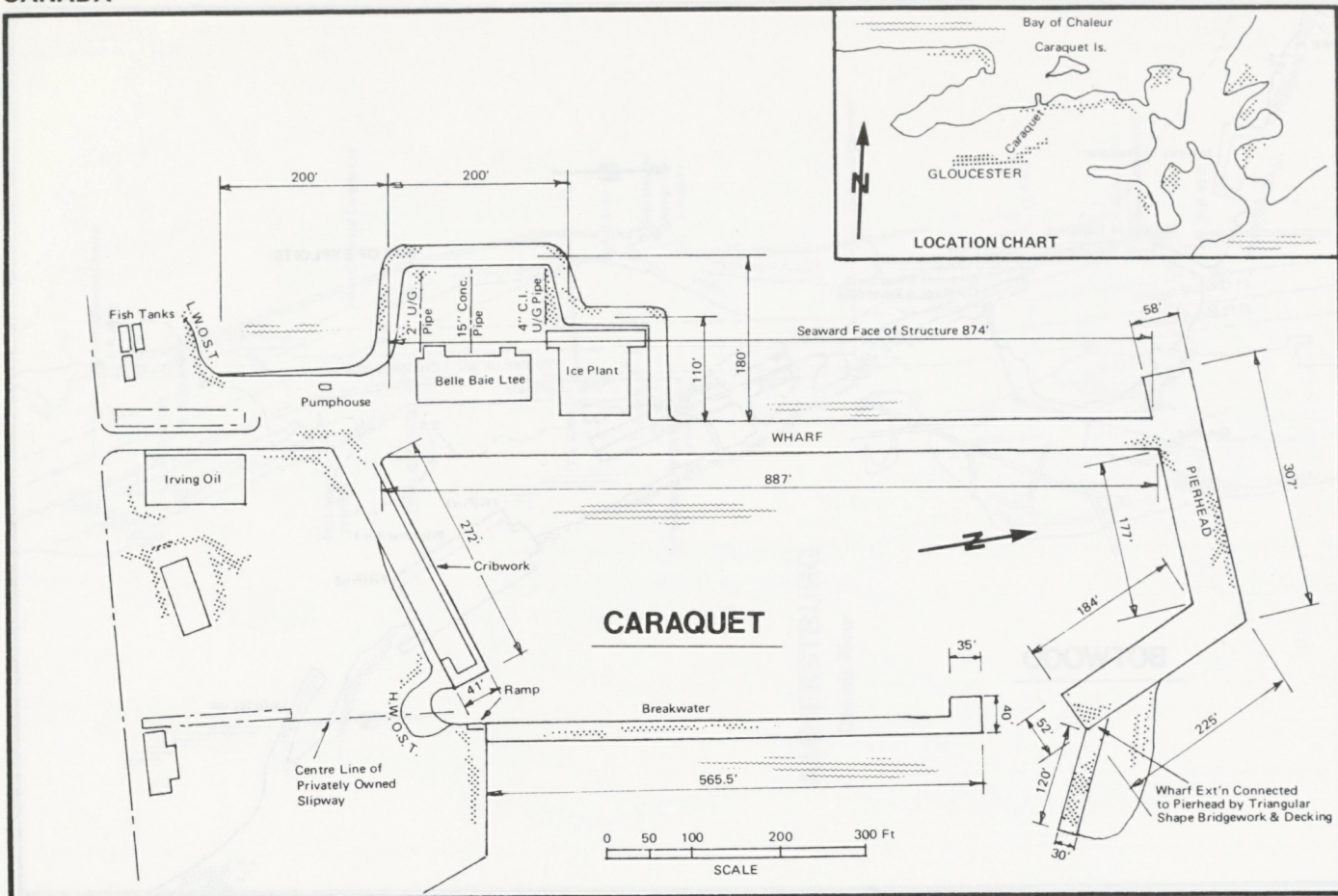


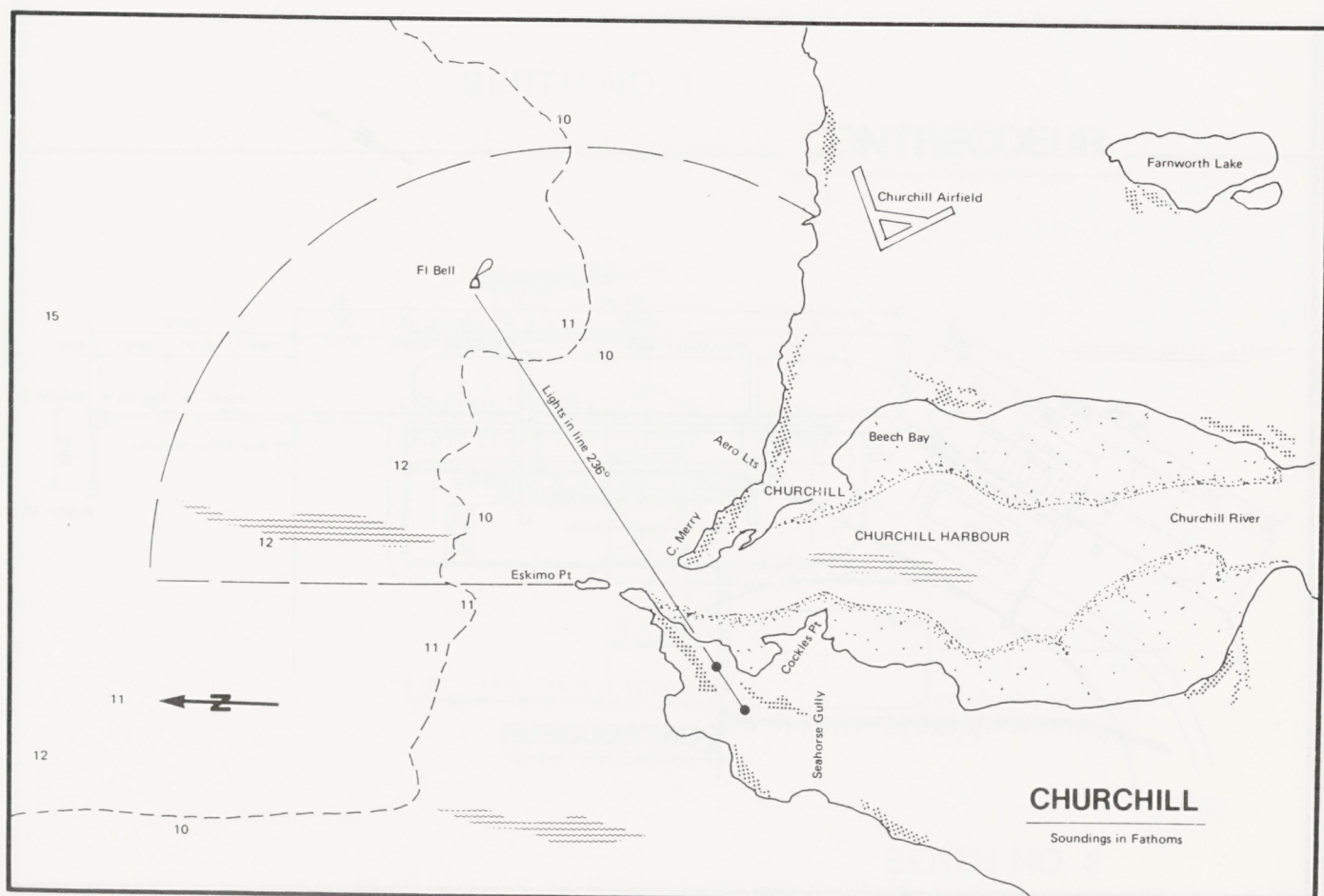
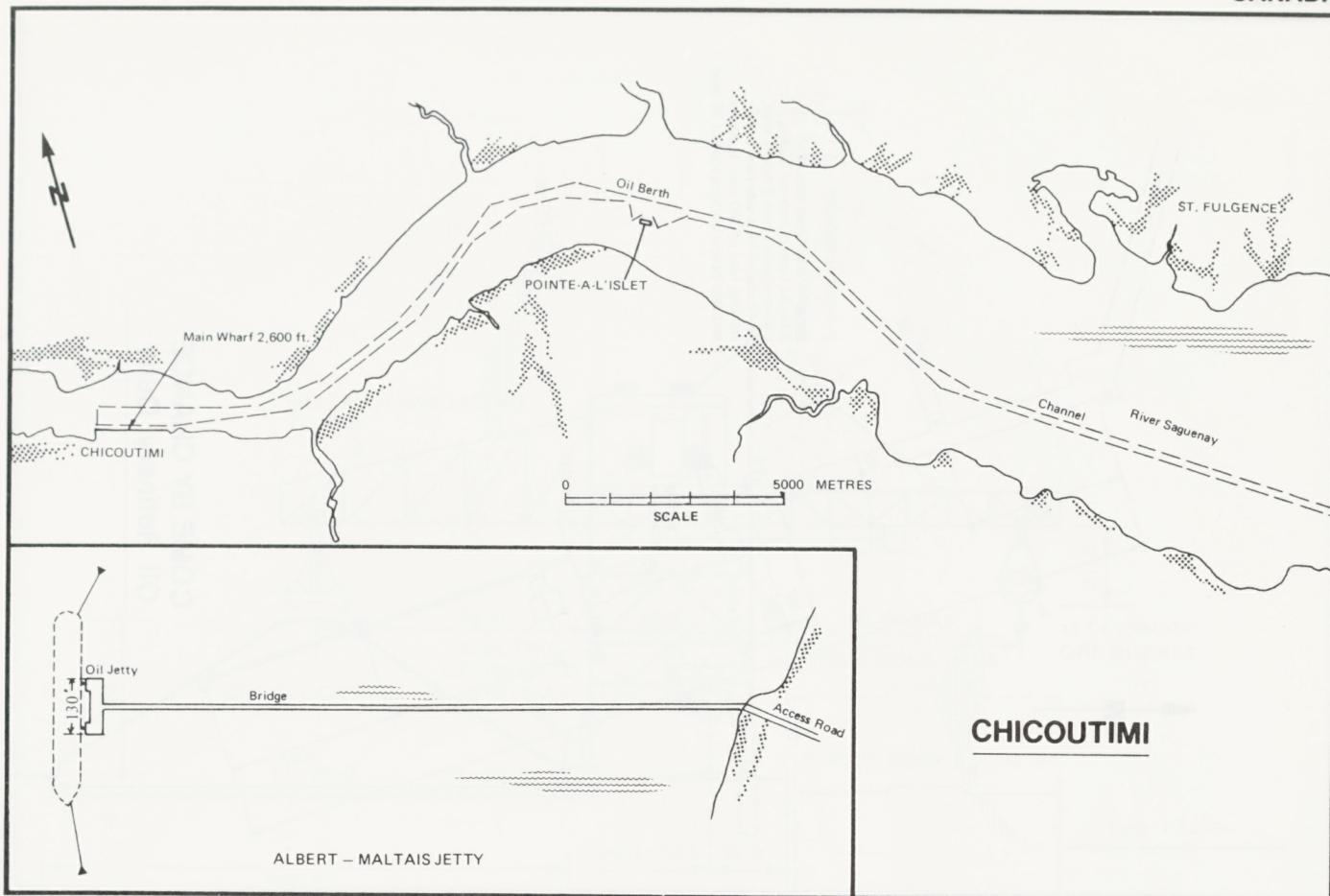


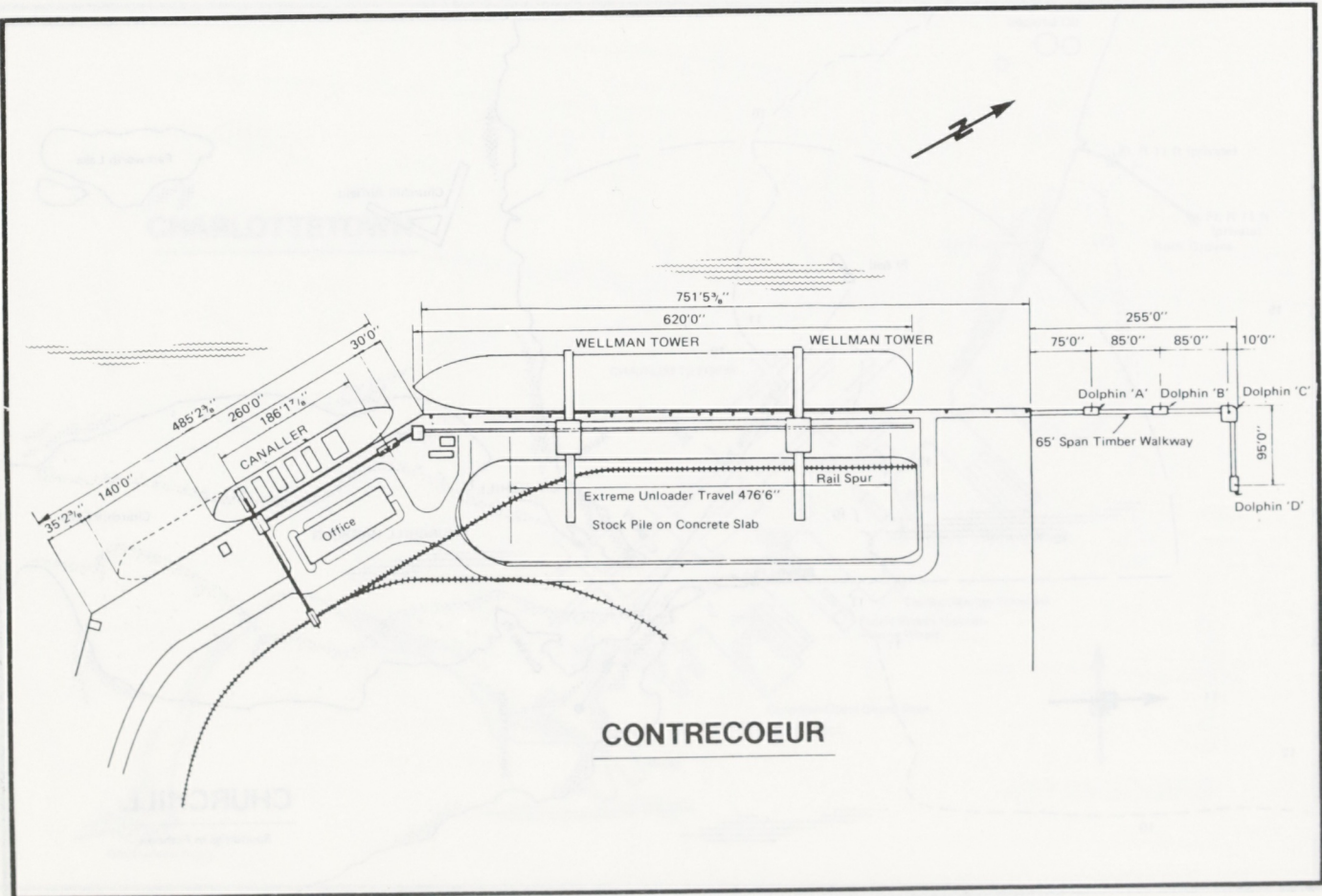
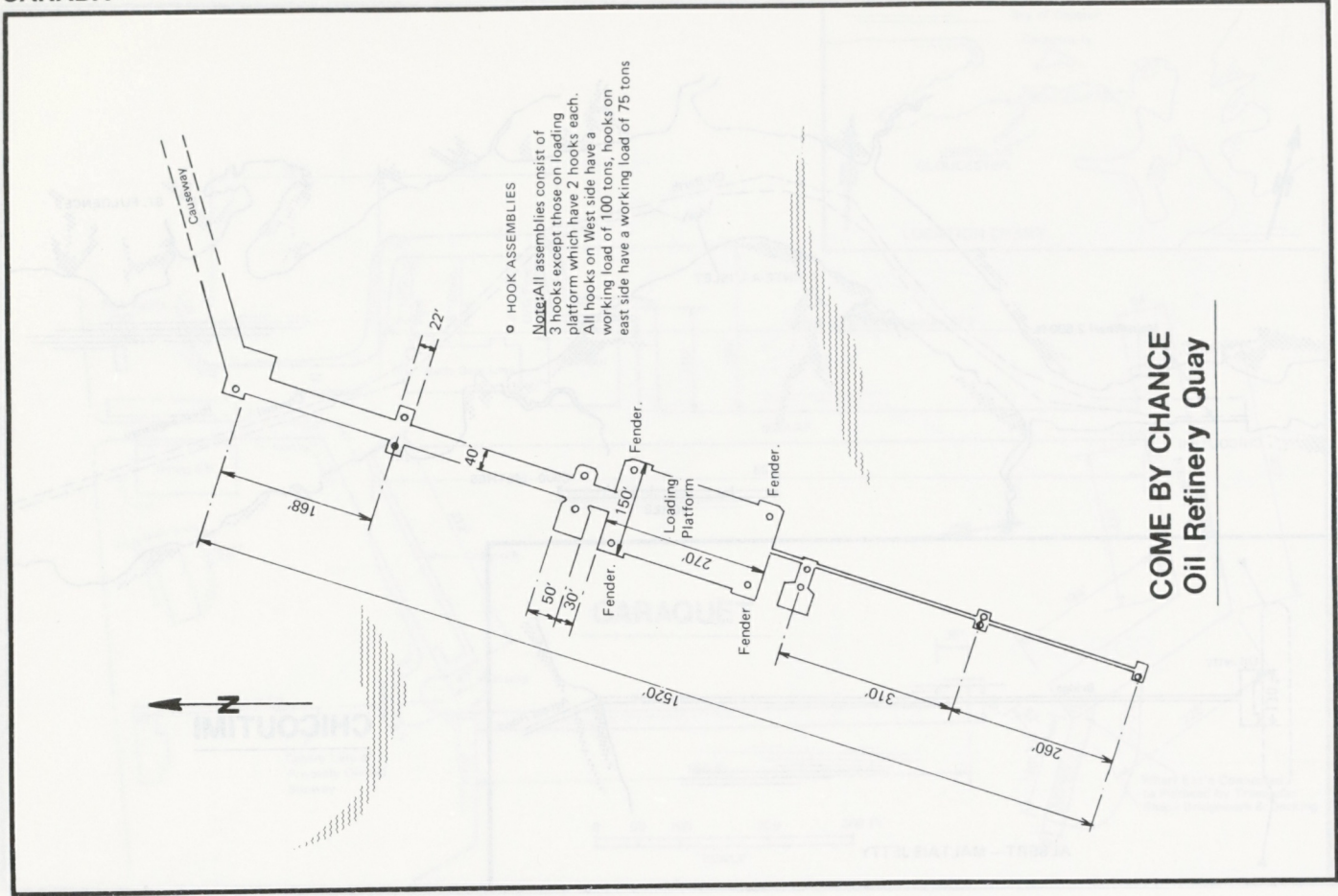


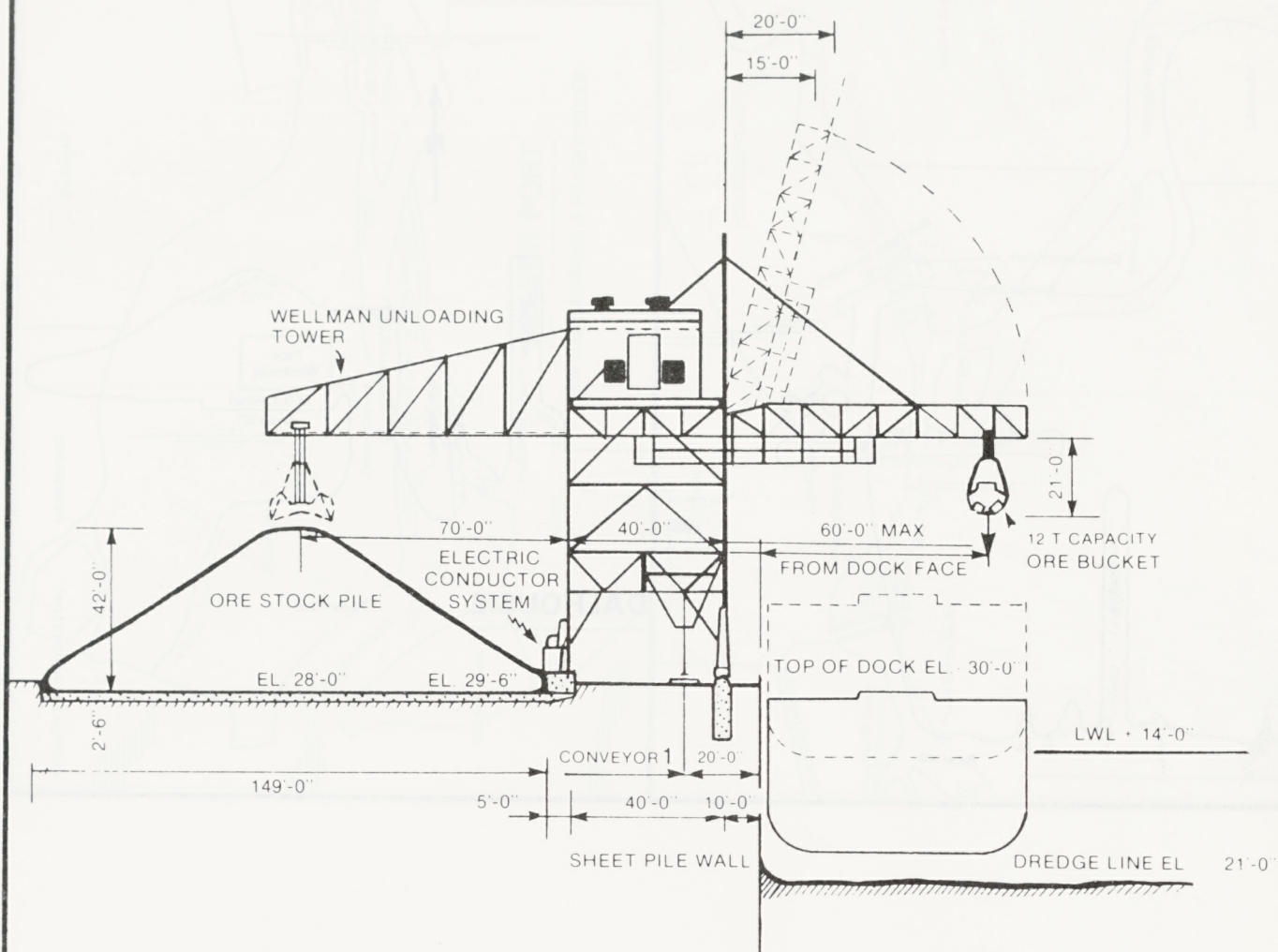




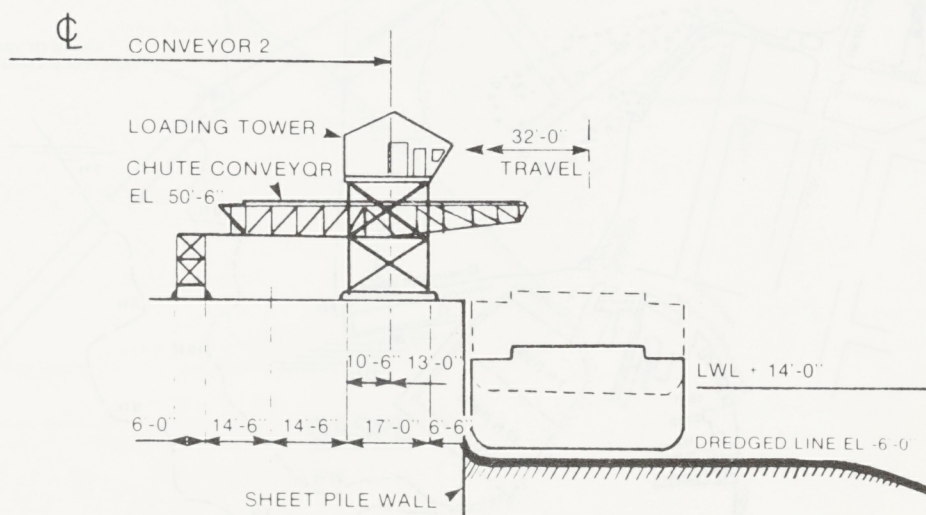




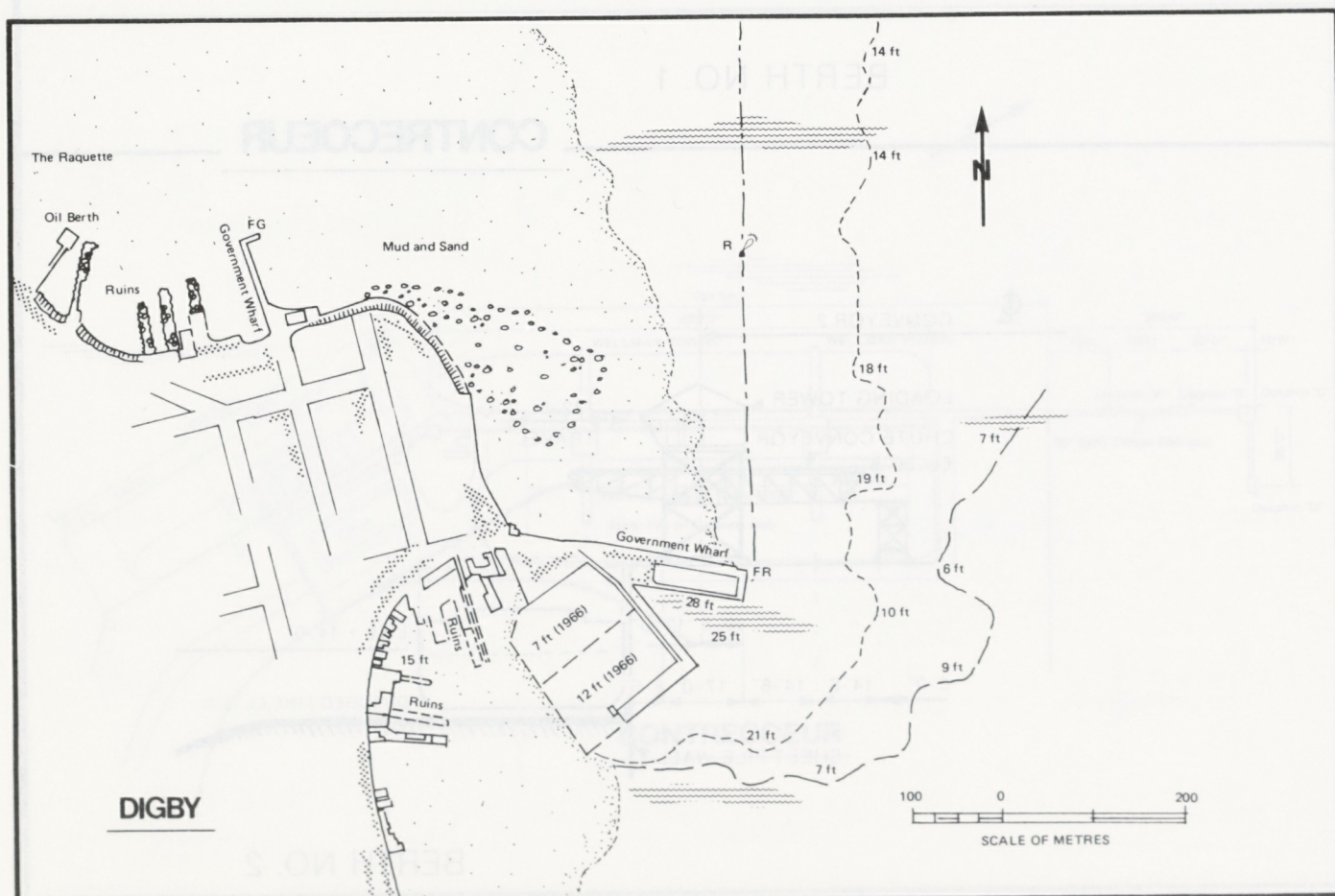
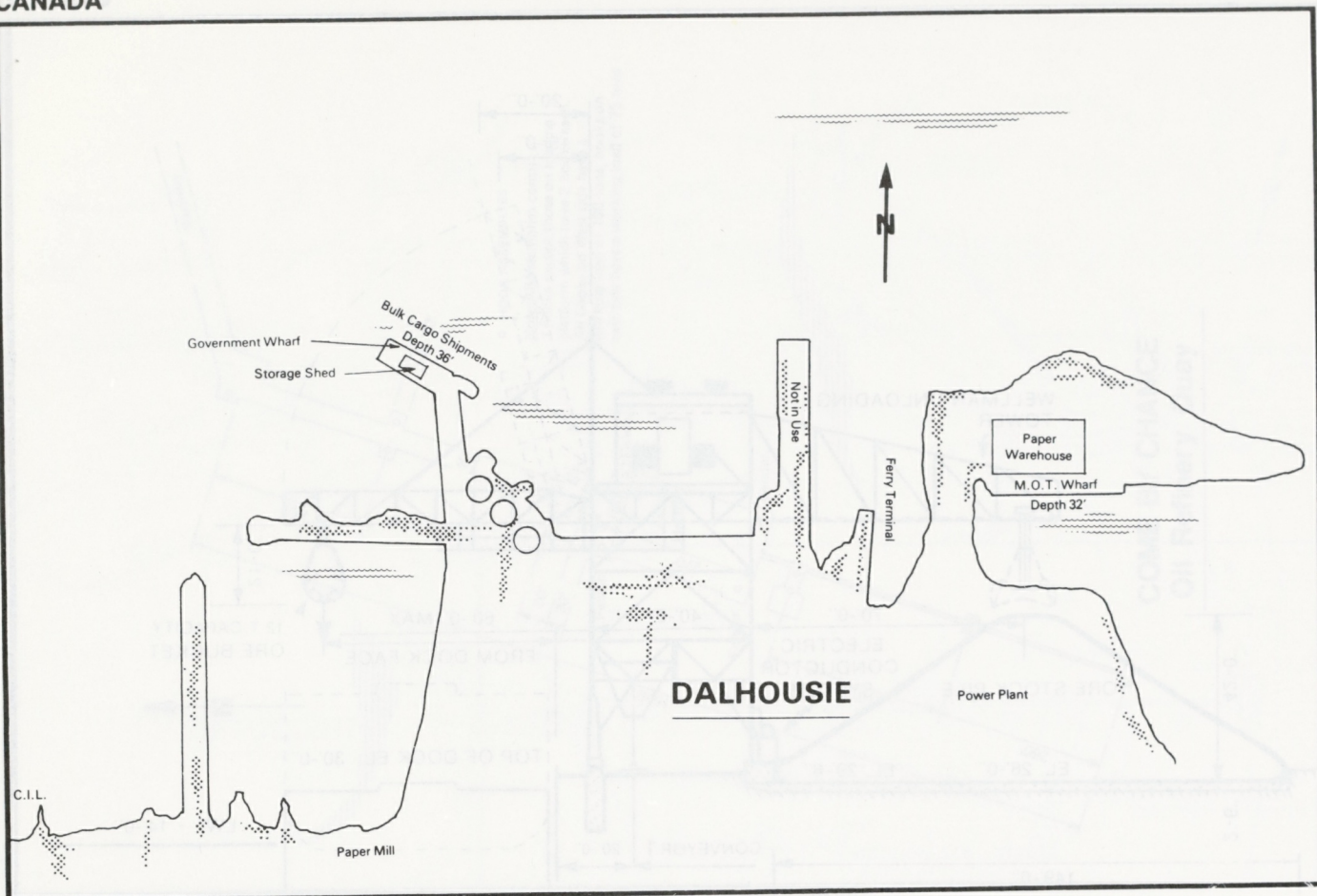


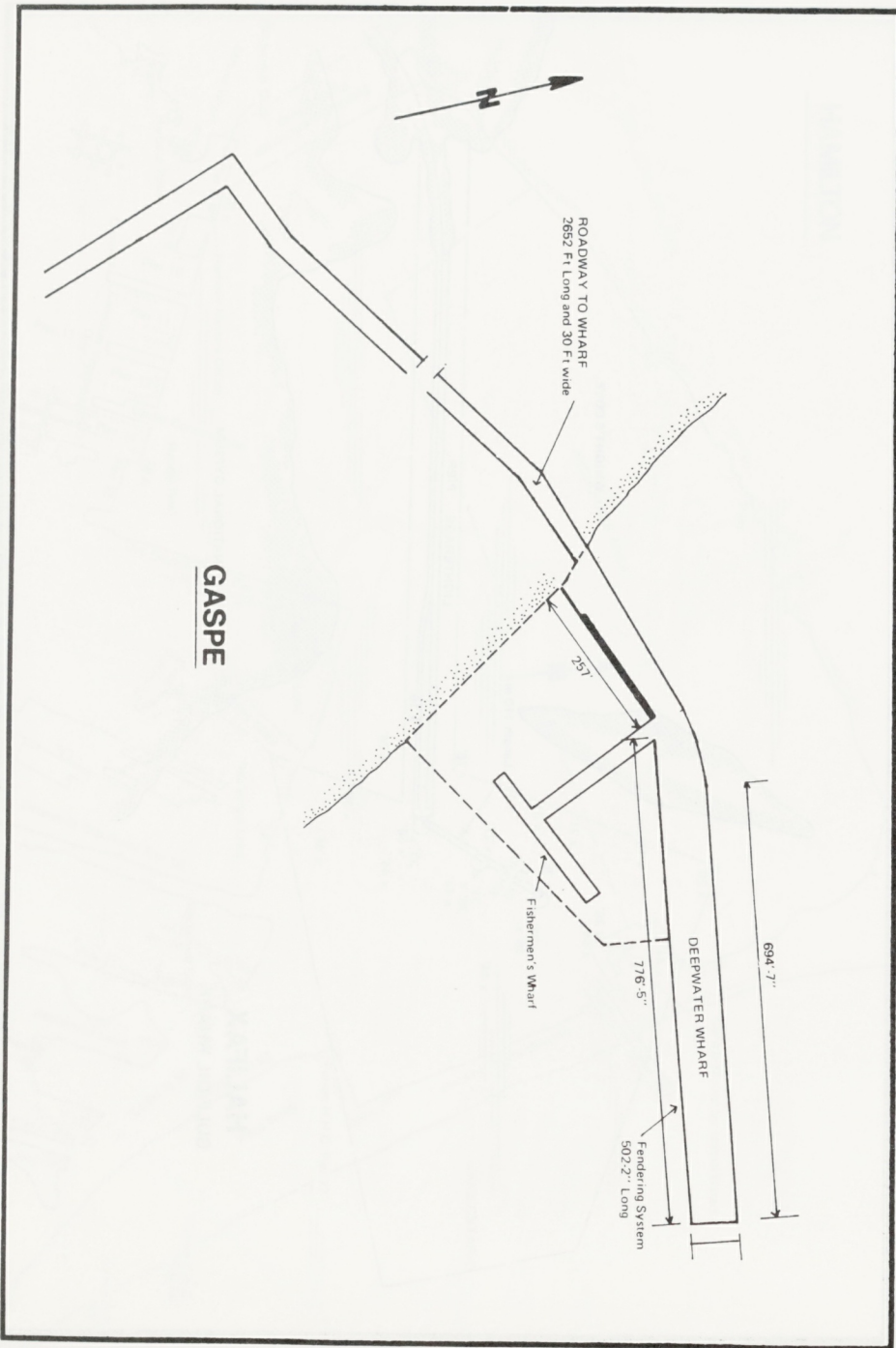


BERTH NO. 1

CONTRECOEUR

BERTH NO. 2





GASPE

ROADWAY TO WHARF
2652 Ft Long and 30 Ft wide

251'

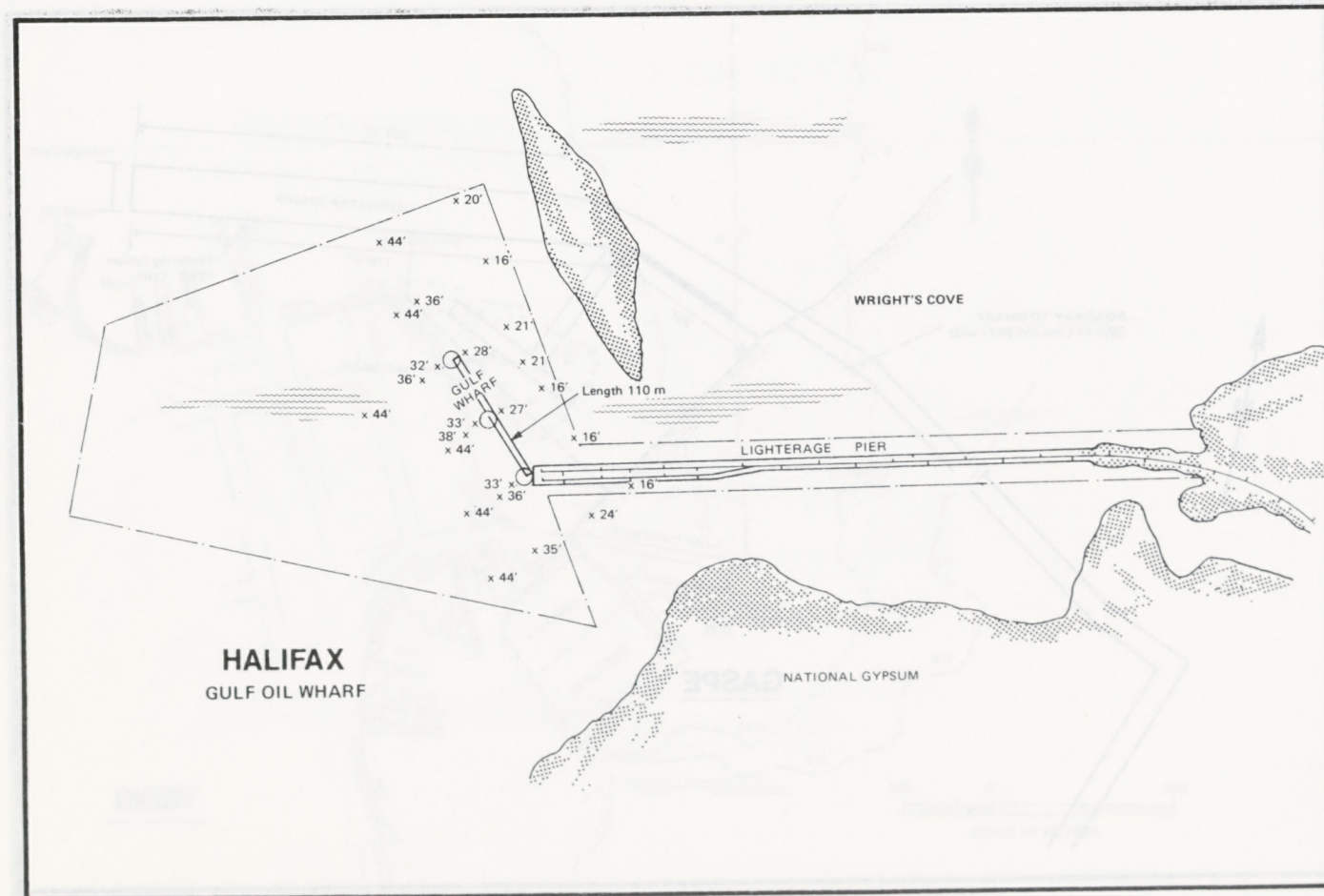
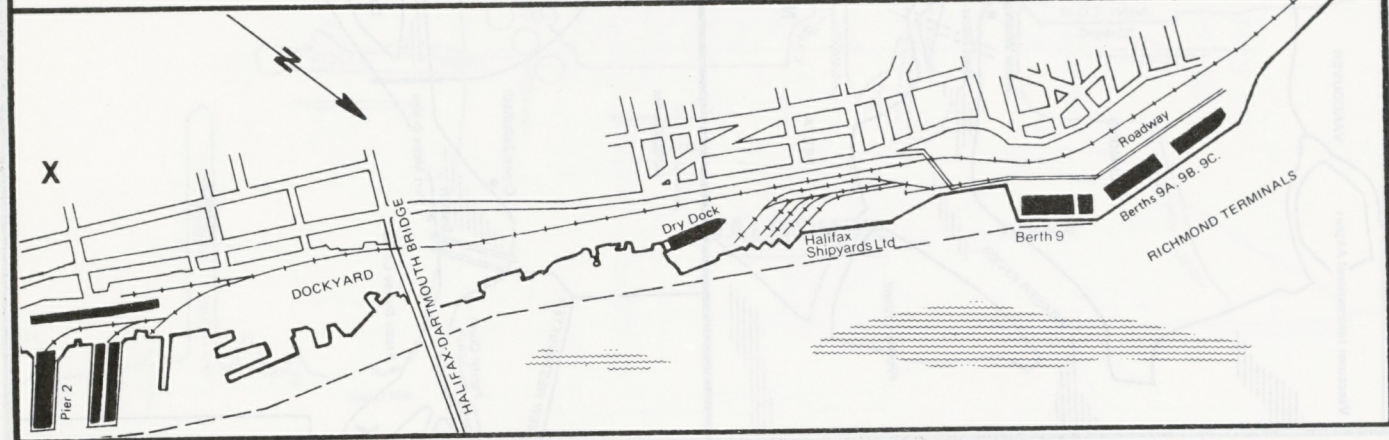
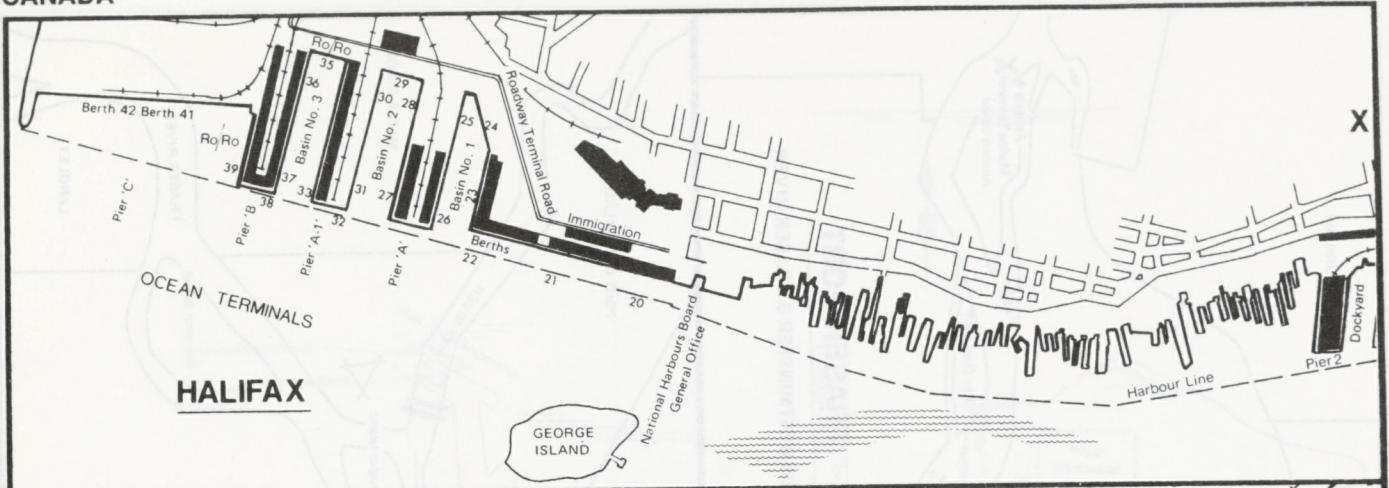
Fishermen's Wharf

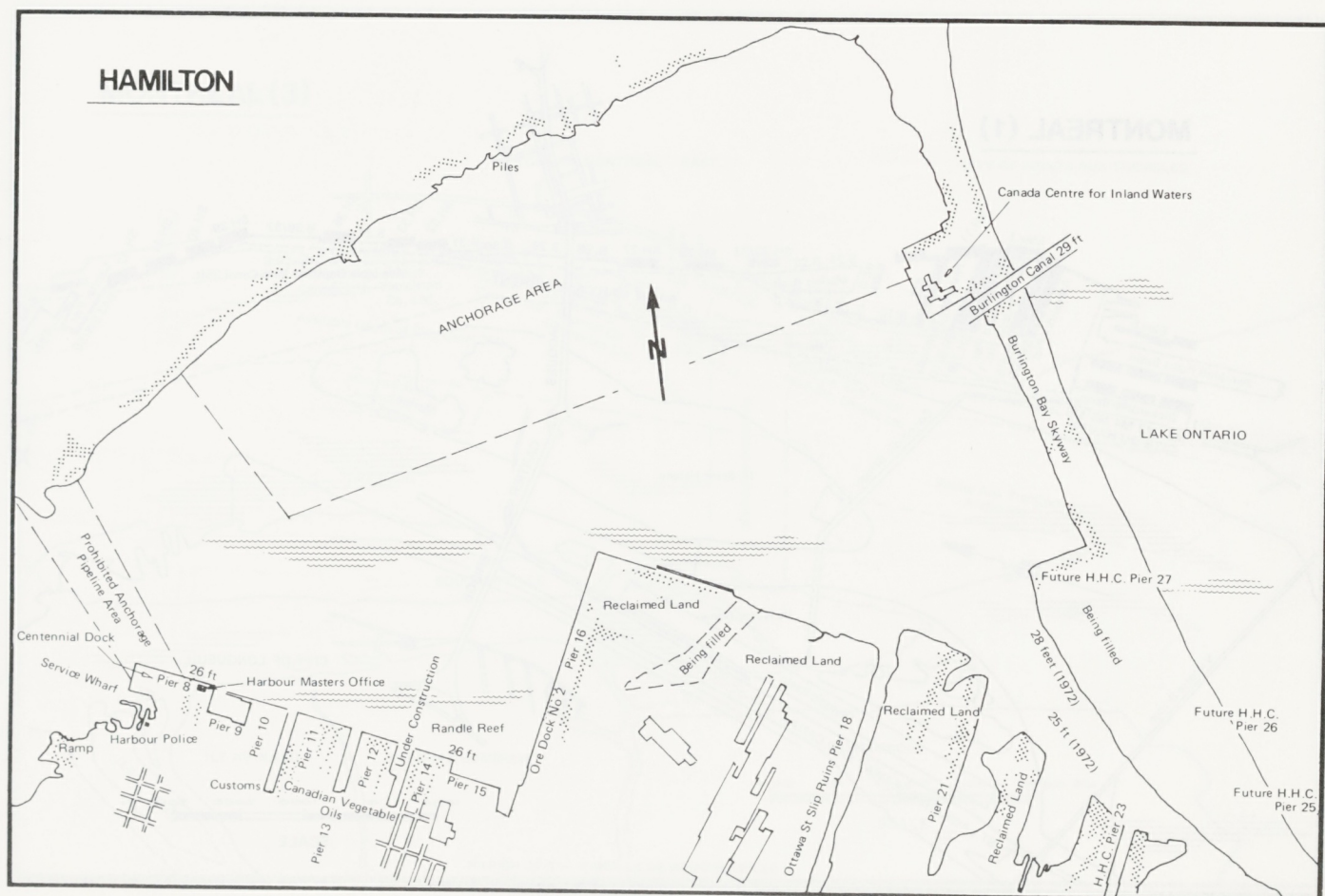
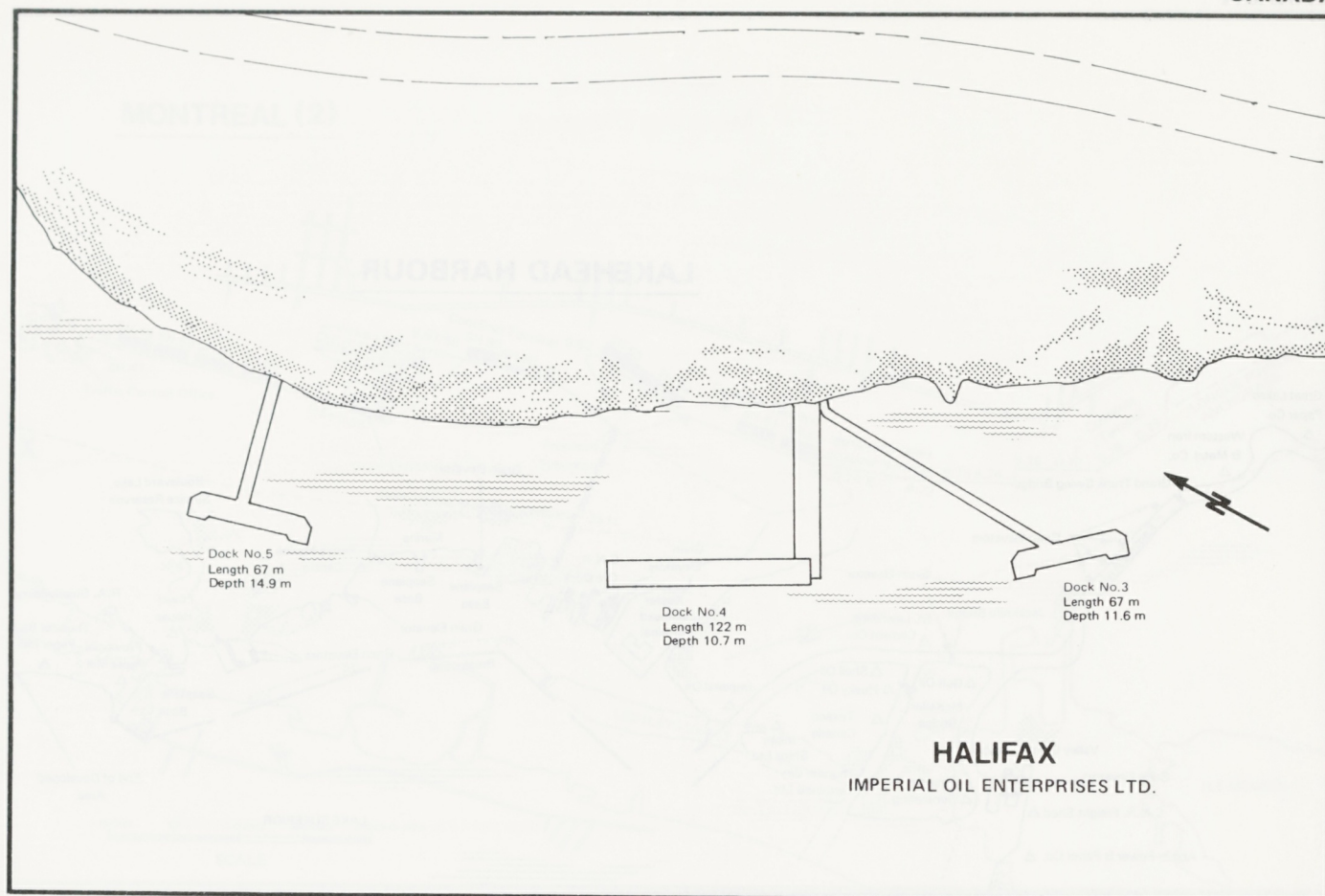
DEEPWATER WHARF

776'-5"

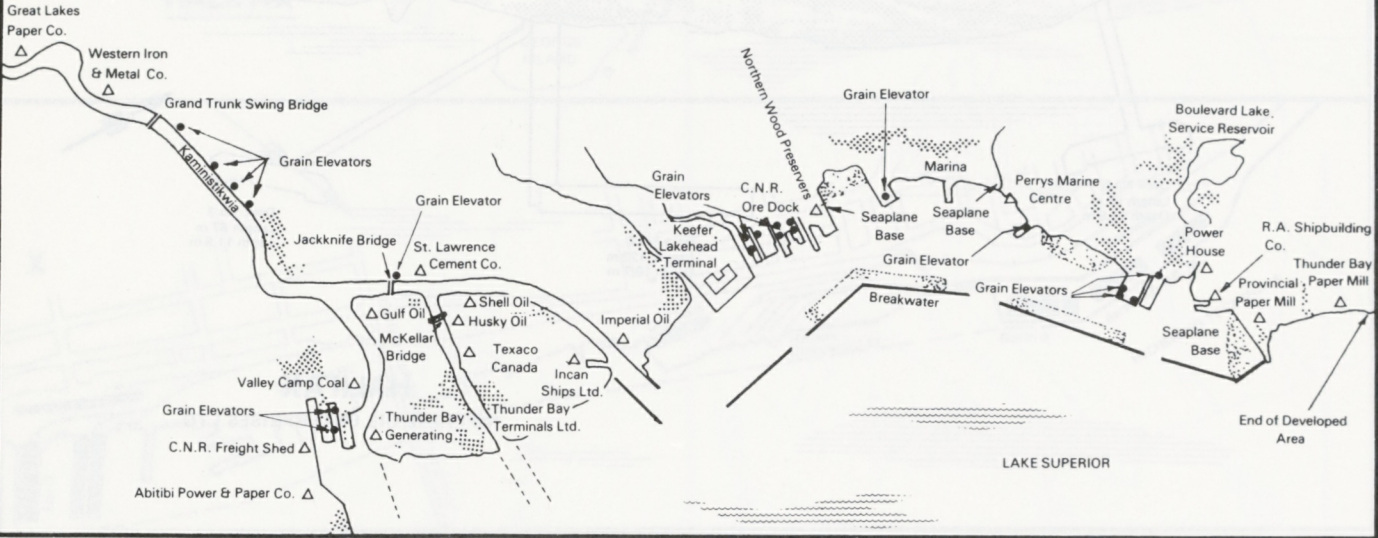
Fendering System
502'-2" Long

694'-7"

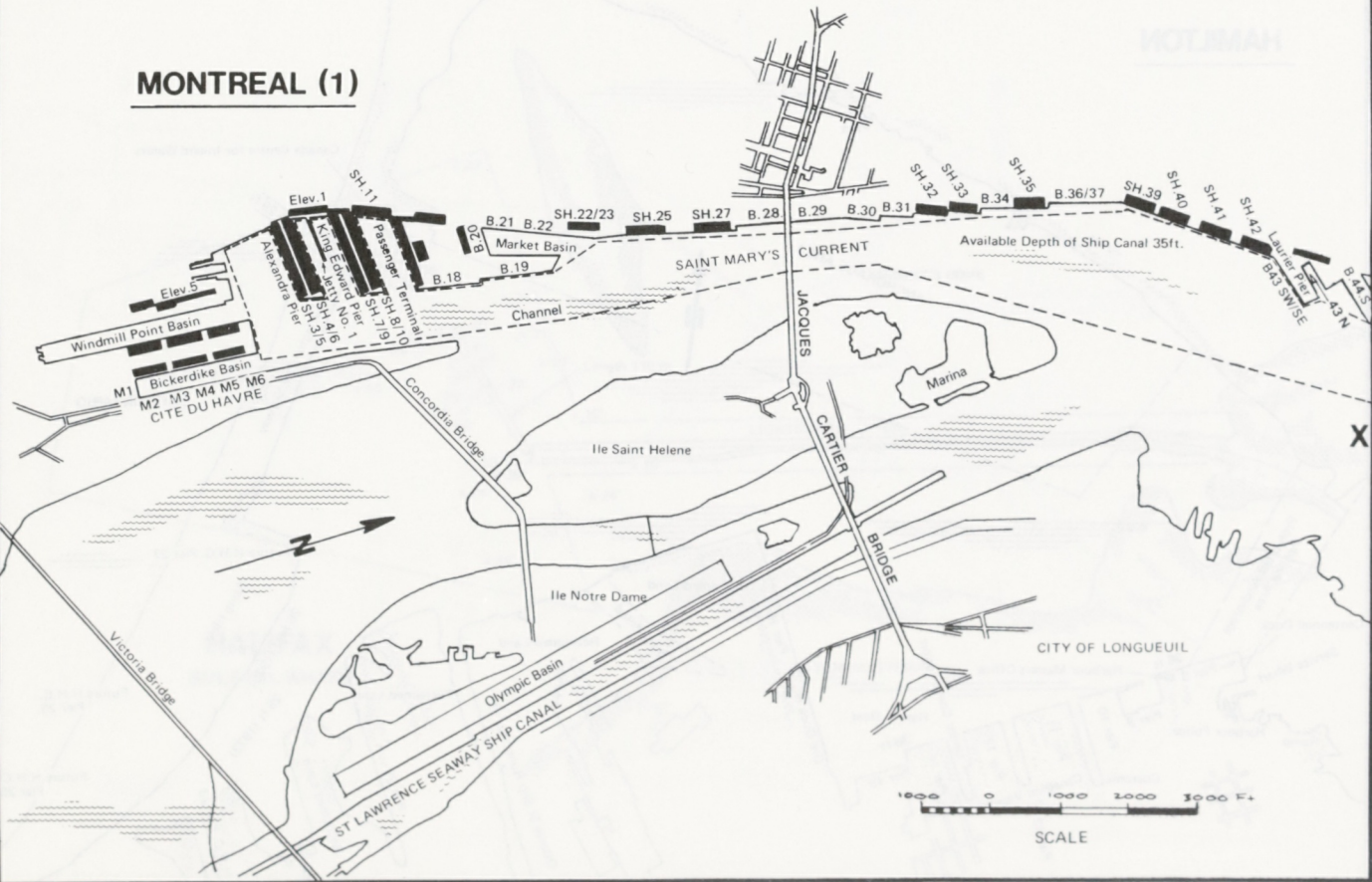




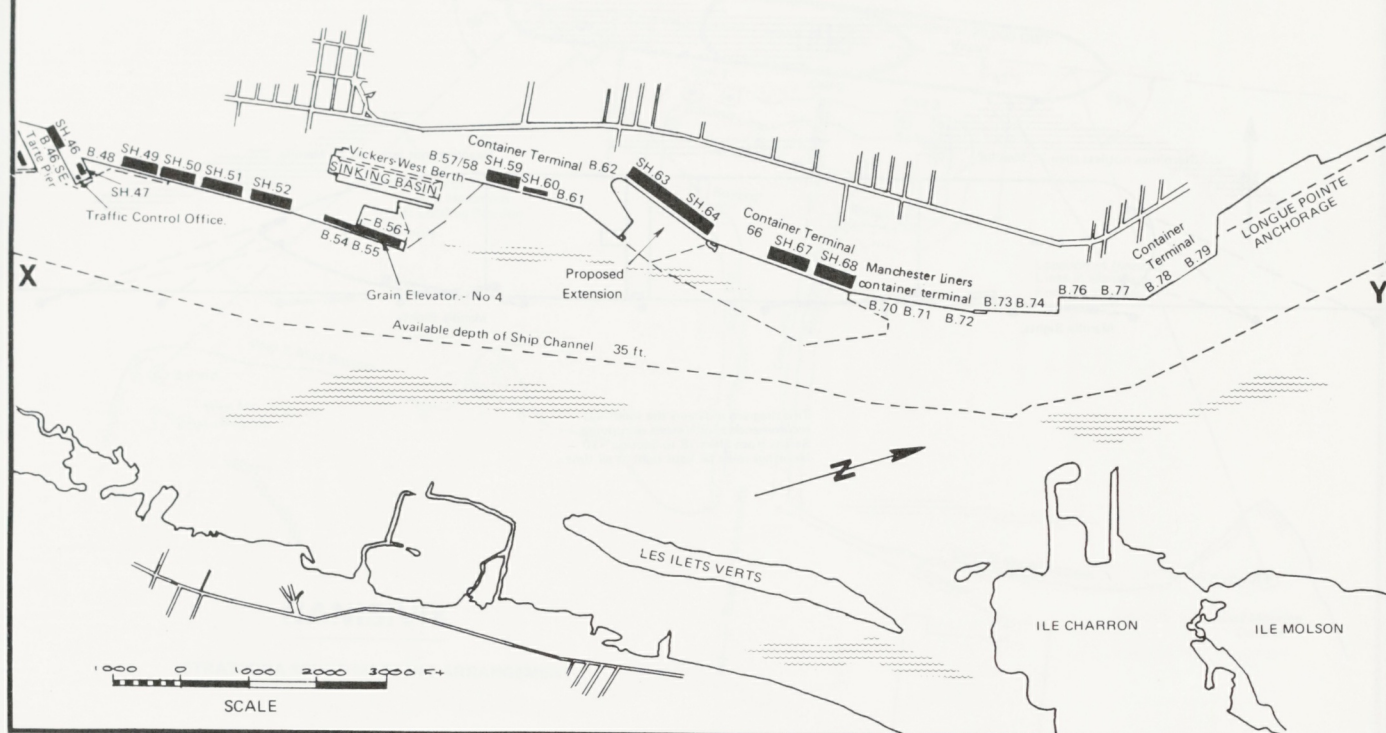
LAKEHEAD HARBOUR



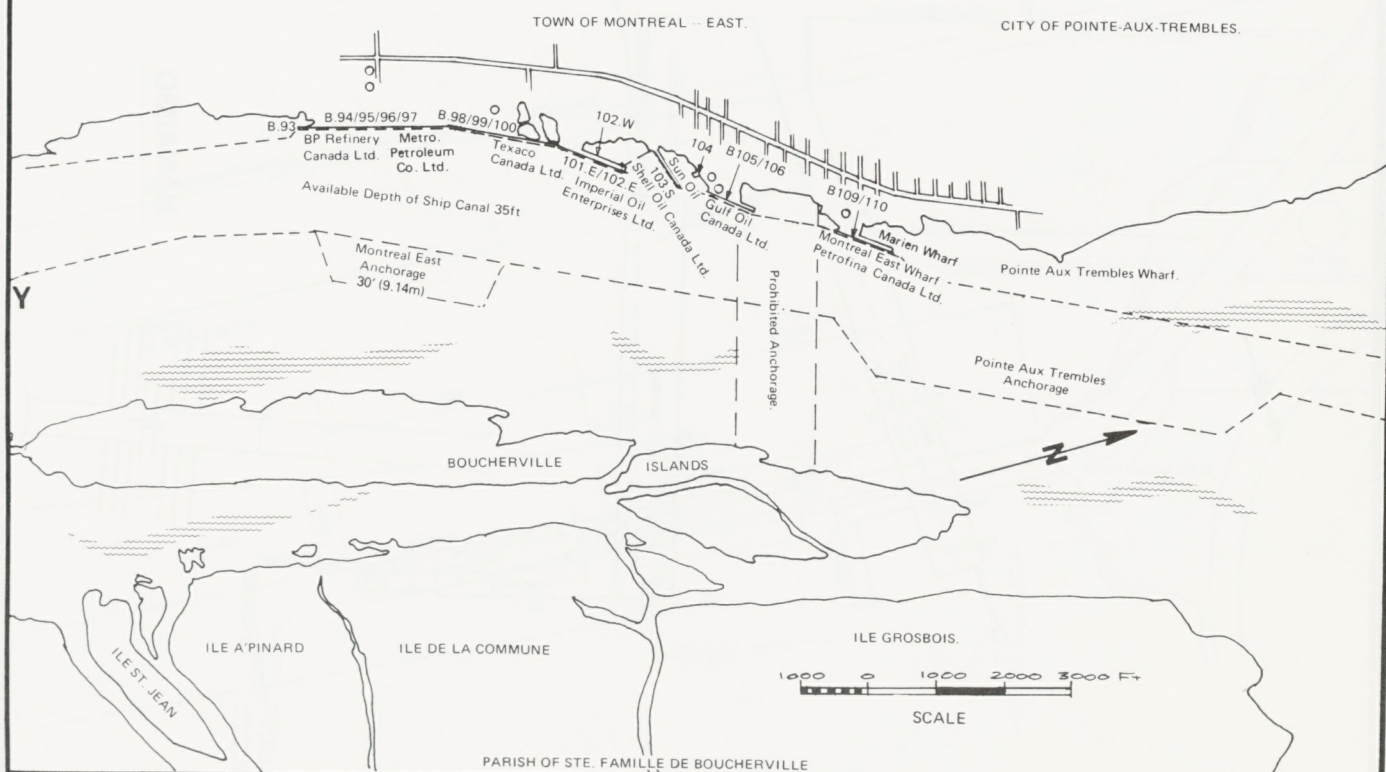
MONTREAL (1)



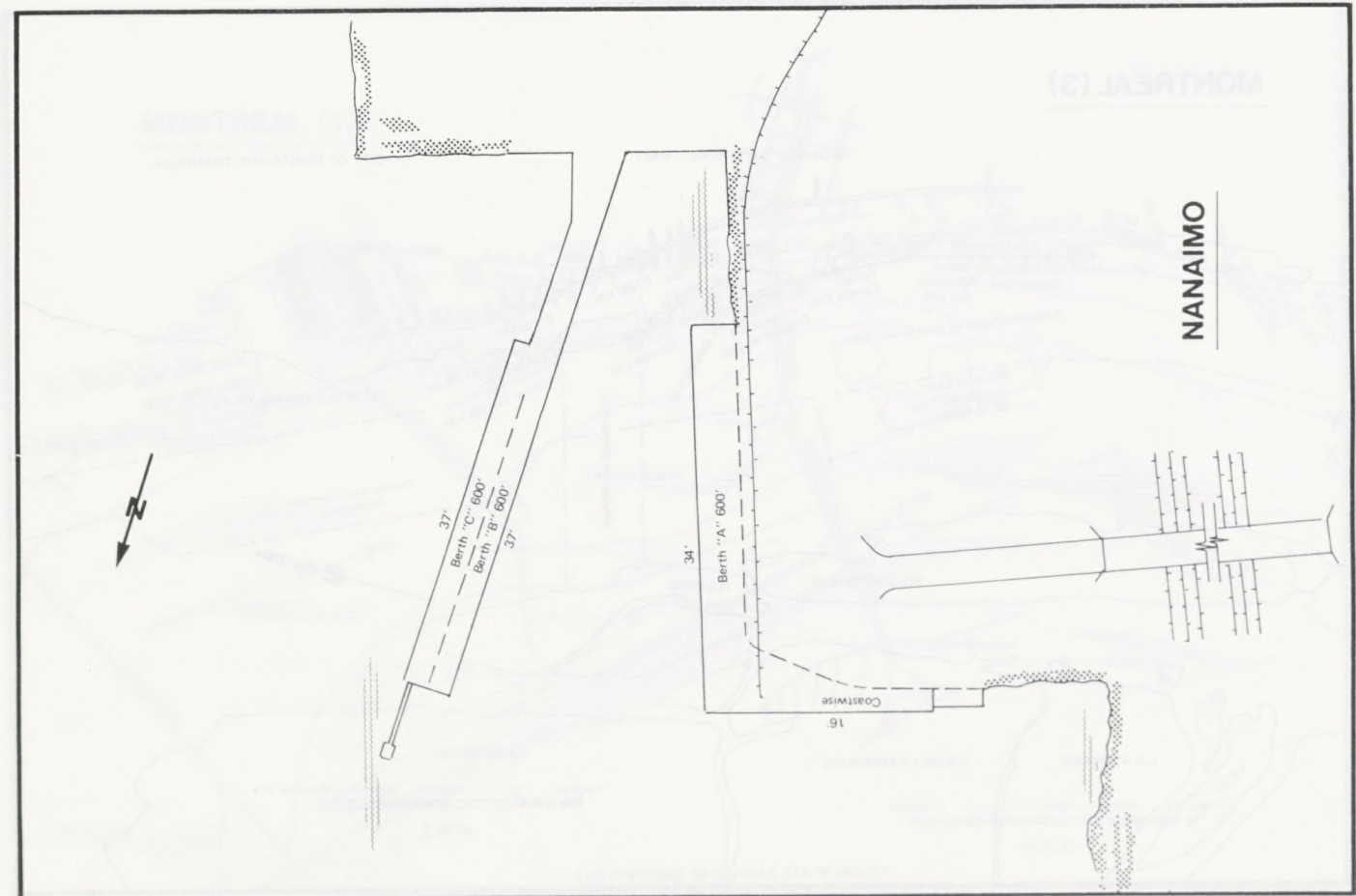
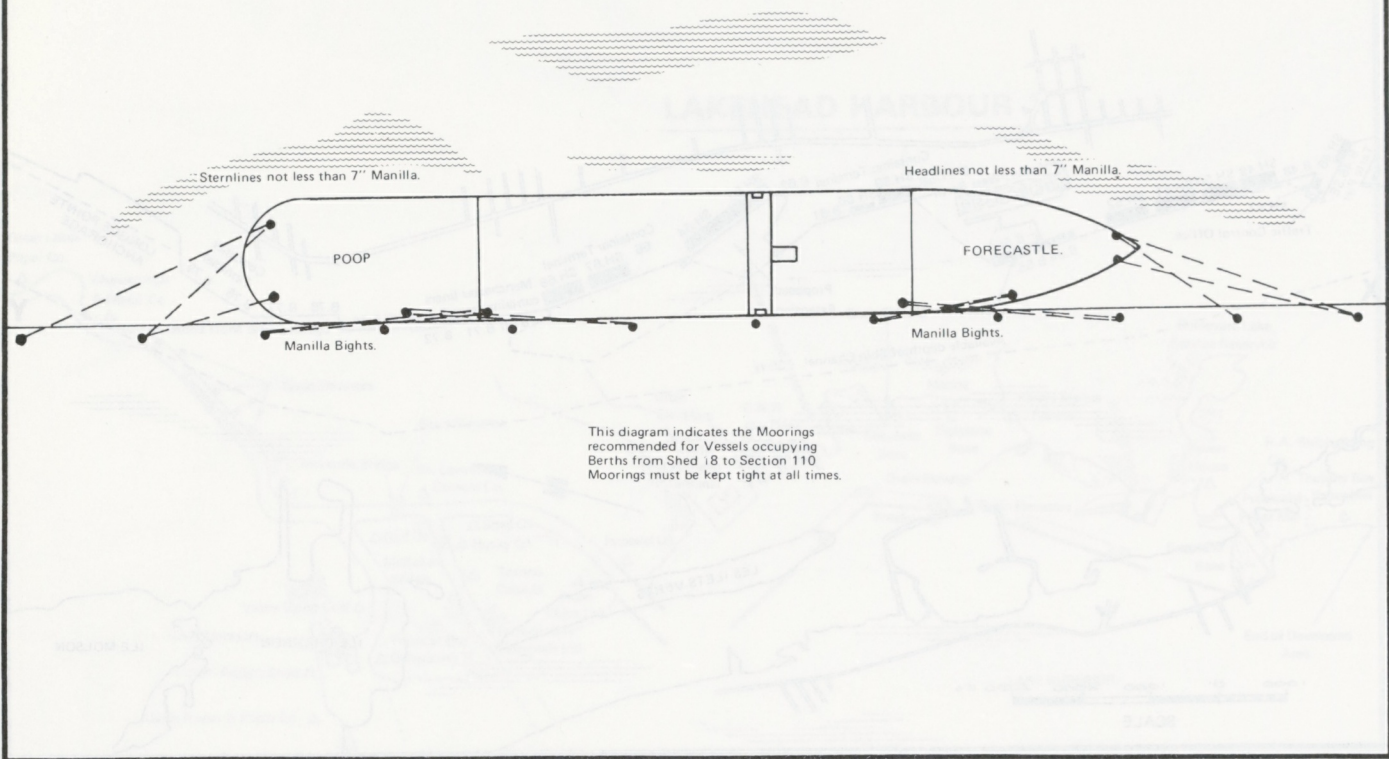
MONTREAL (2)



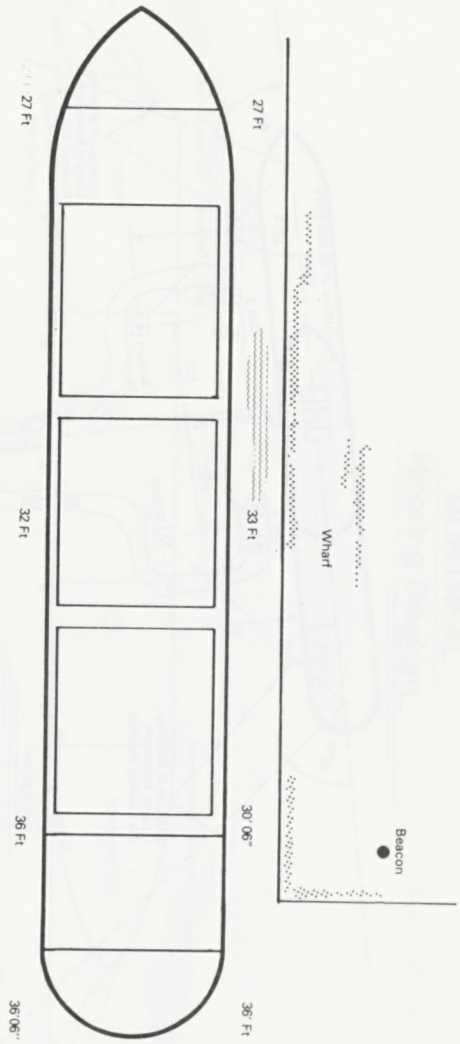
MONTREAL (3)



MONTREAL
Mooring Diagram





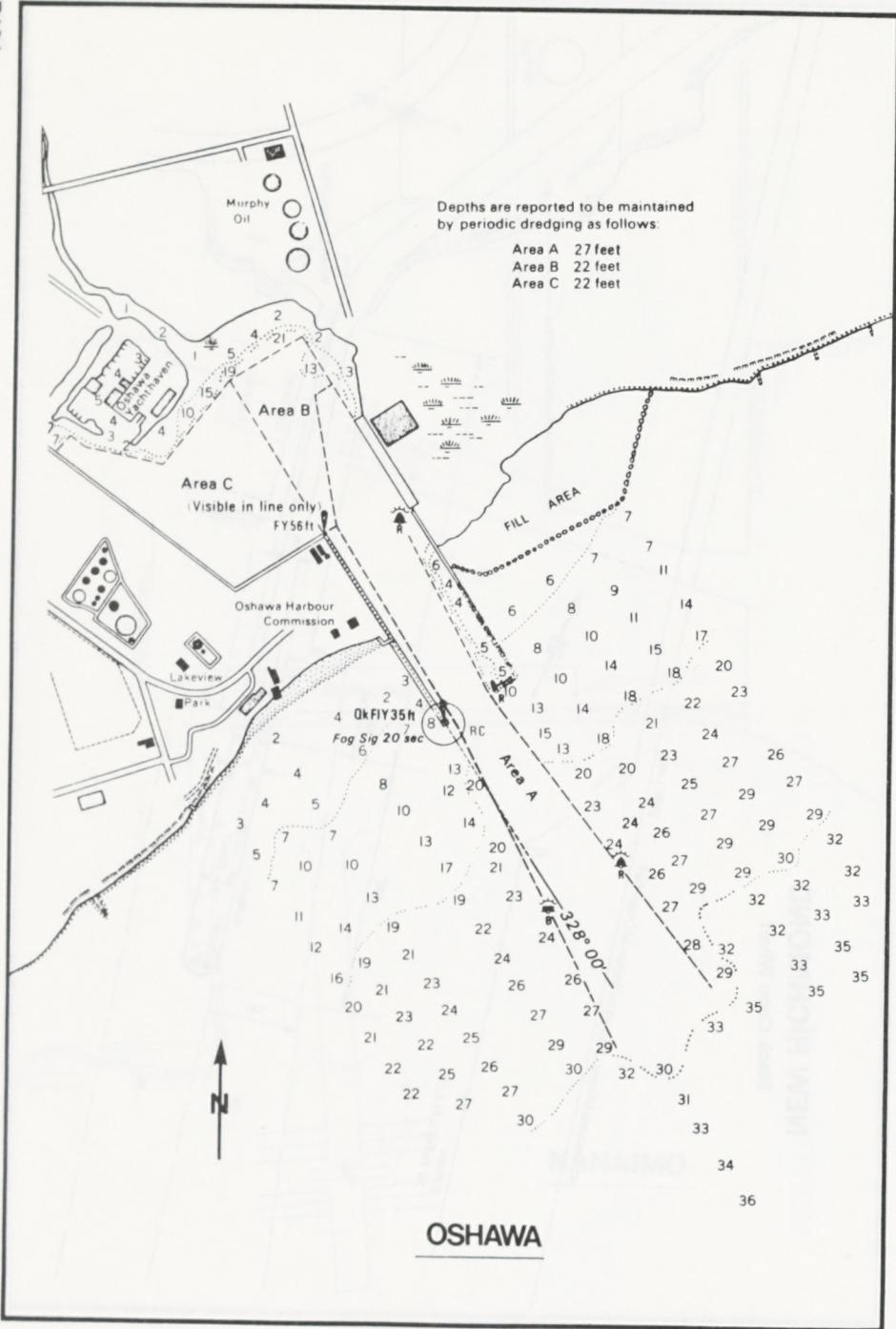


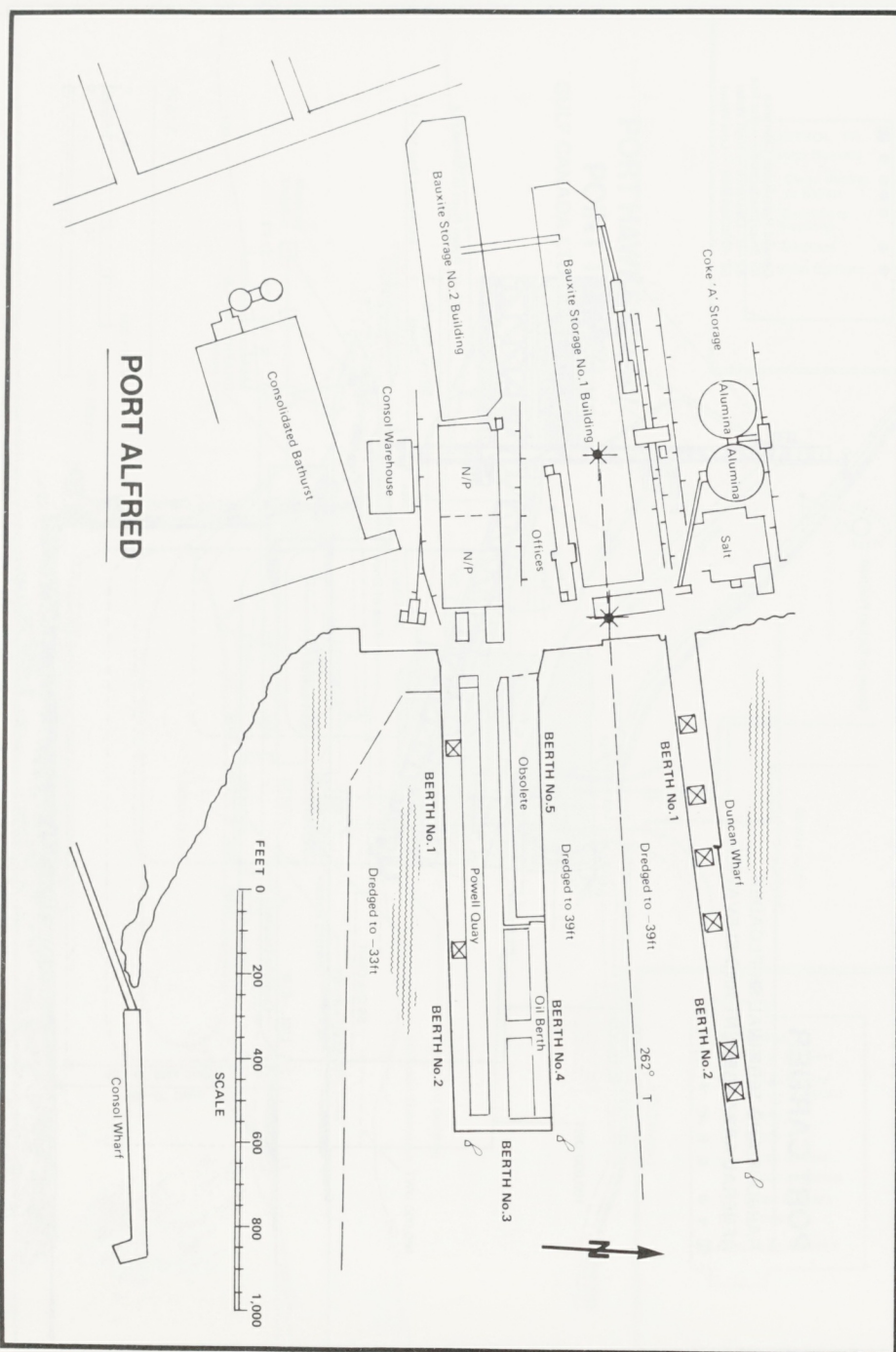
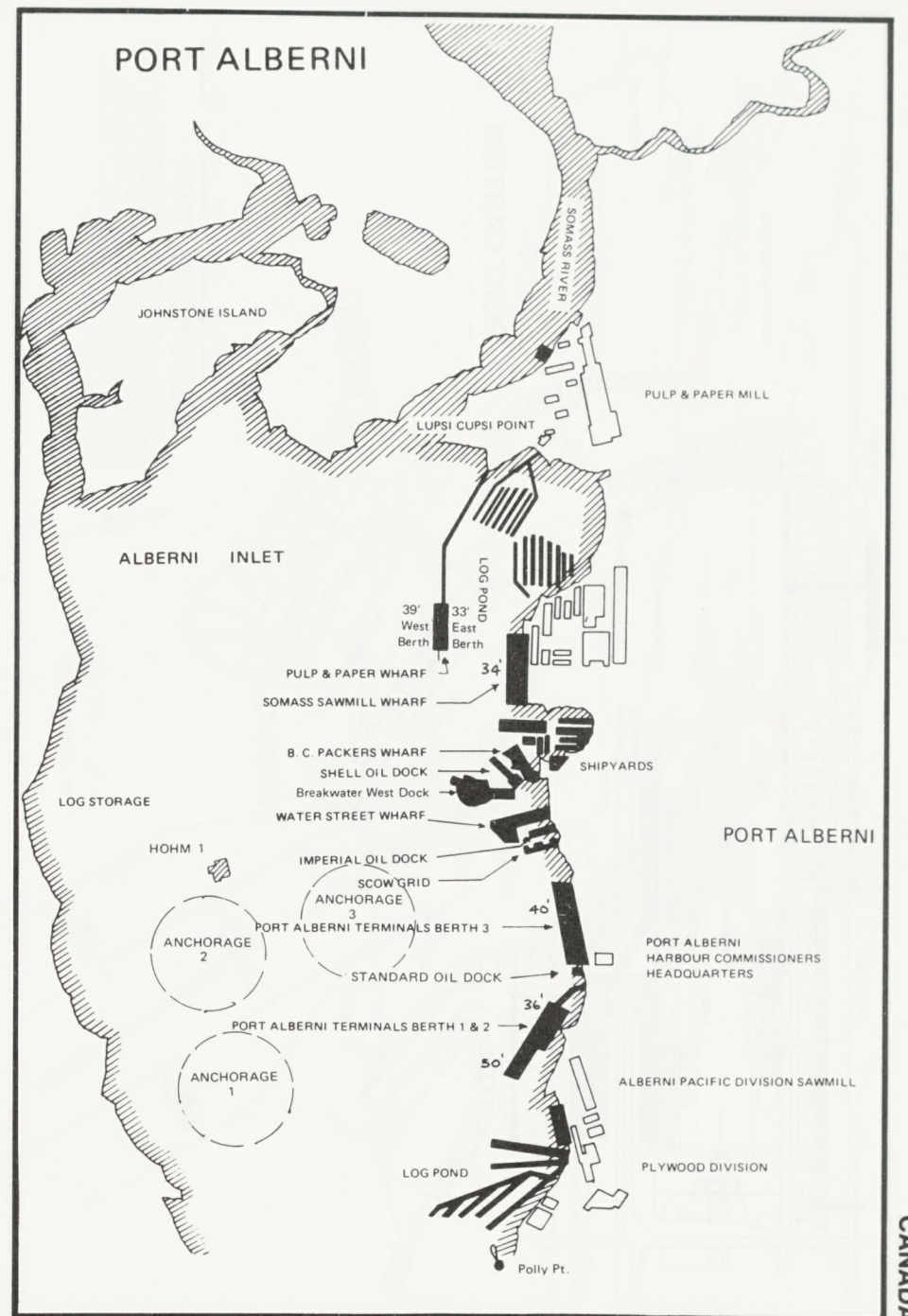
NEW RICHMOND

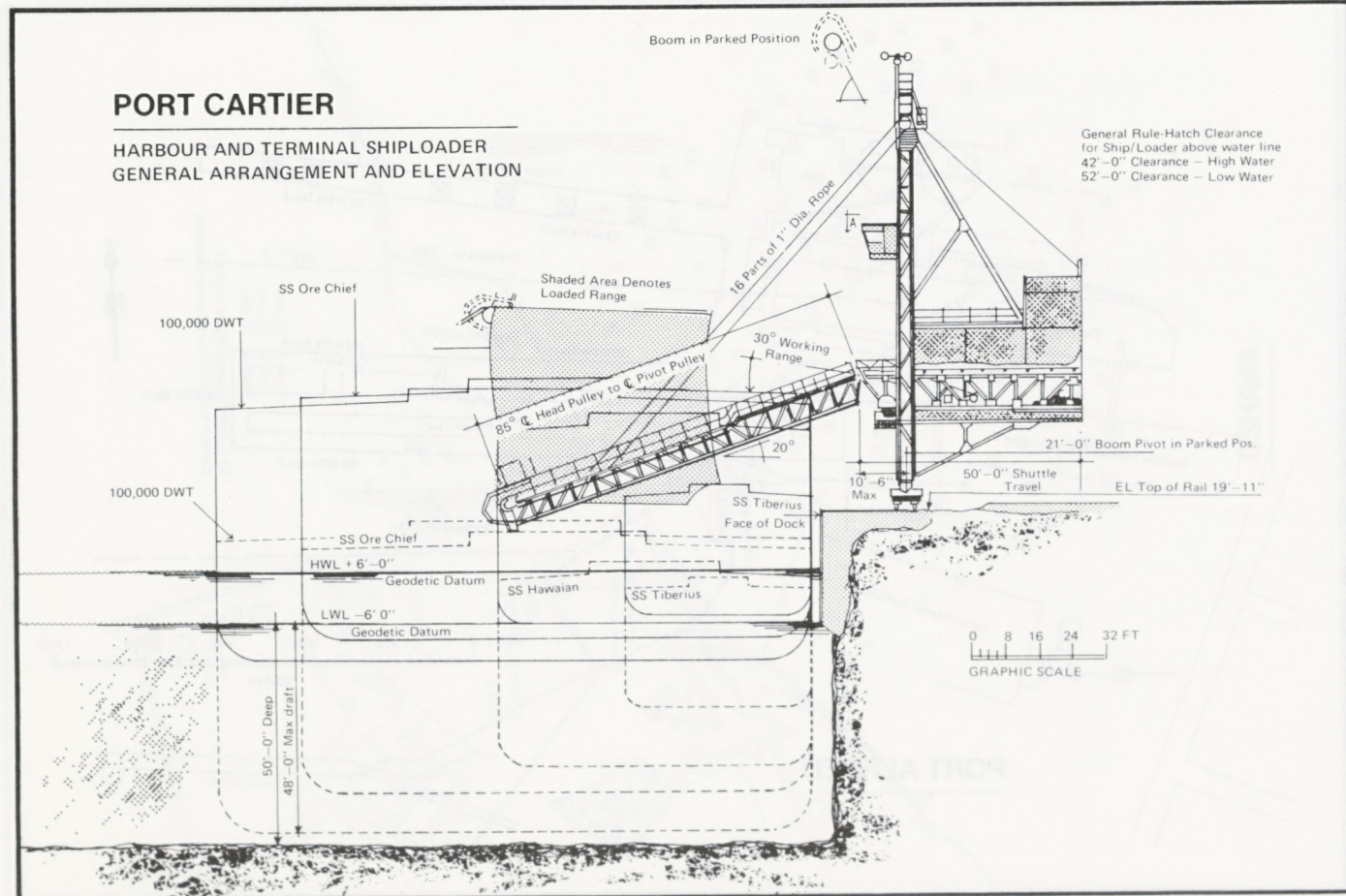
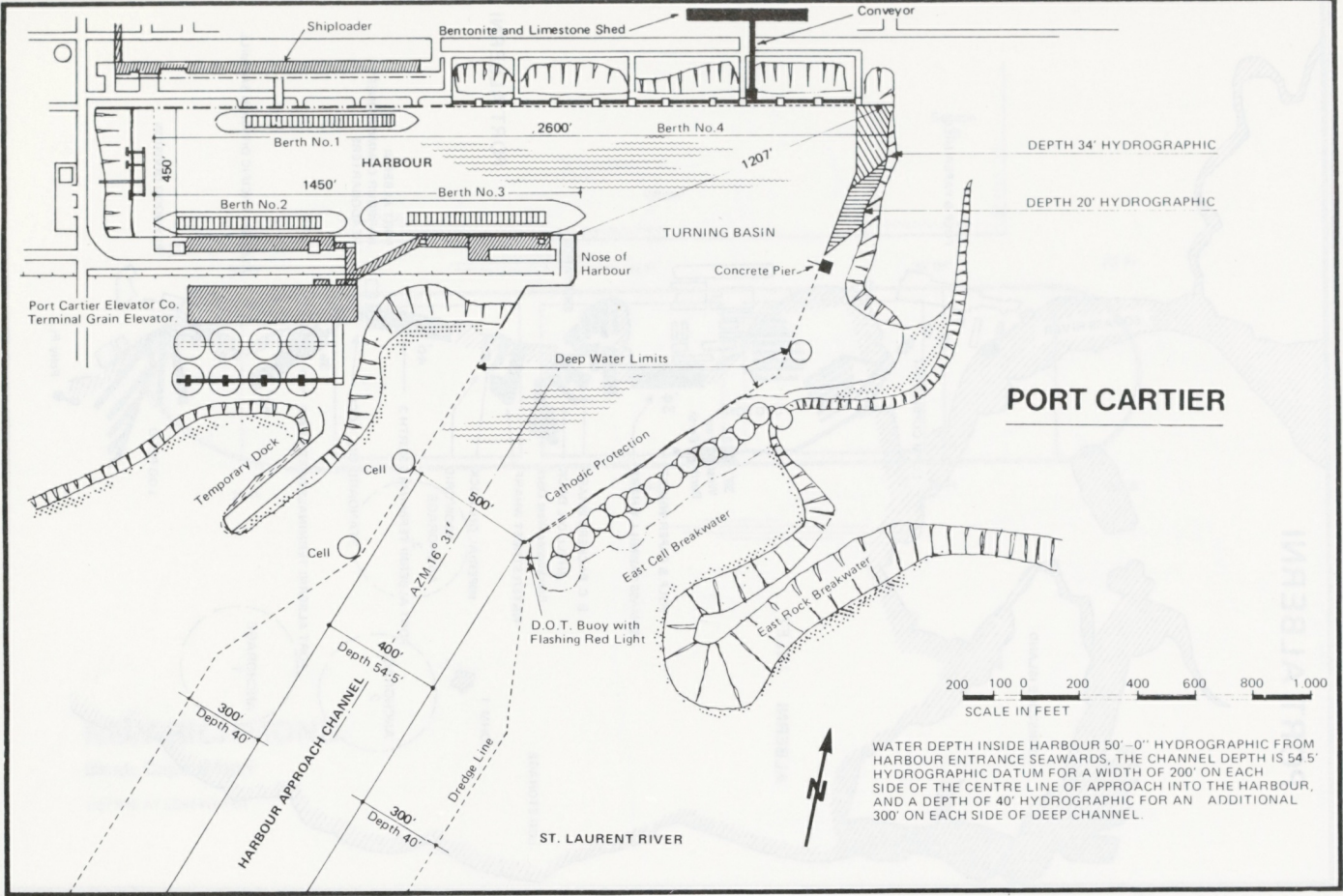
Black Cape Wharf

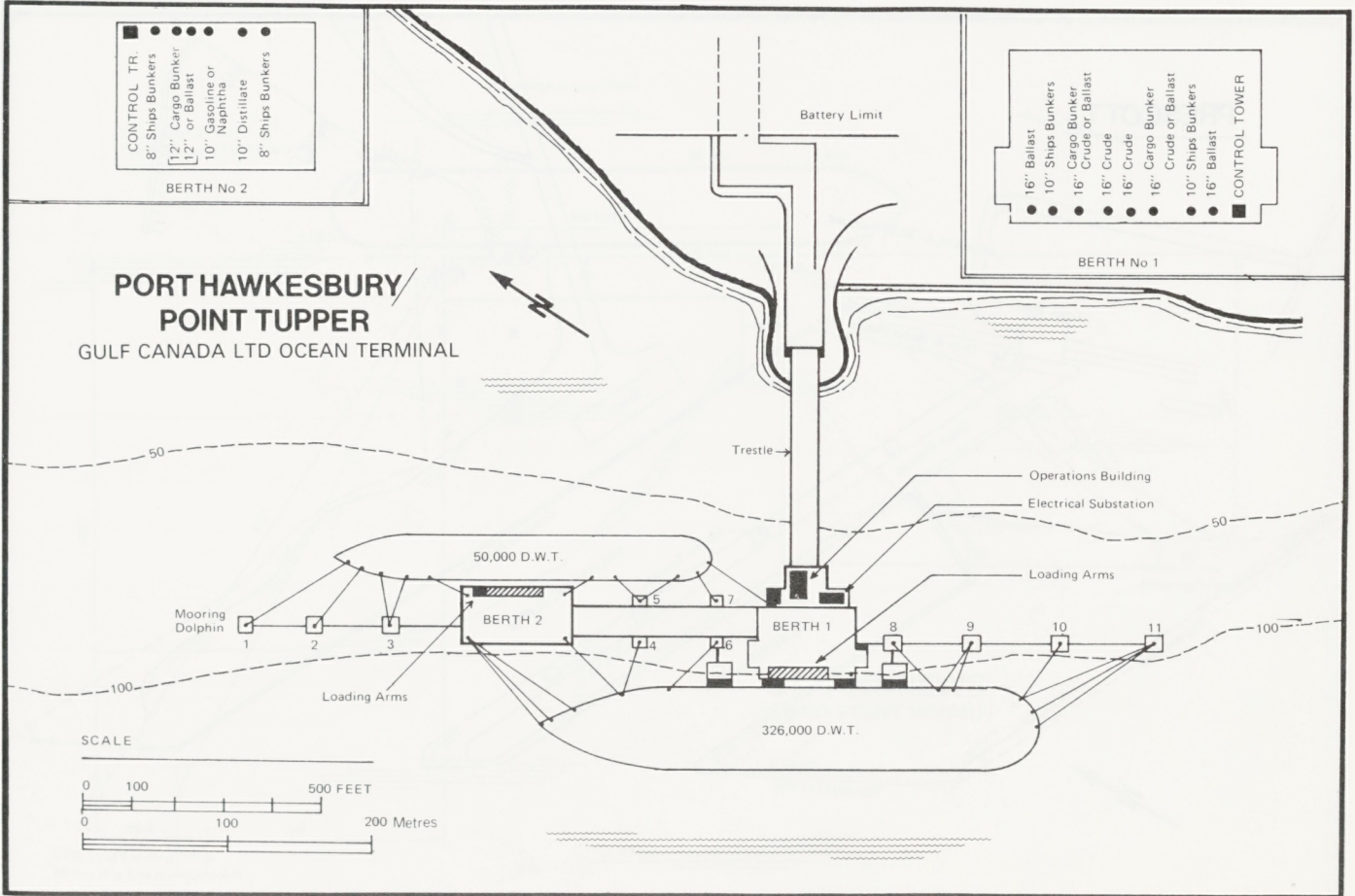
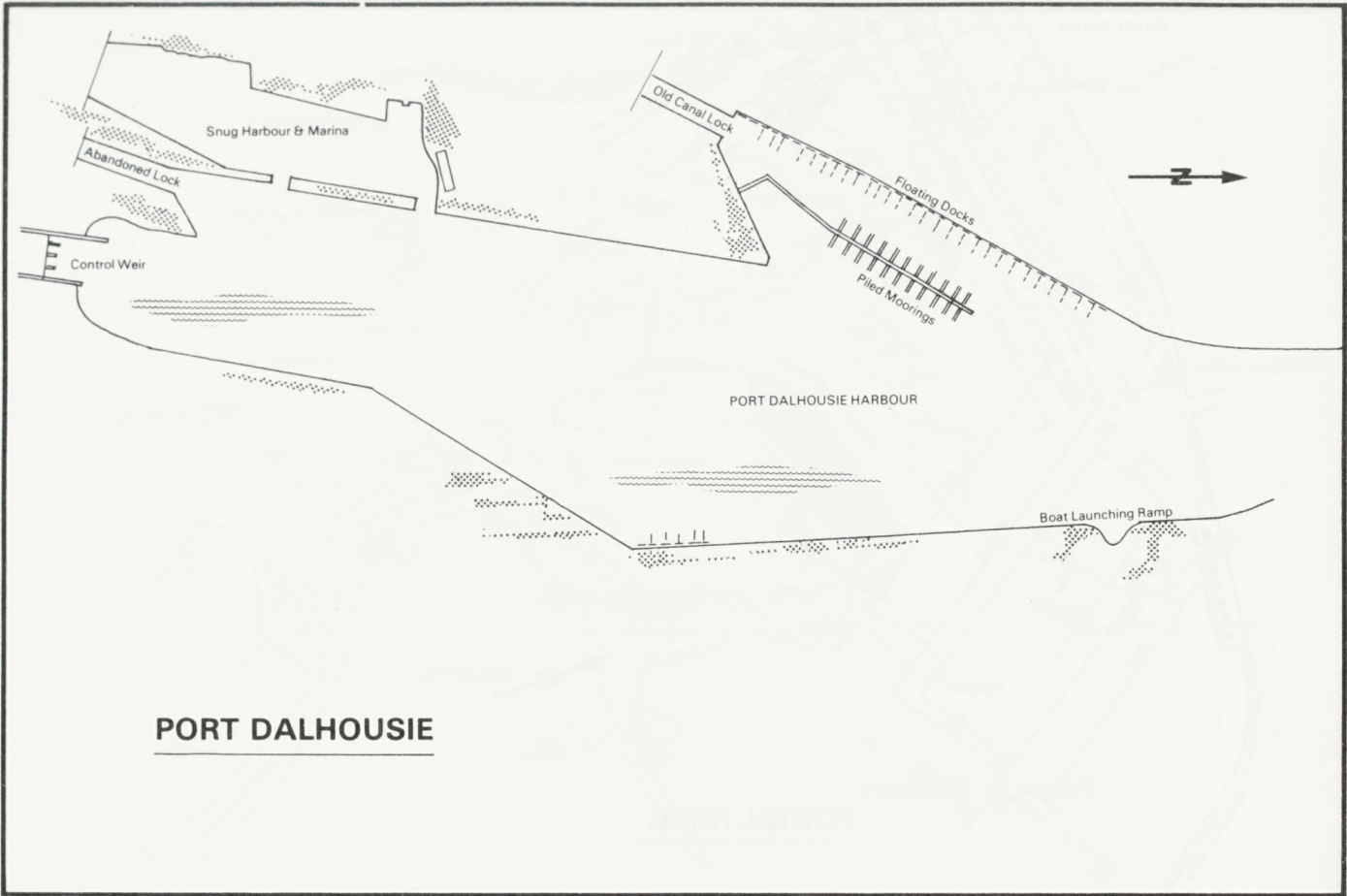
DEPTHS AT LOW WATER

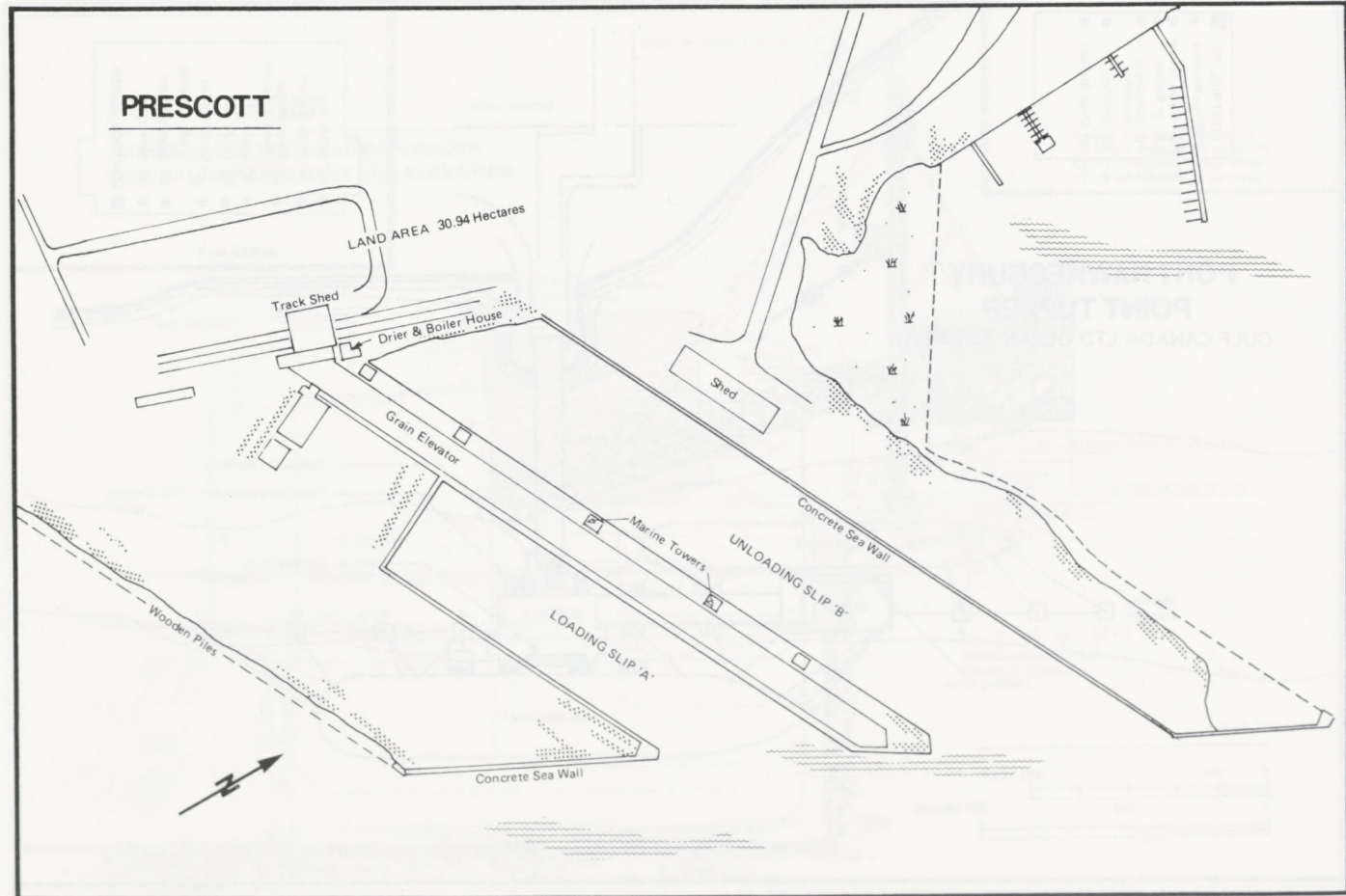
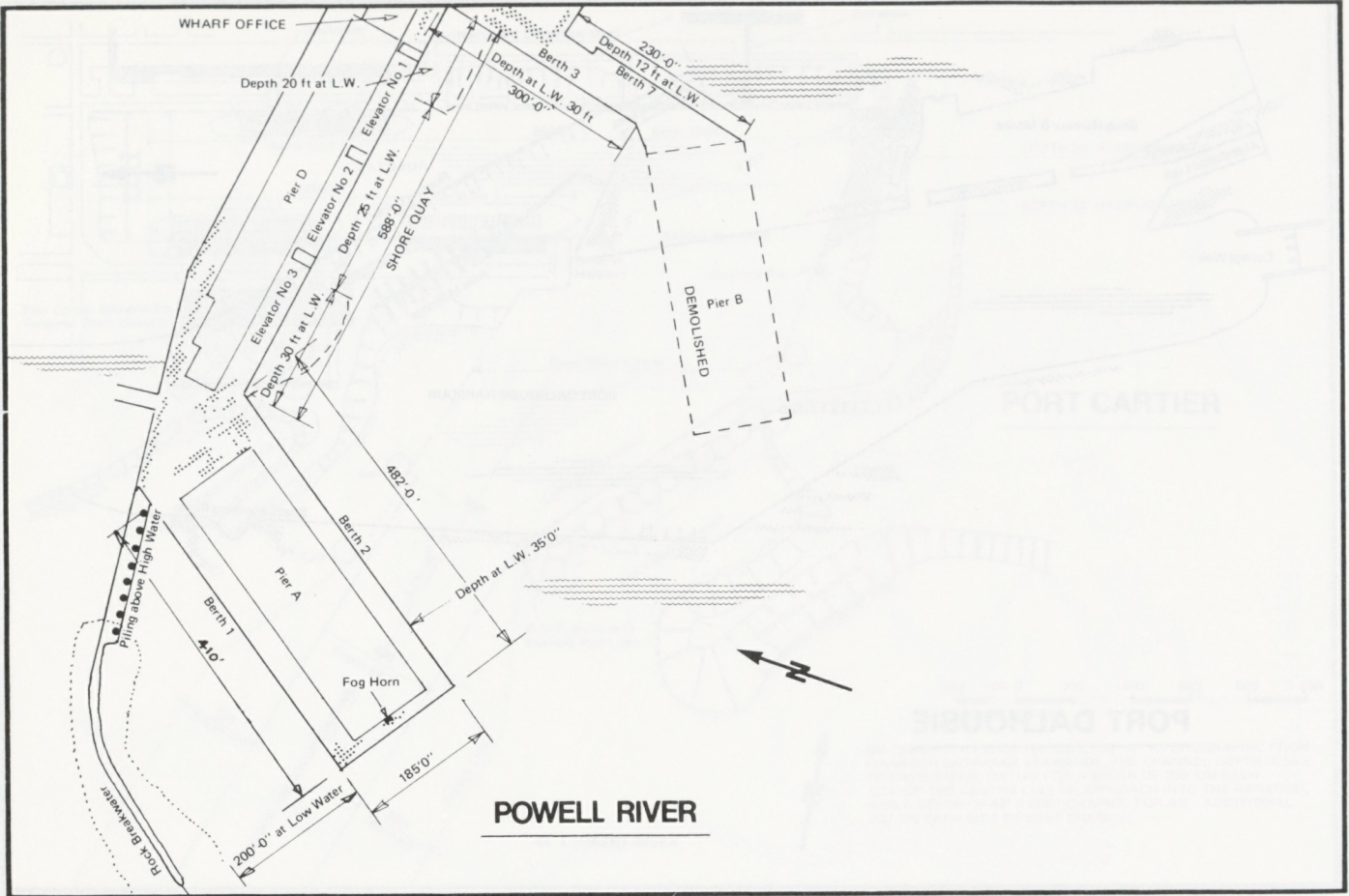
"Plan supplied by Ship's Master"

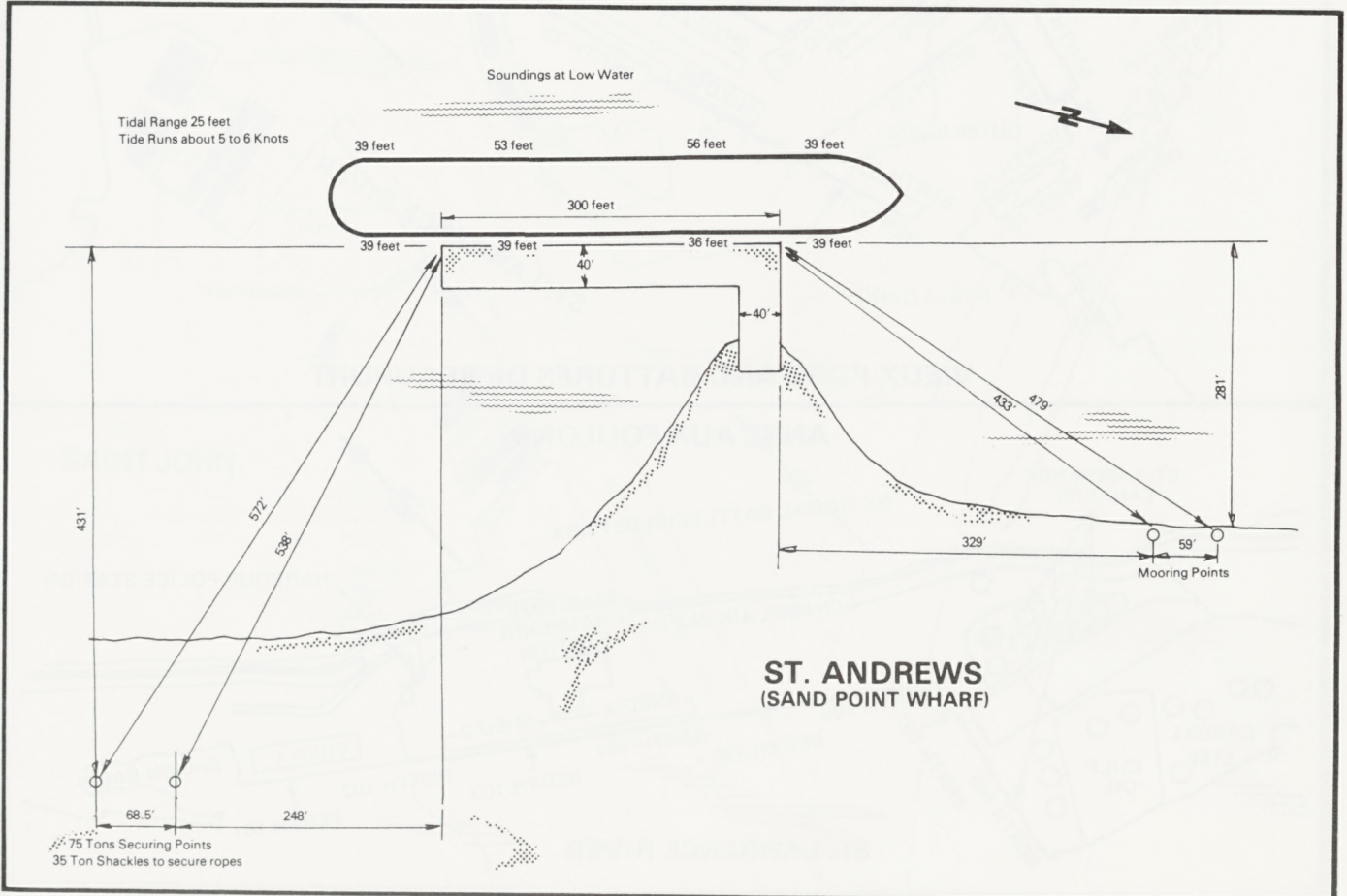
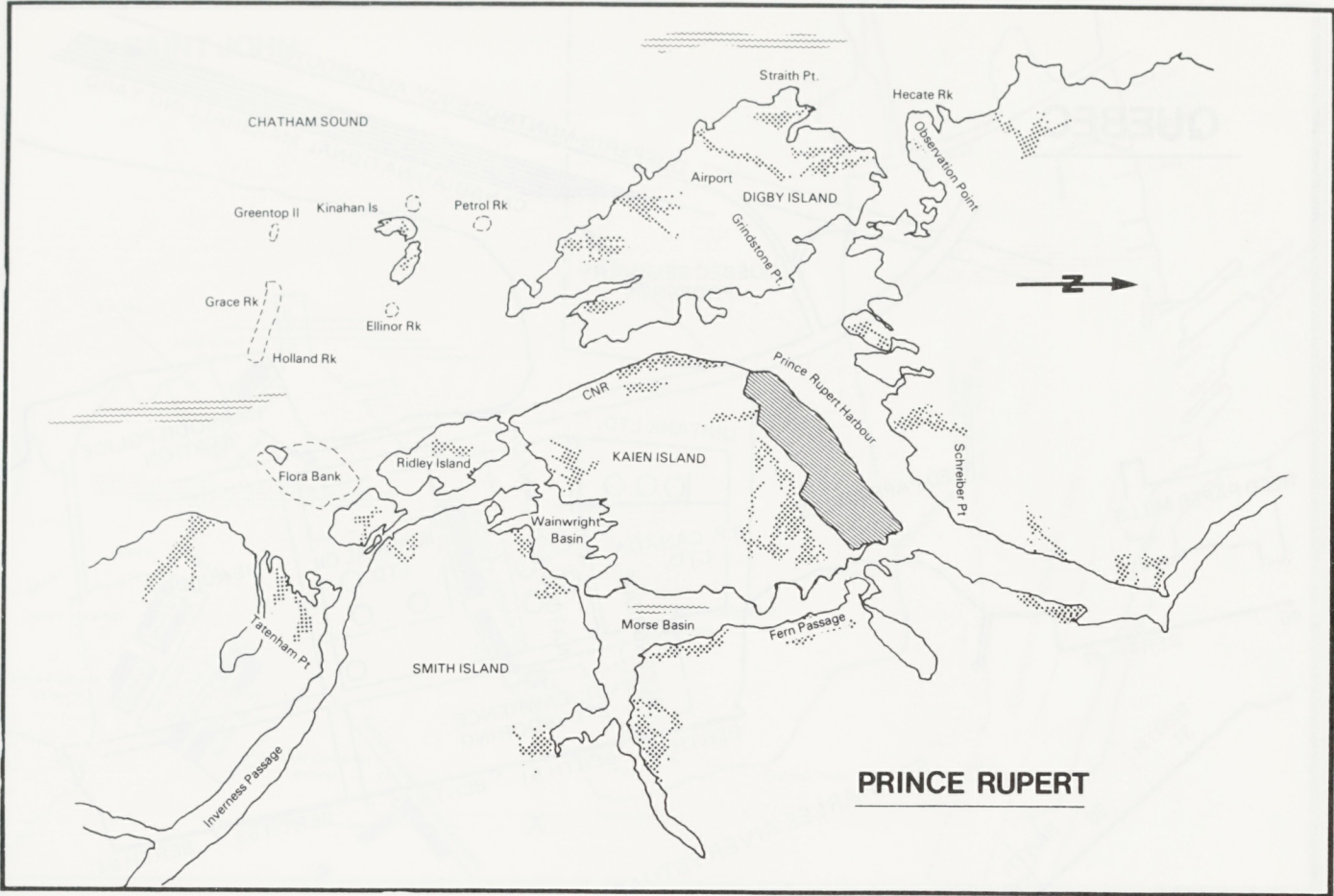




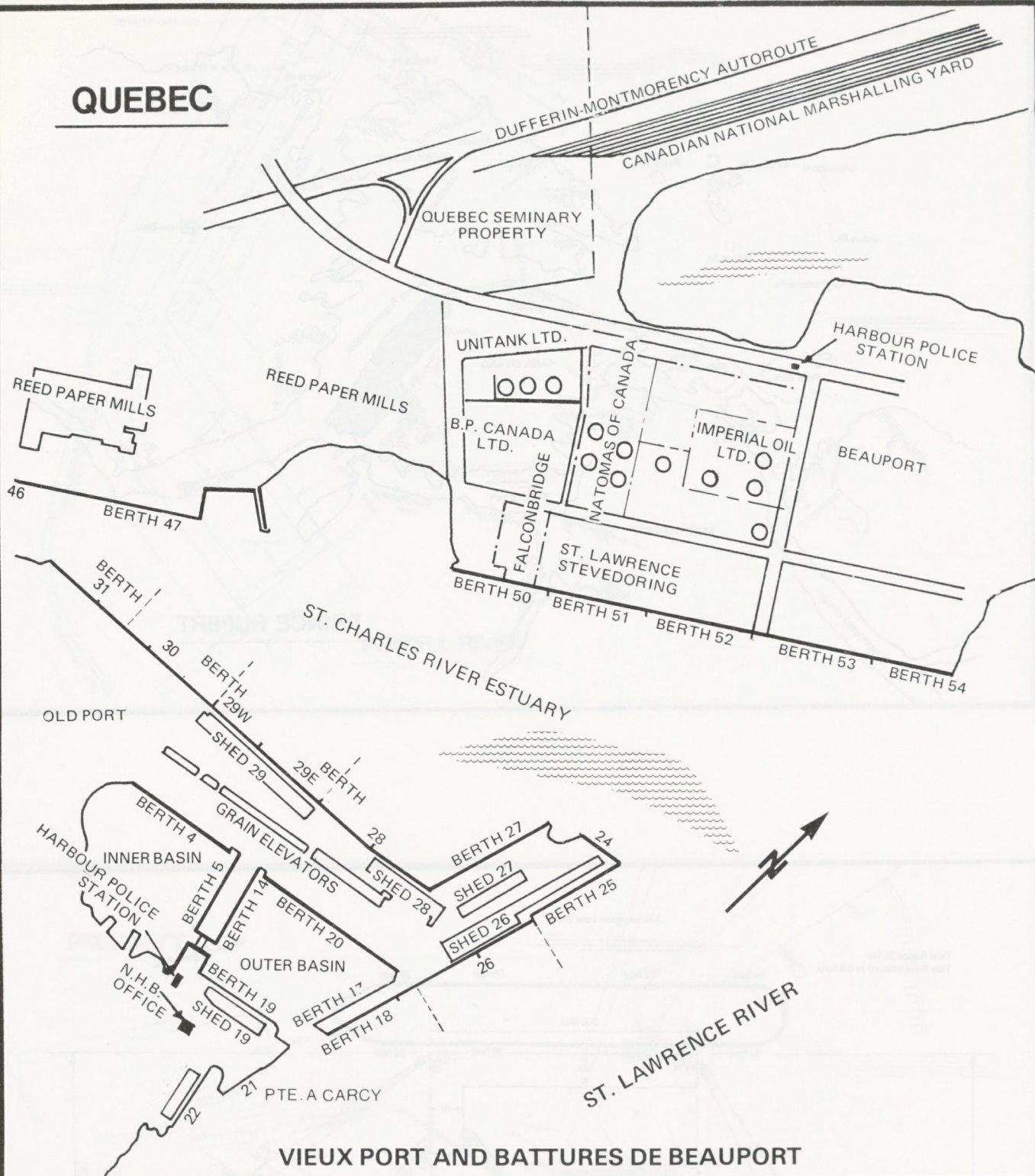






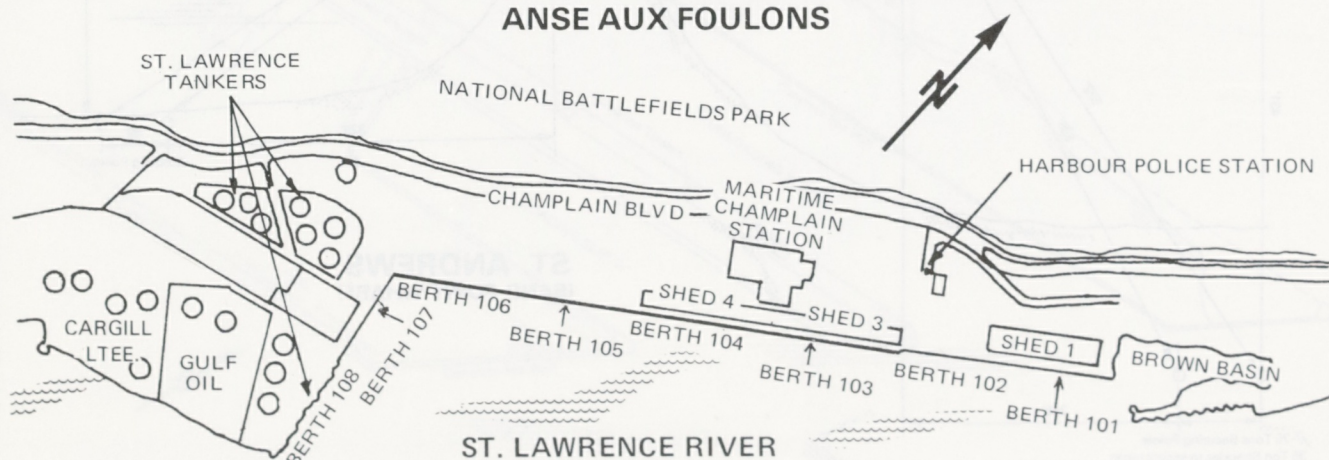


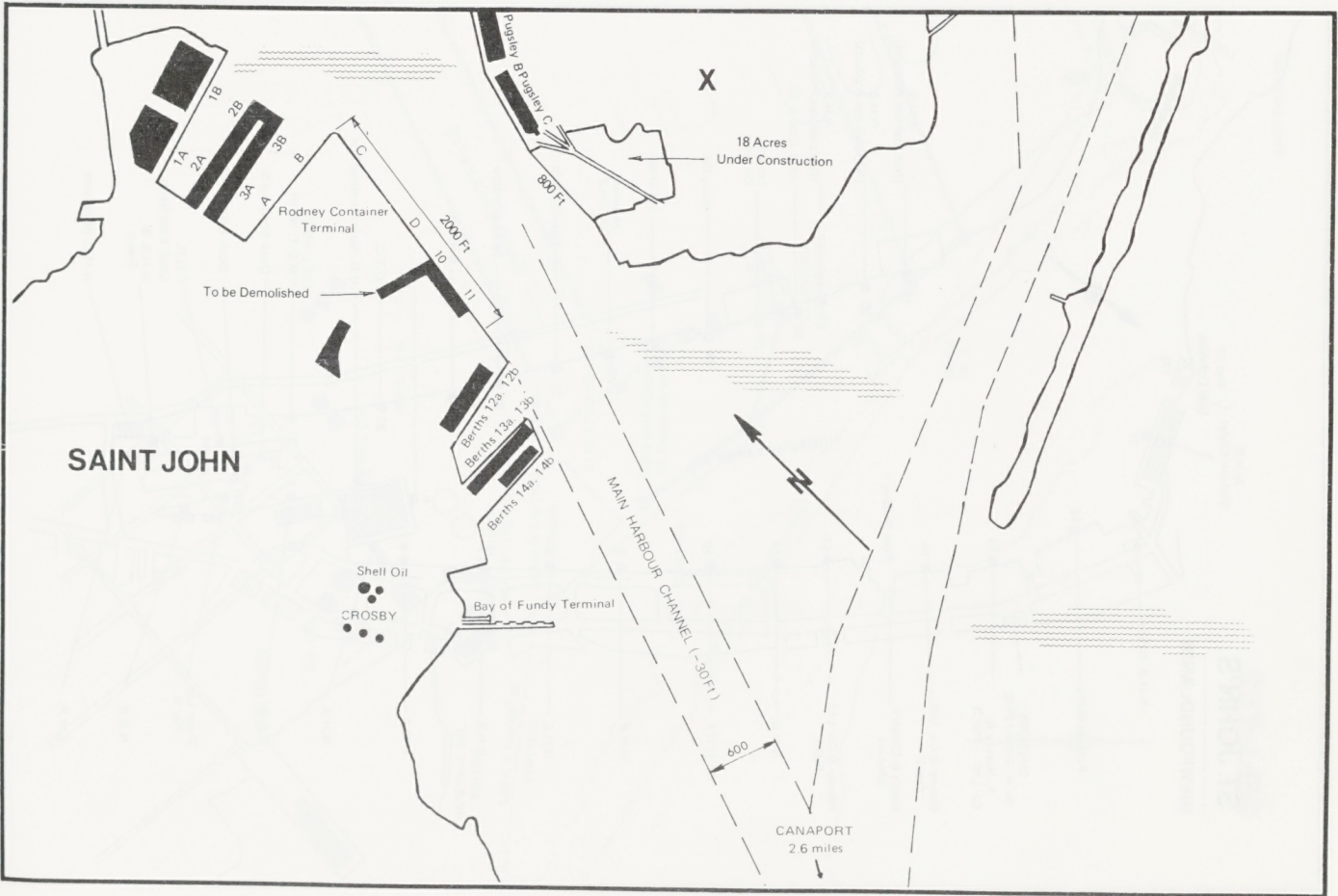
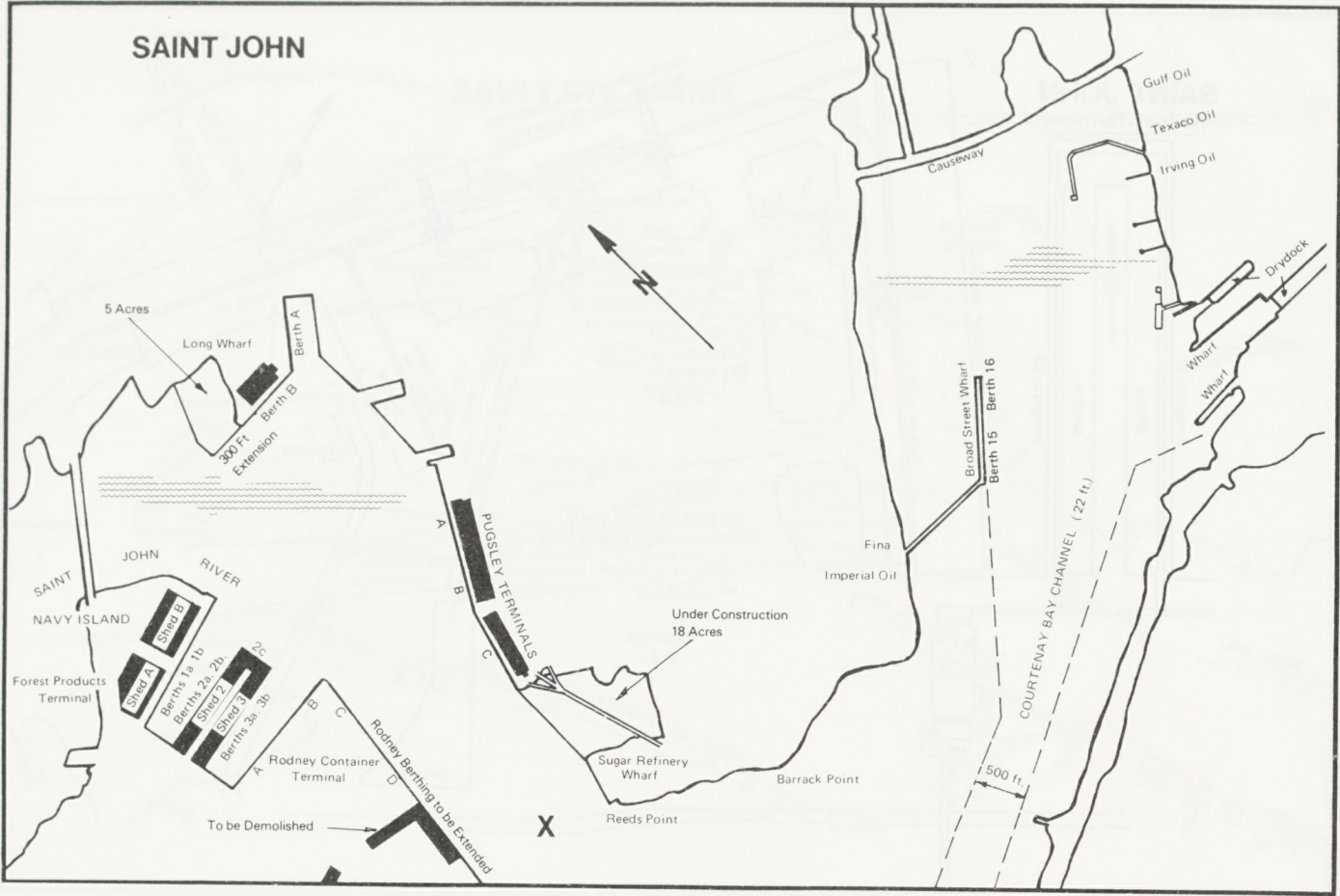
QUEBEC



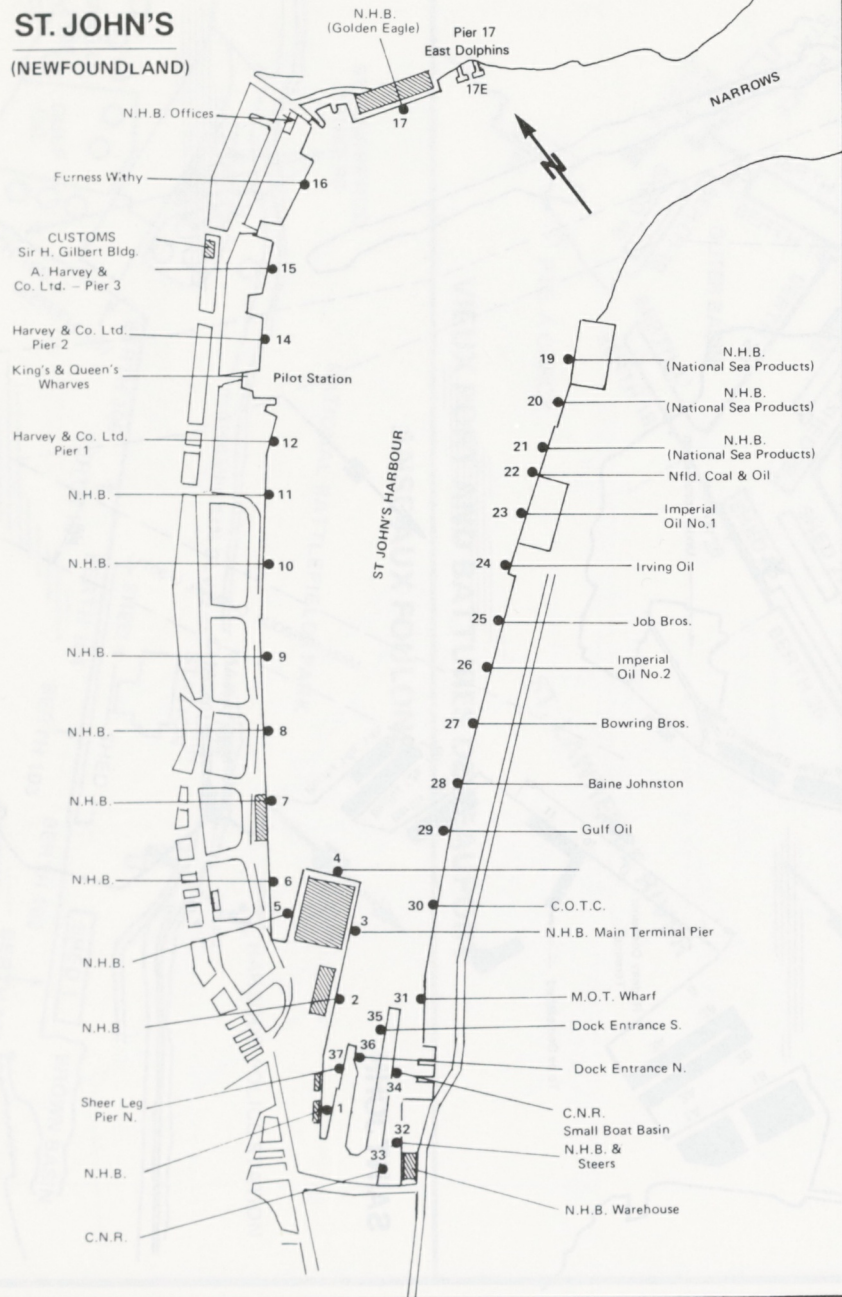
VIEUX PORT AND BATTURES DE BEAUPORT

ANSE AUX FOULONS

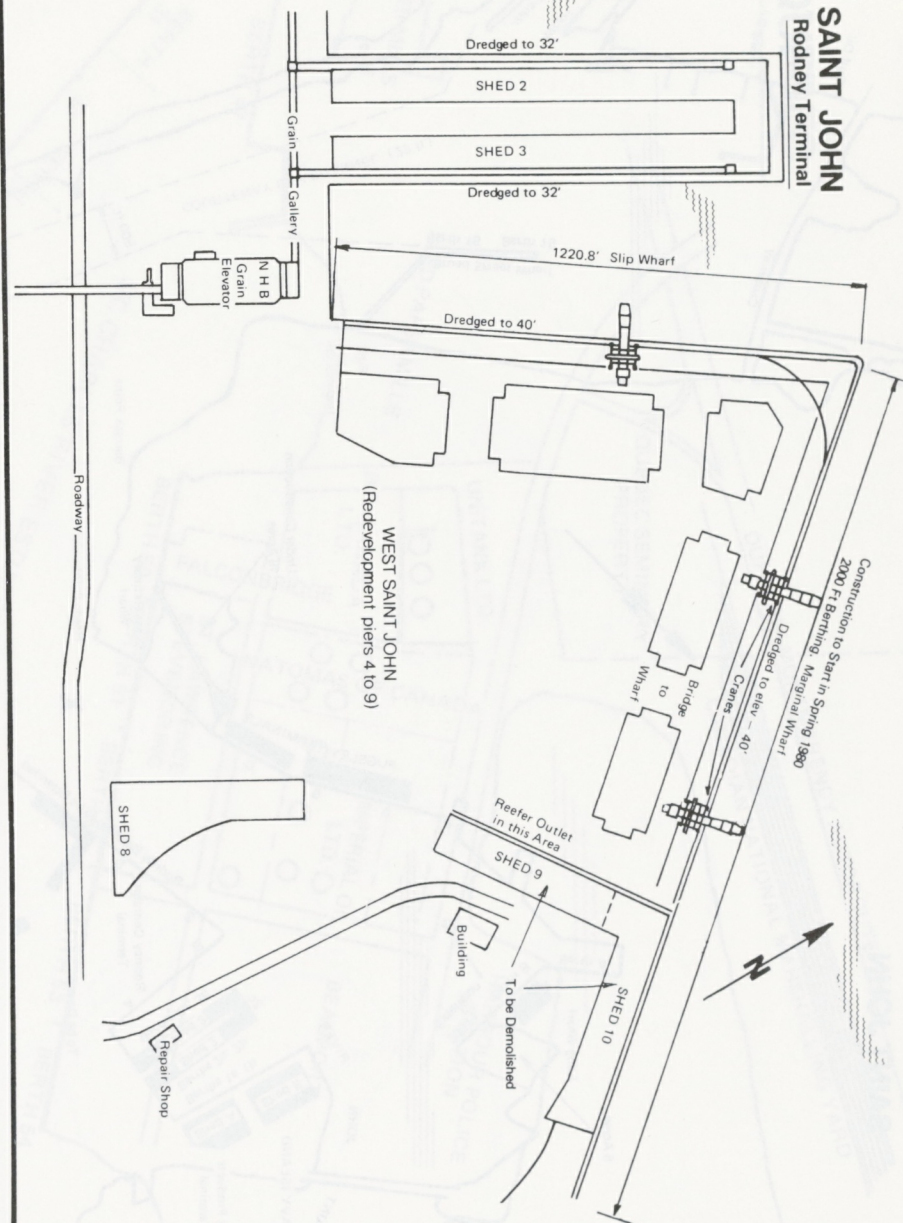


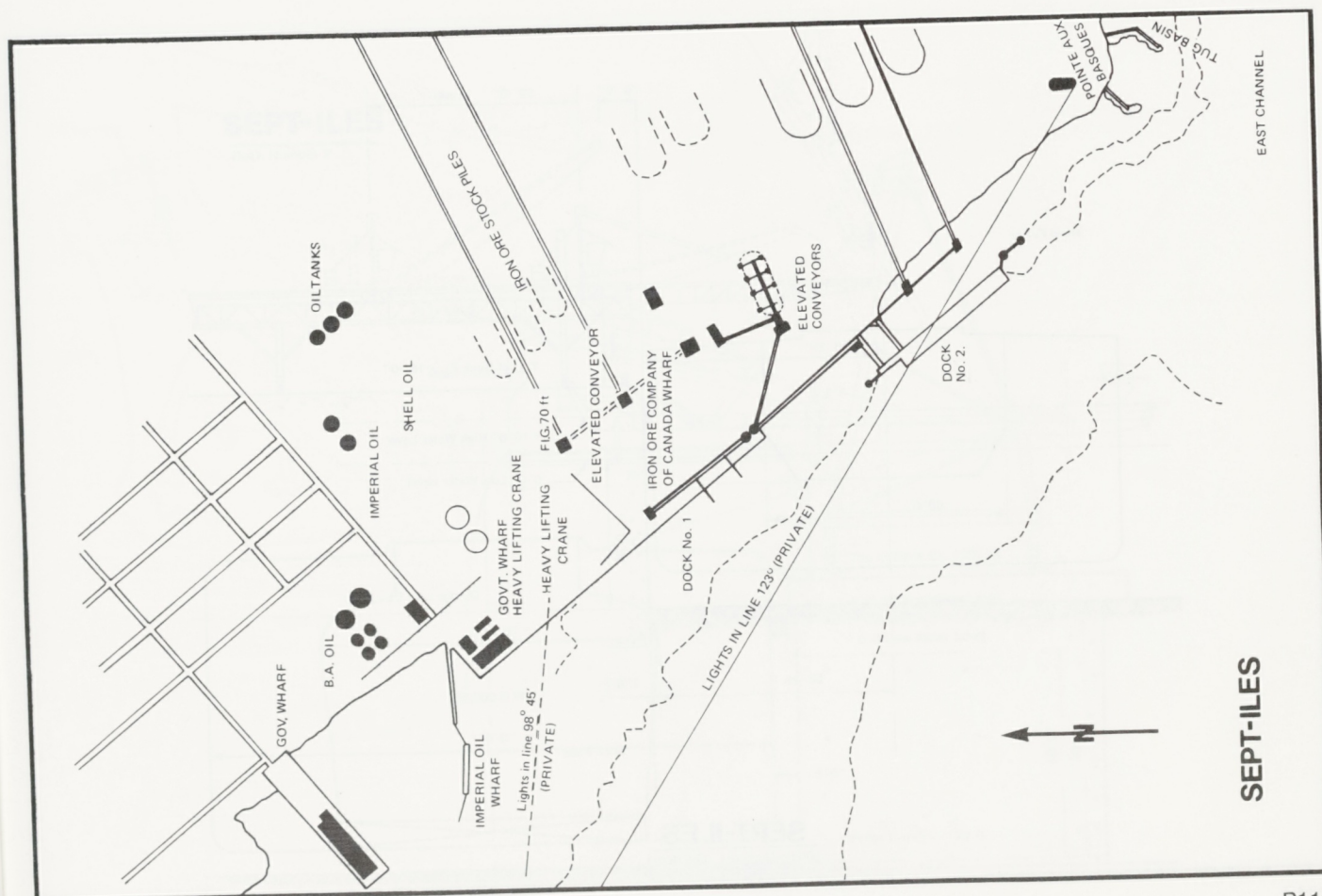
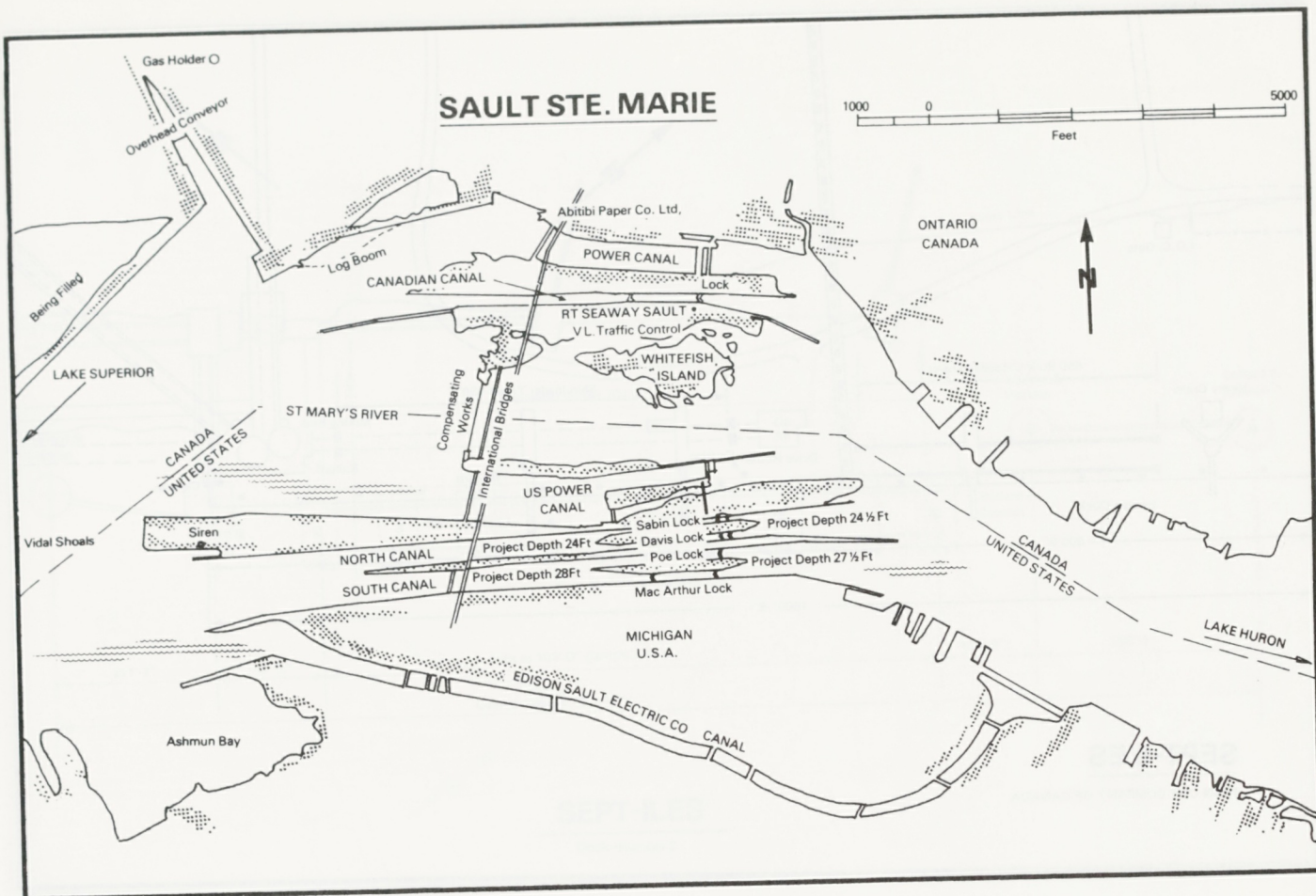


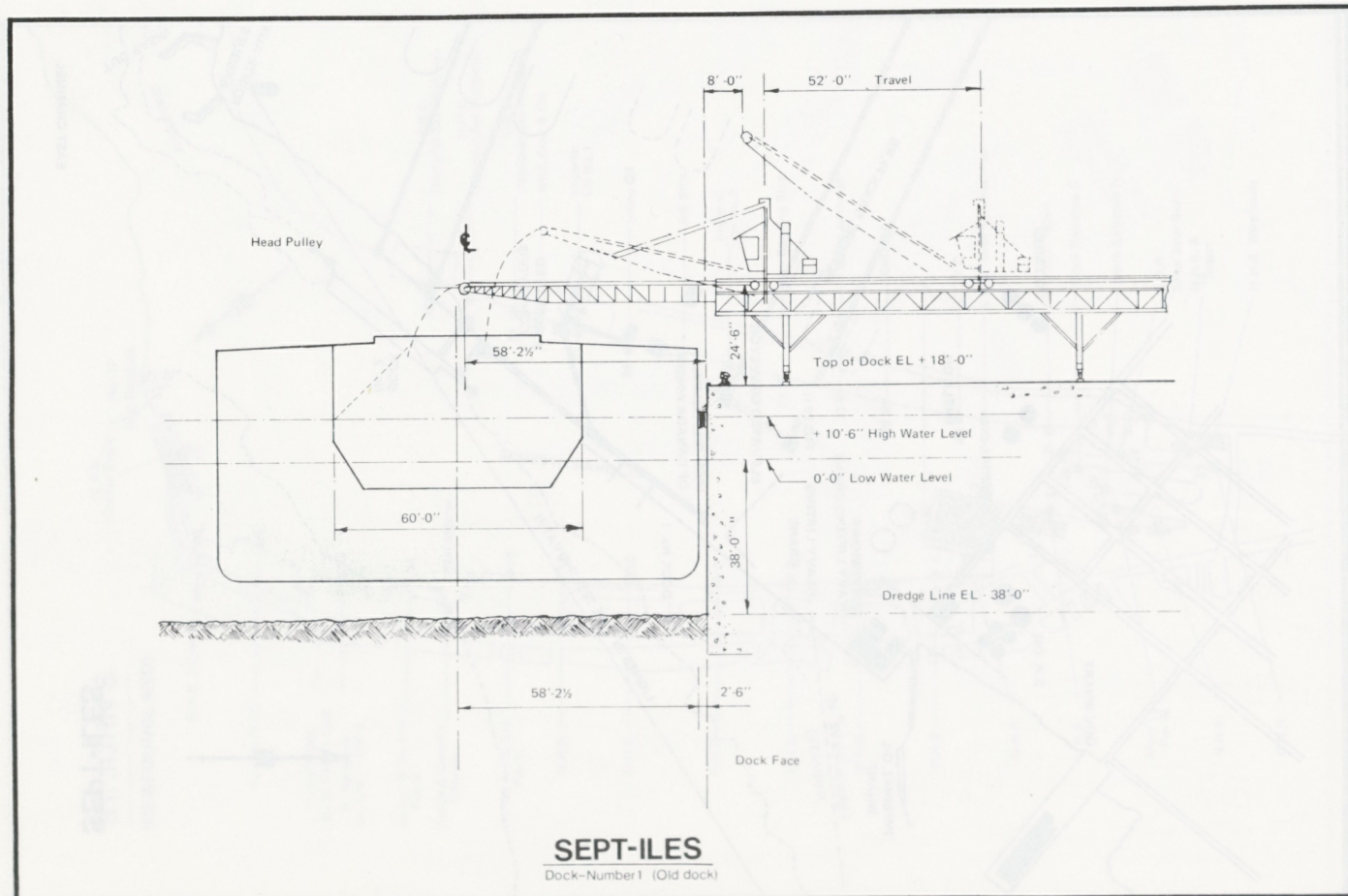
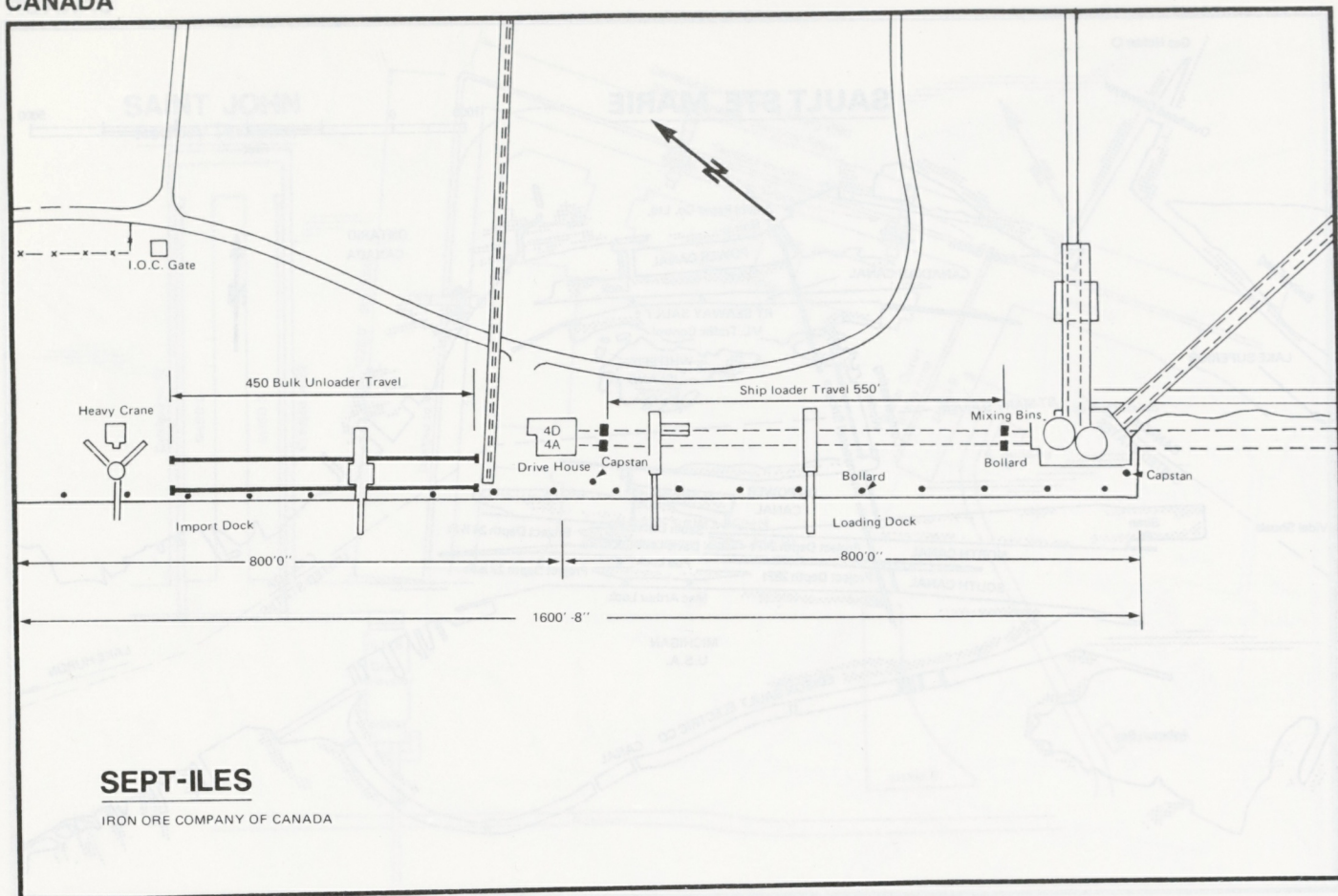
ST. JOHN'S (NEWFOUNDLAND)

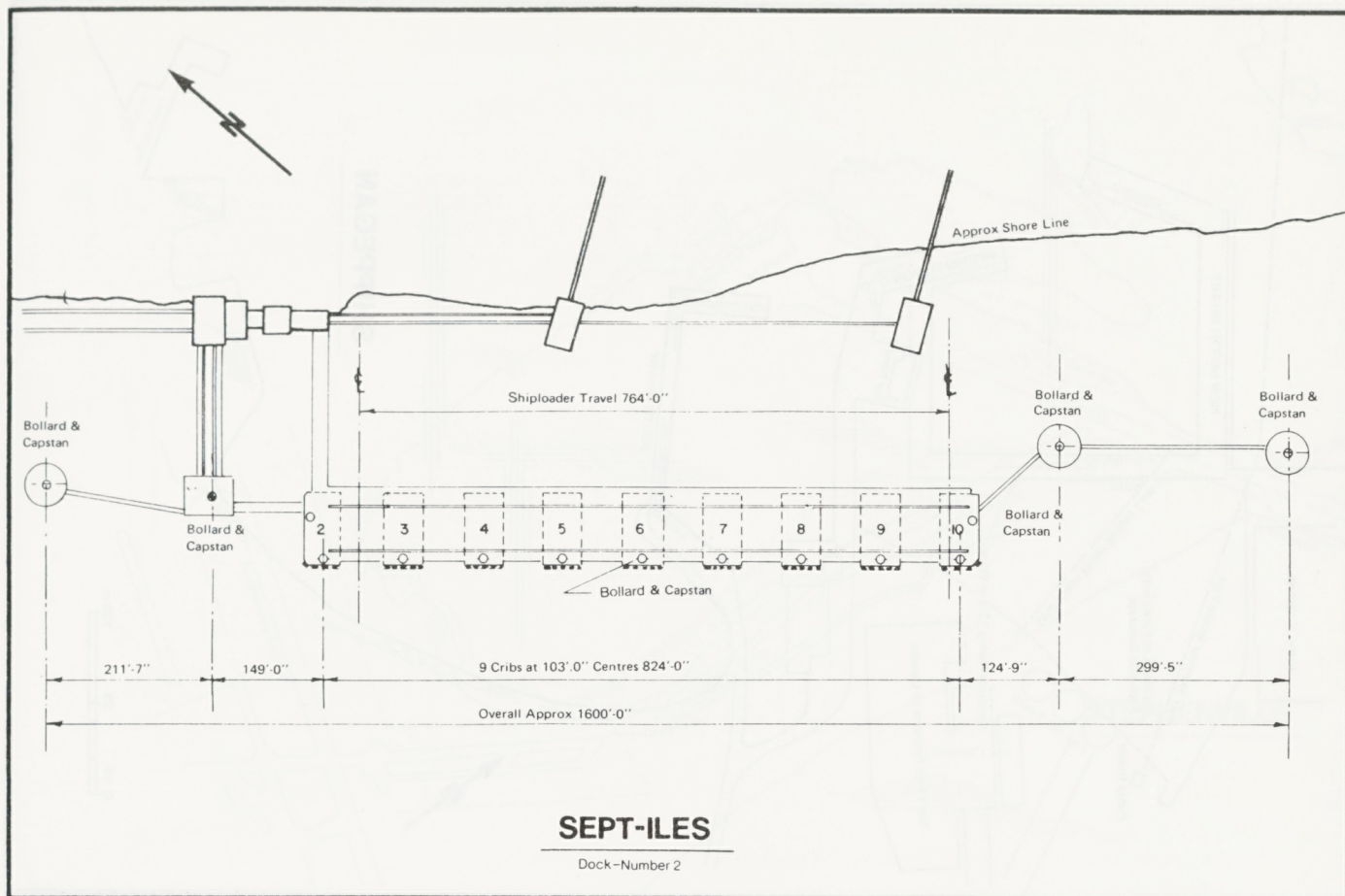


SAINT JOHN Rodney Terminal

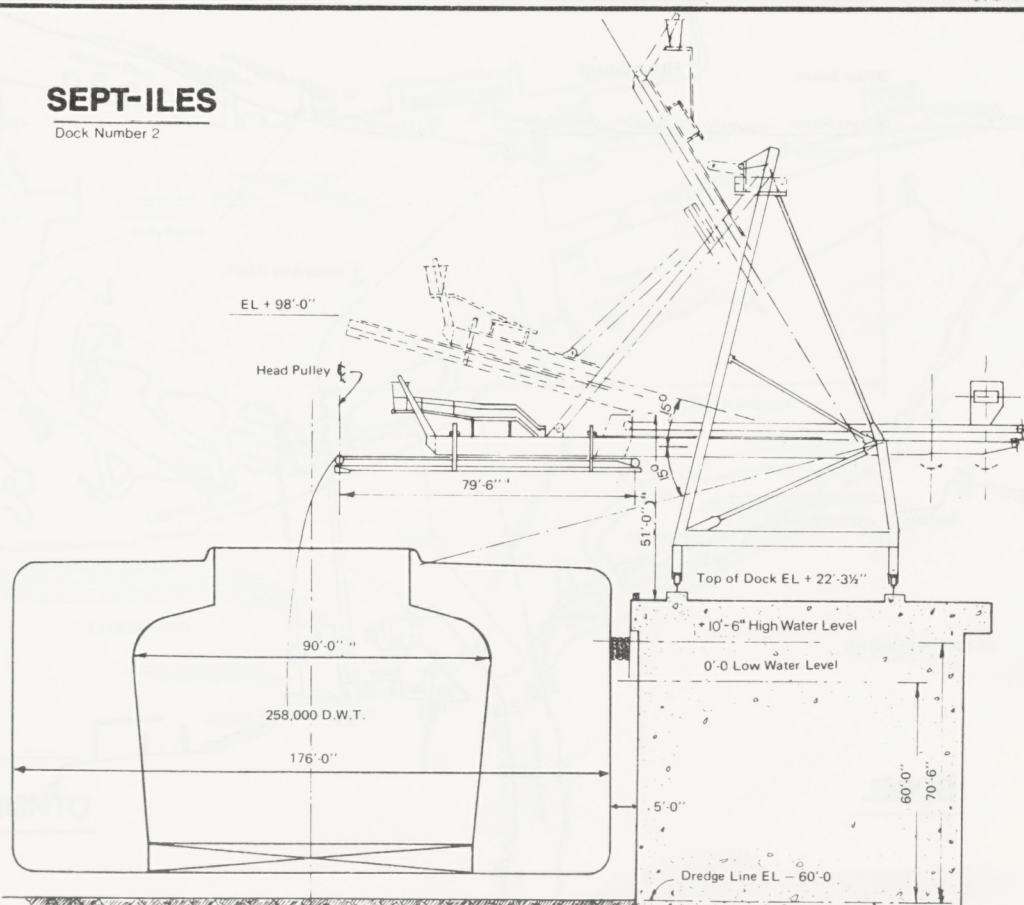


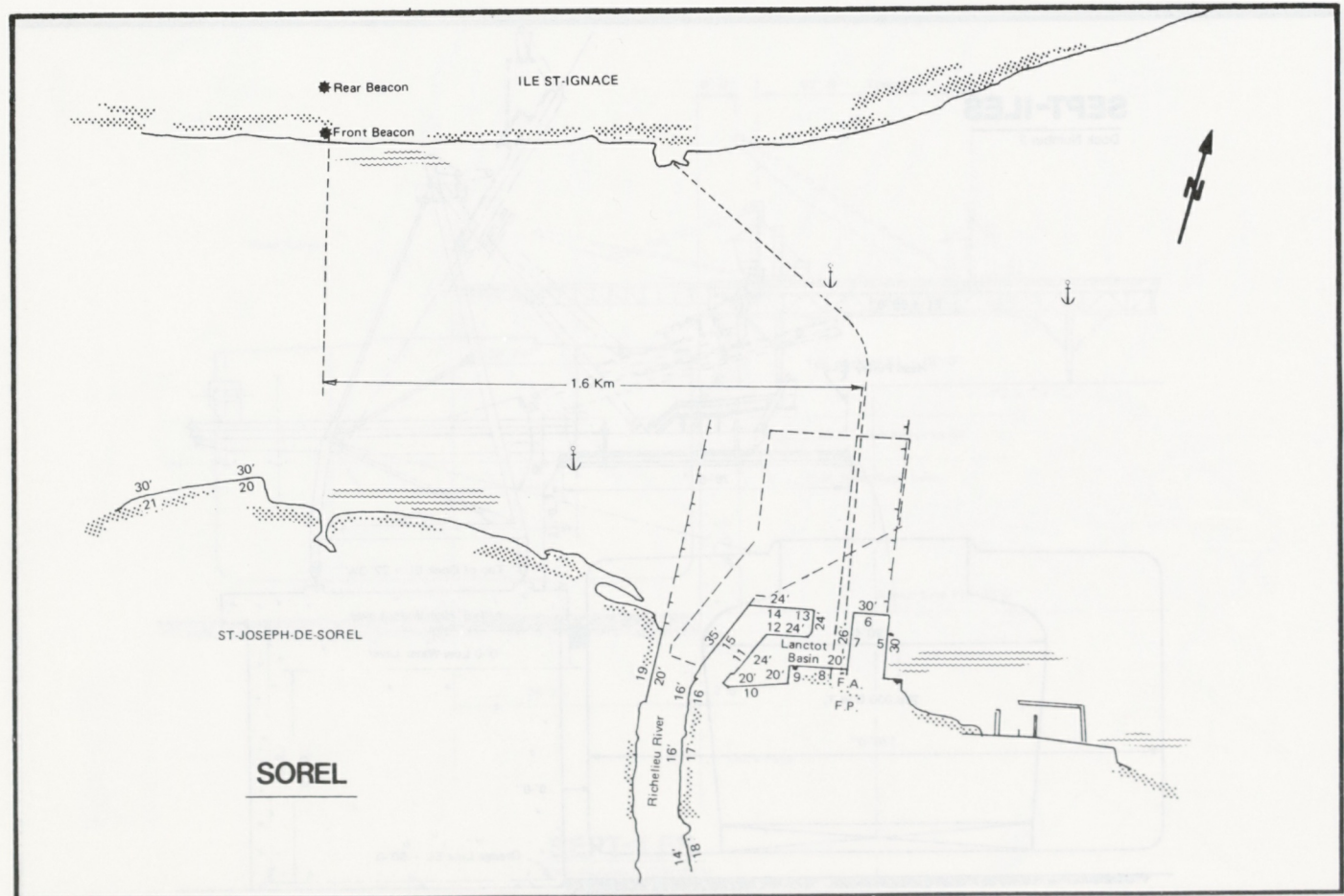
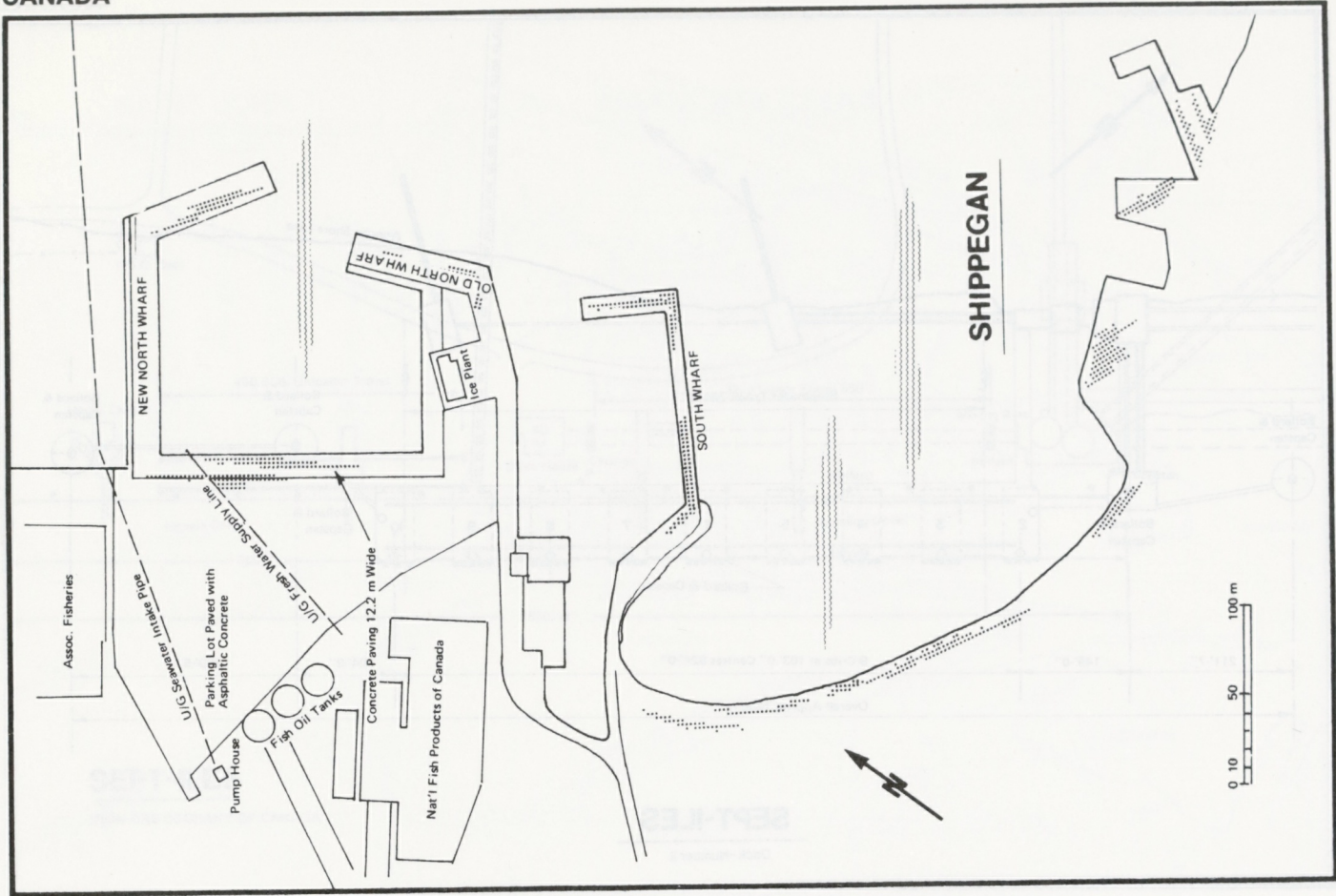


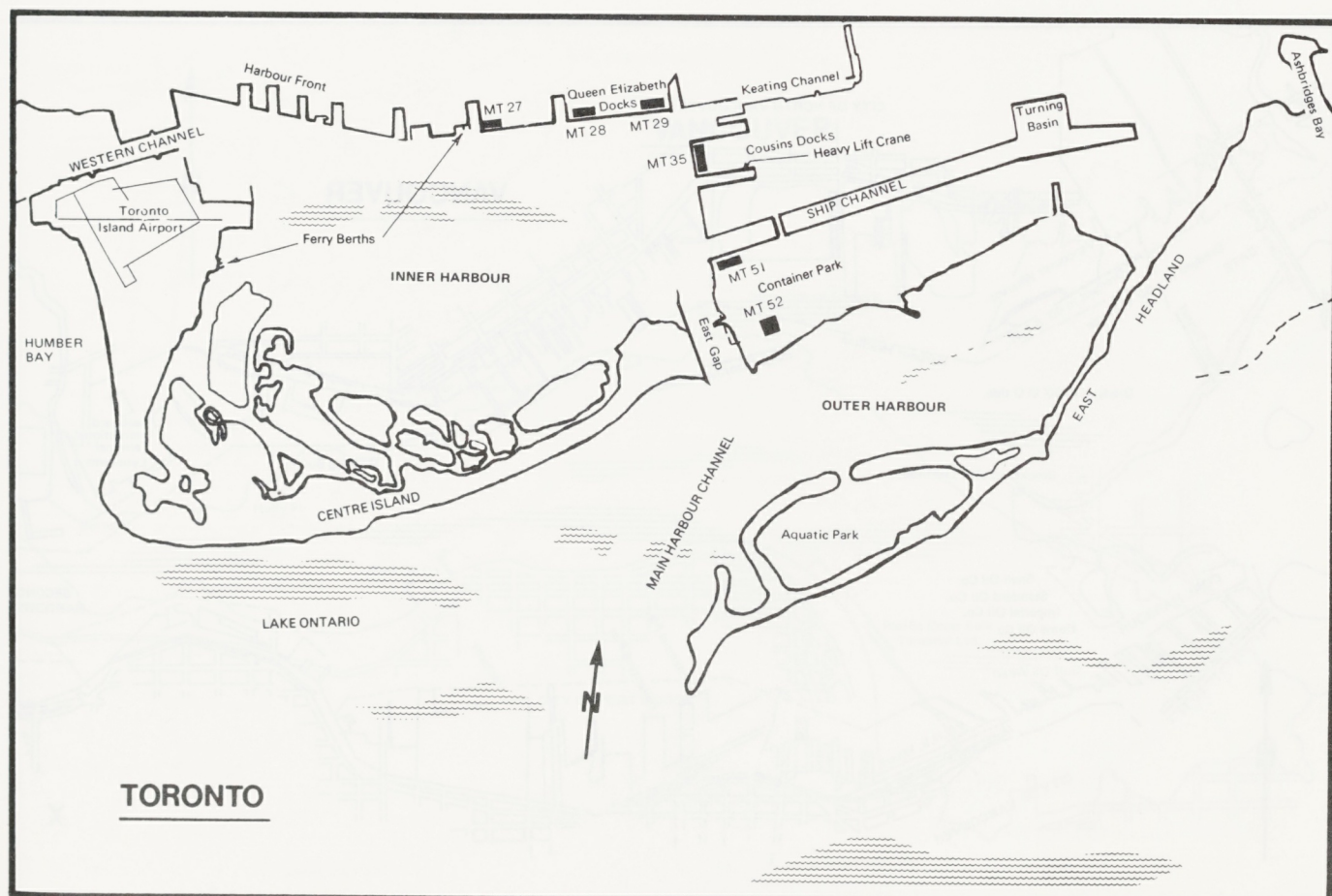
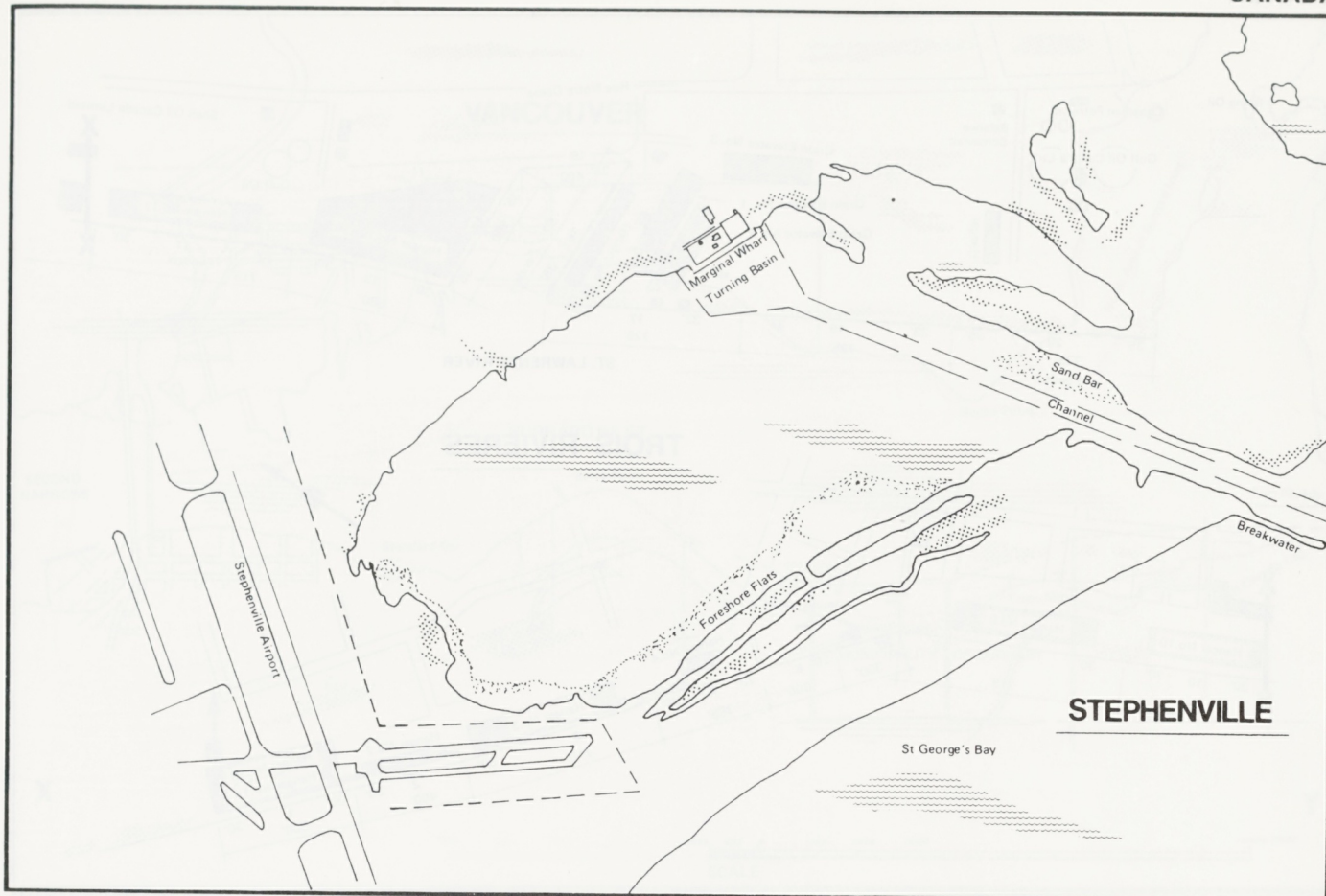


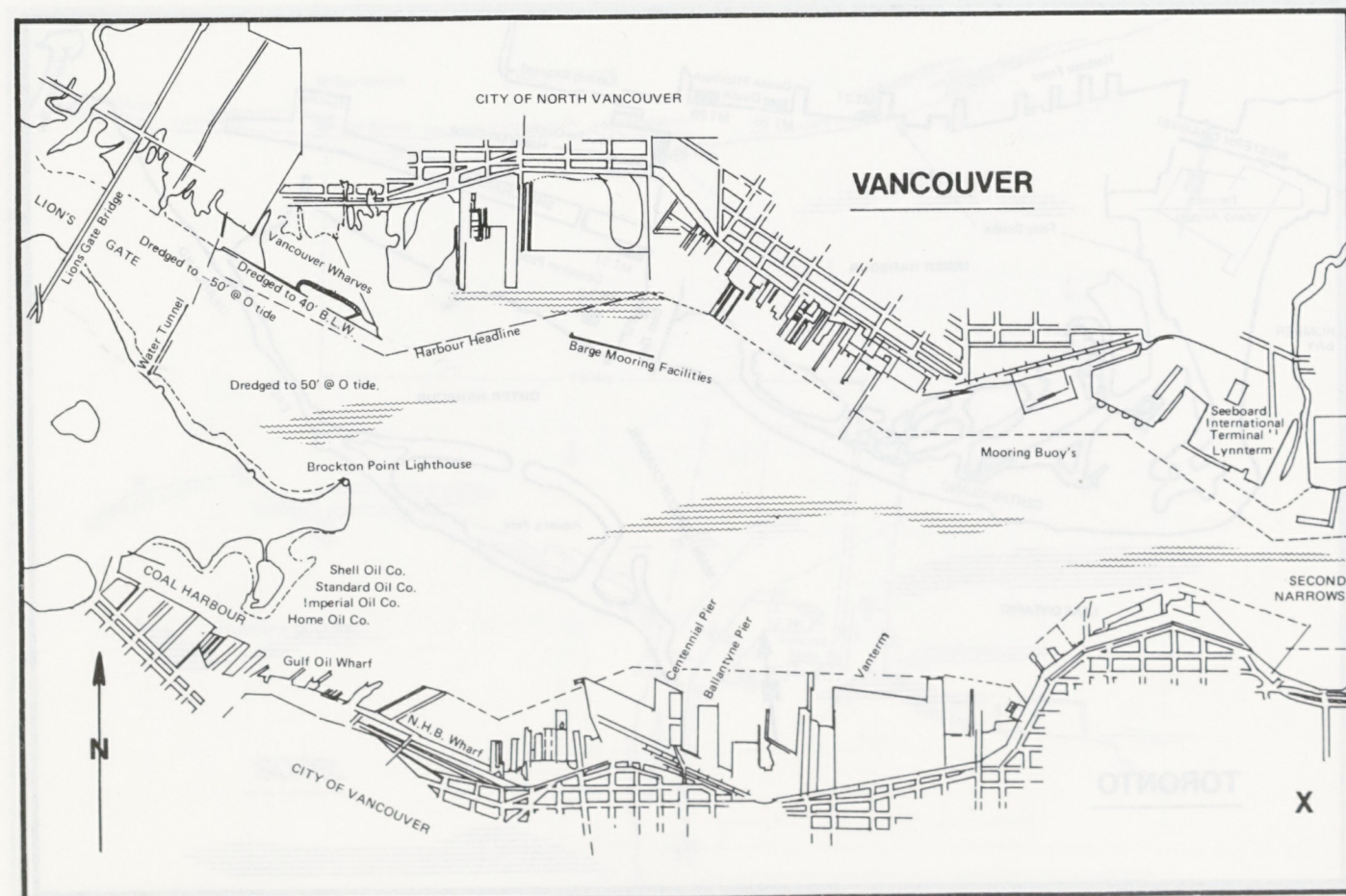
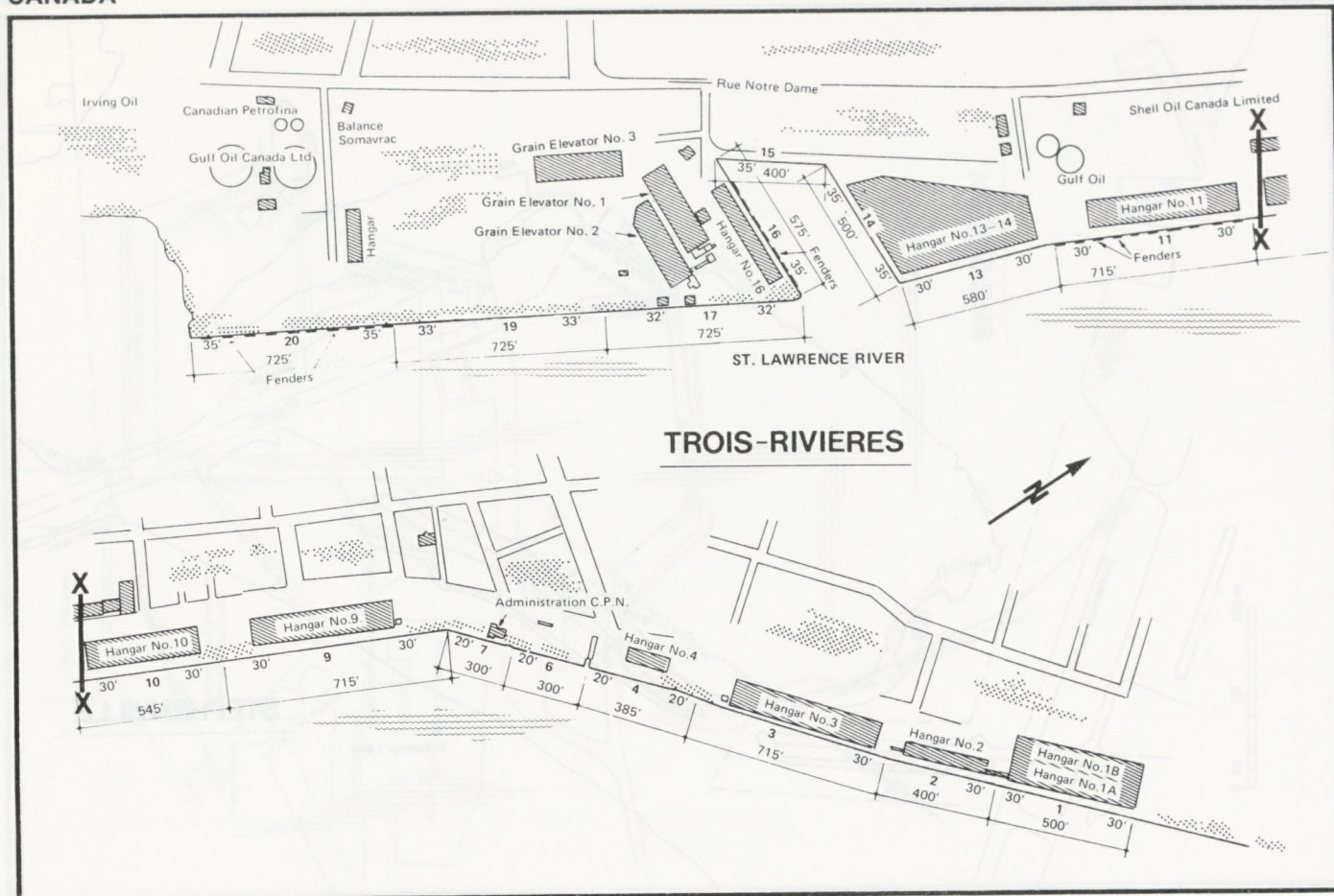
**SEPT-ILES**

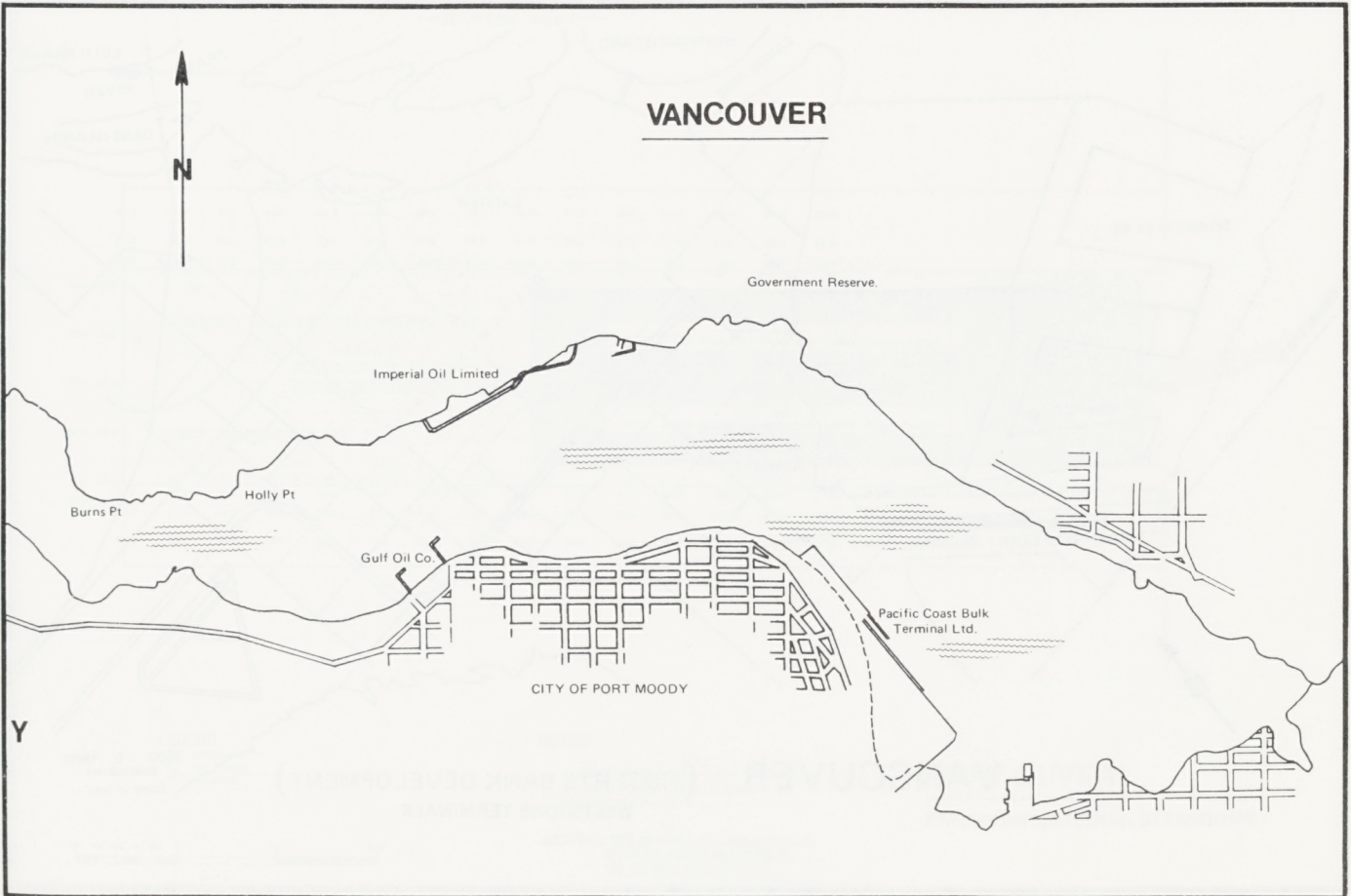
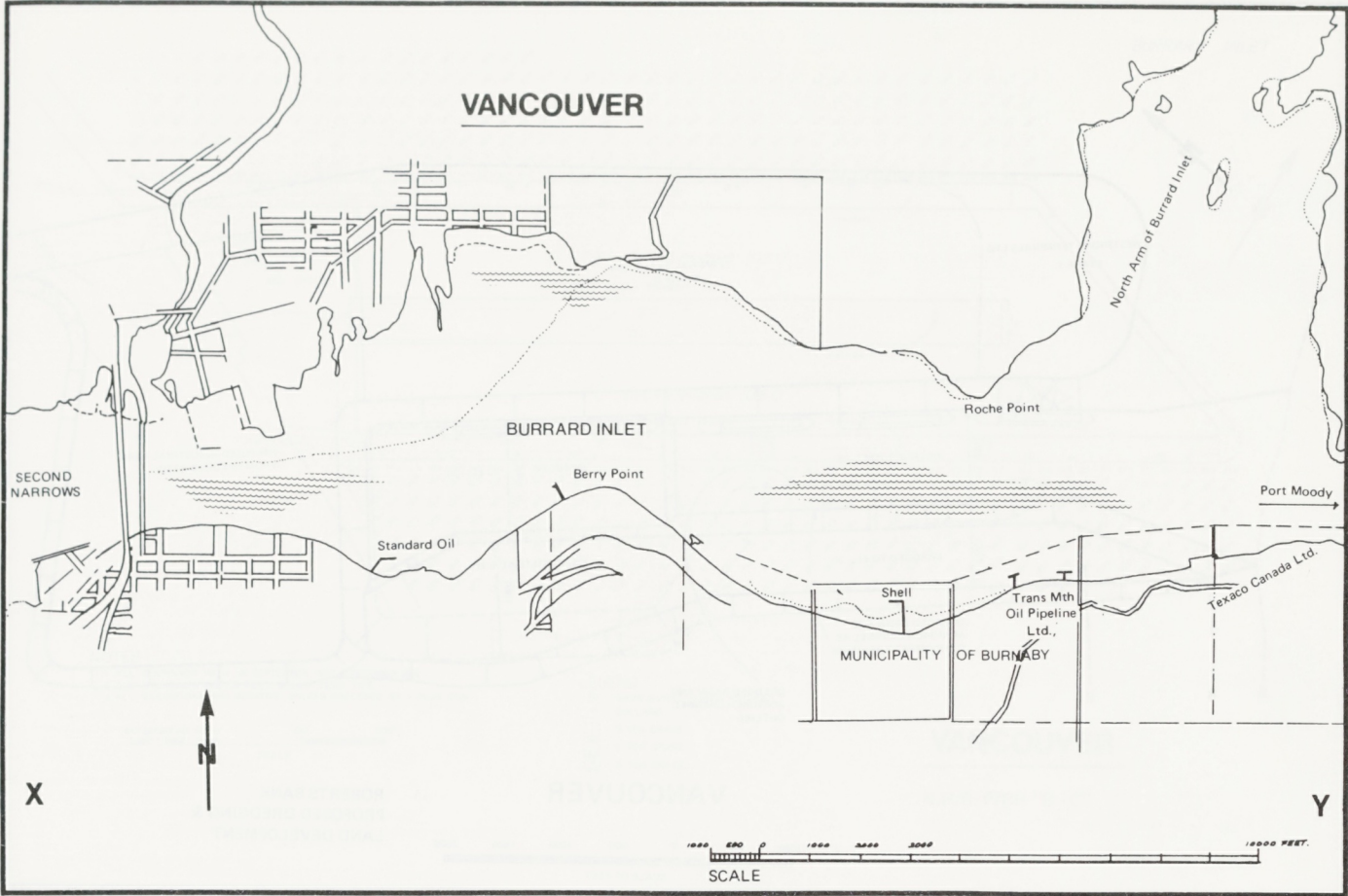
Dock Number 2

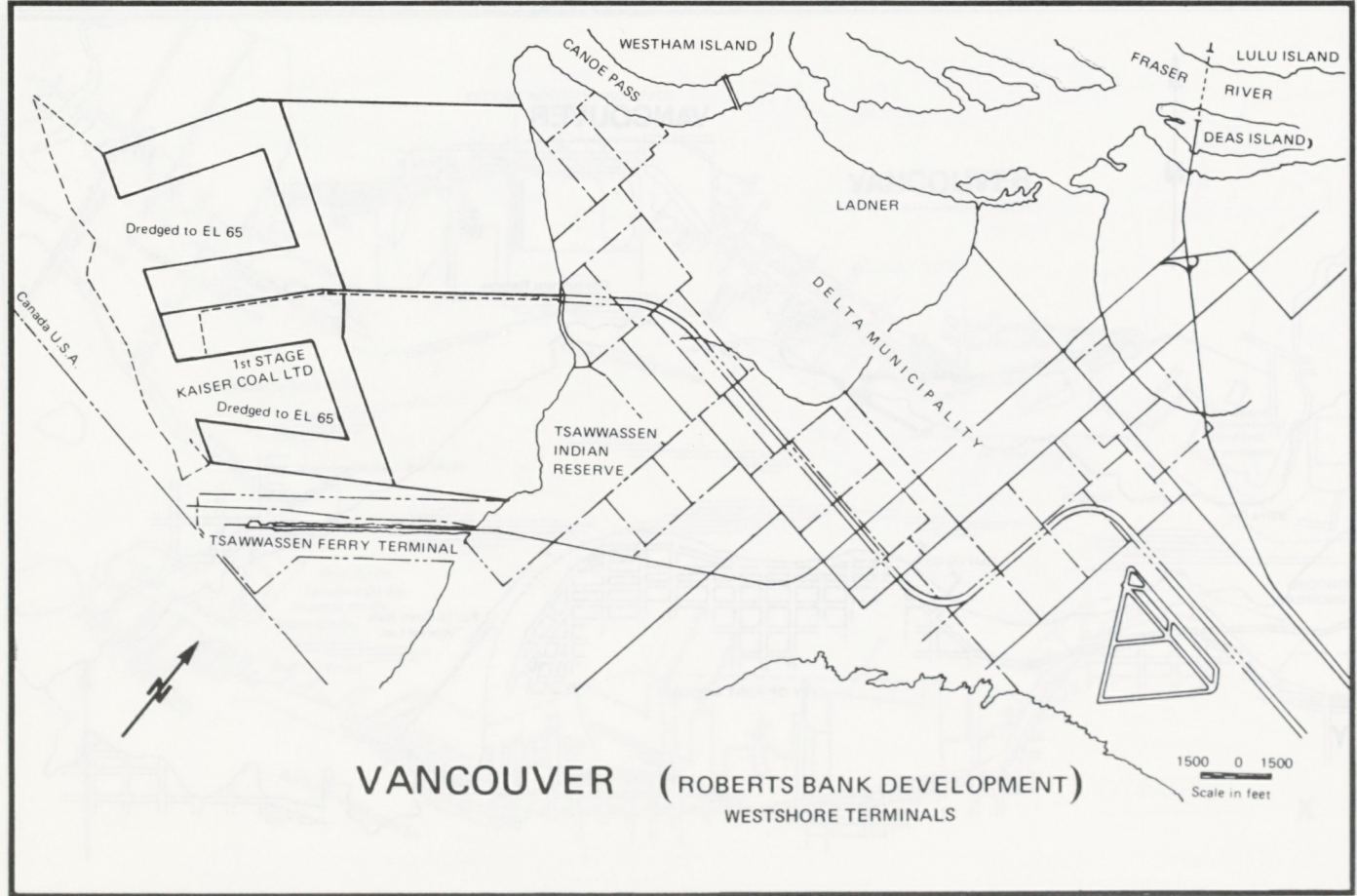
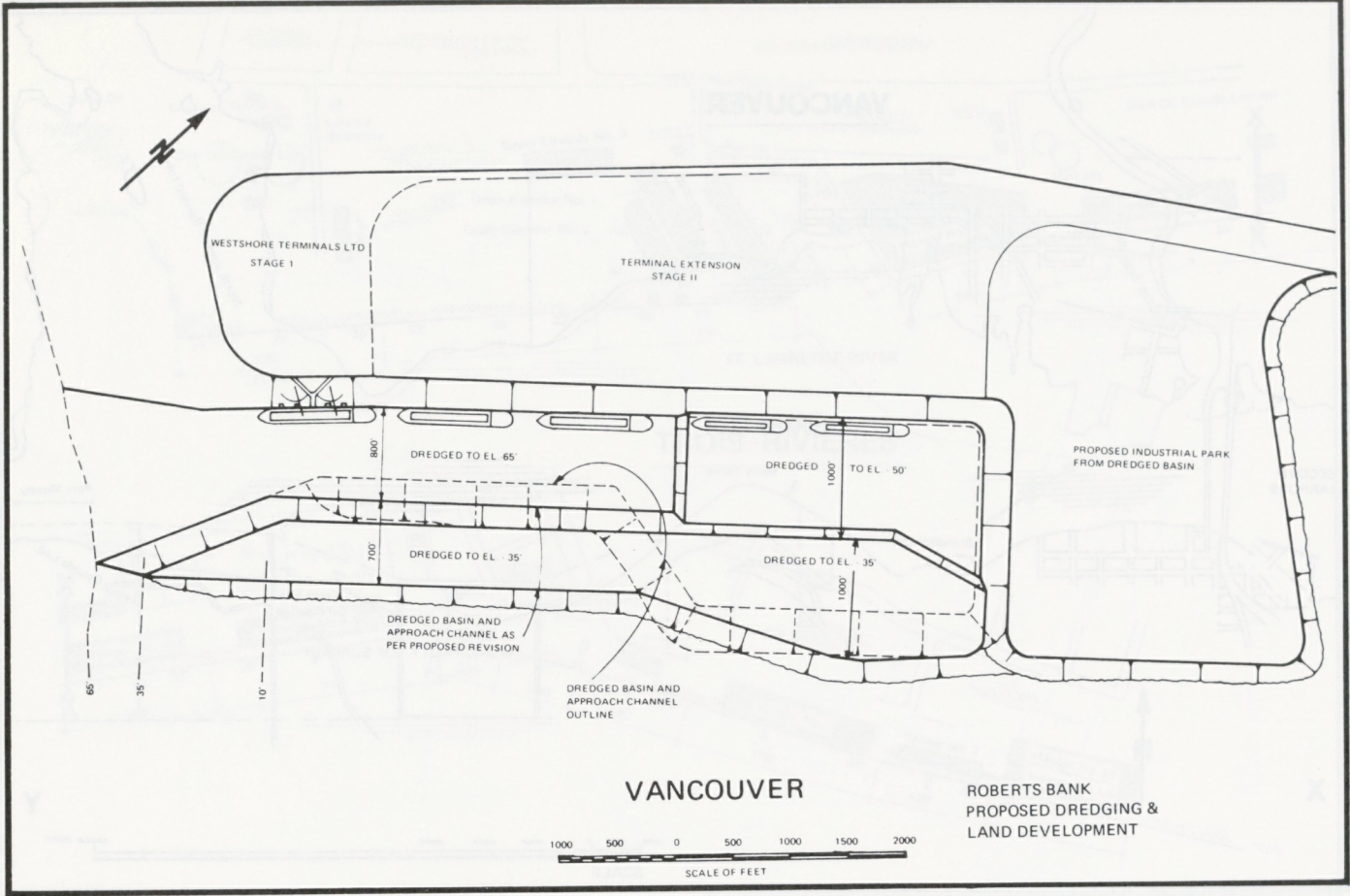


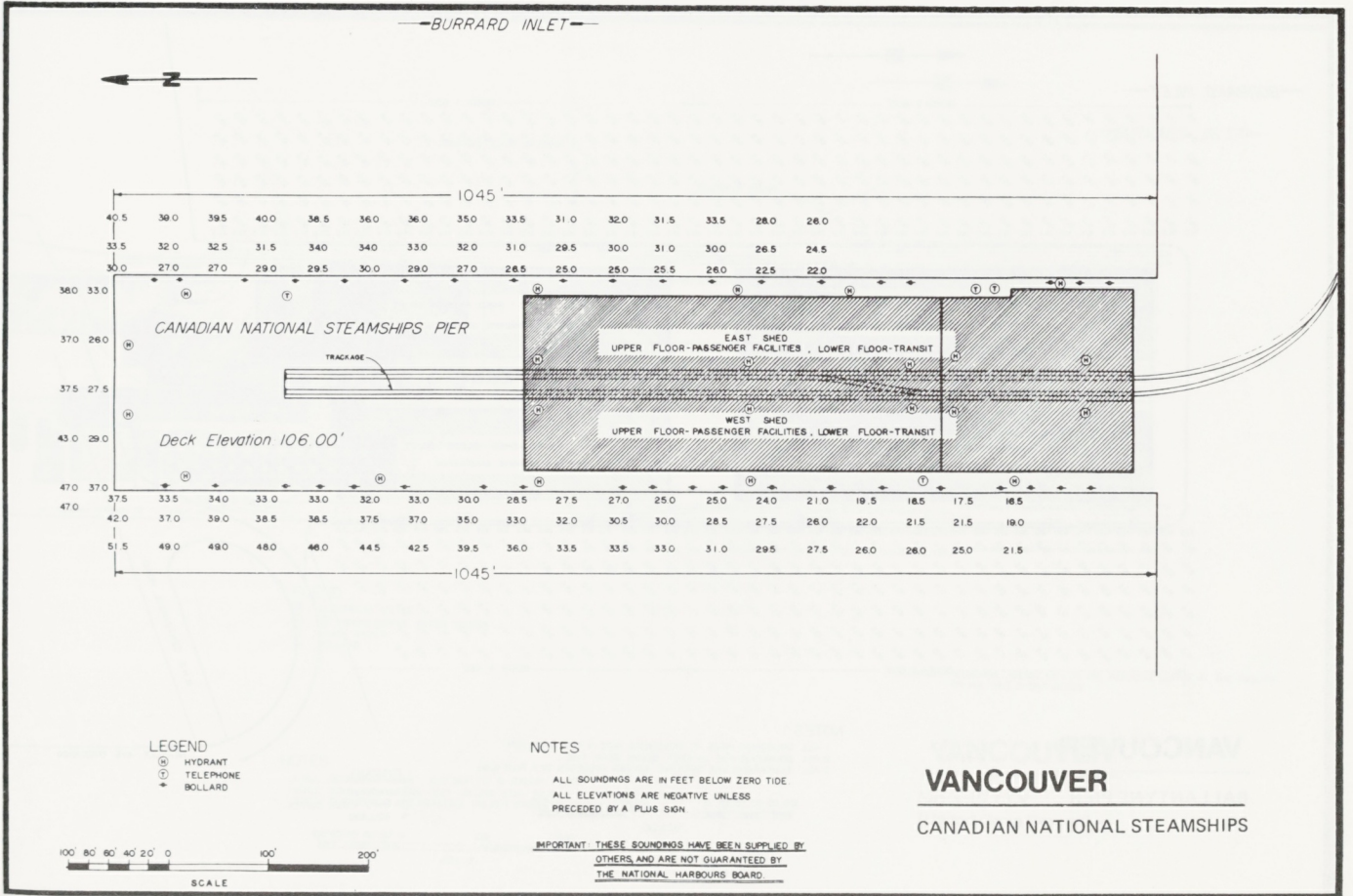
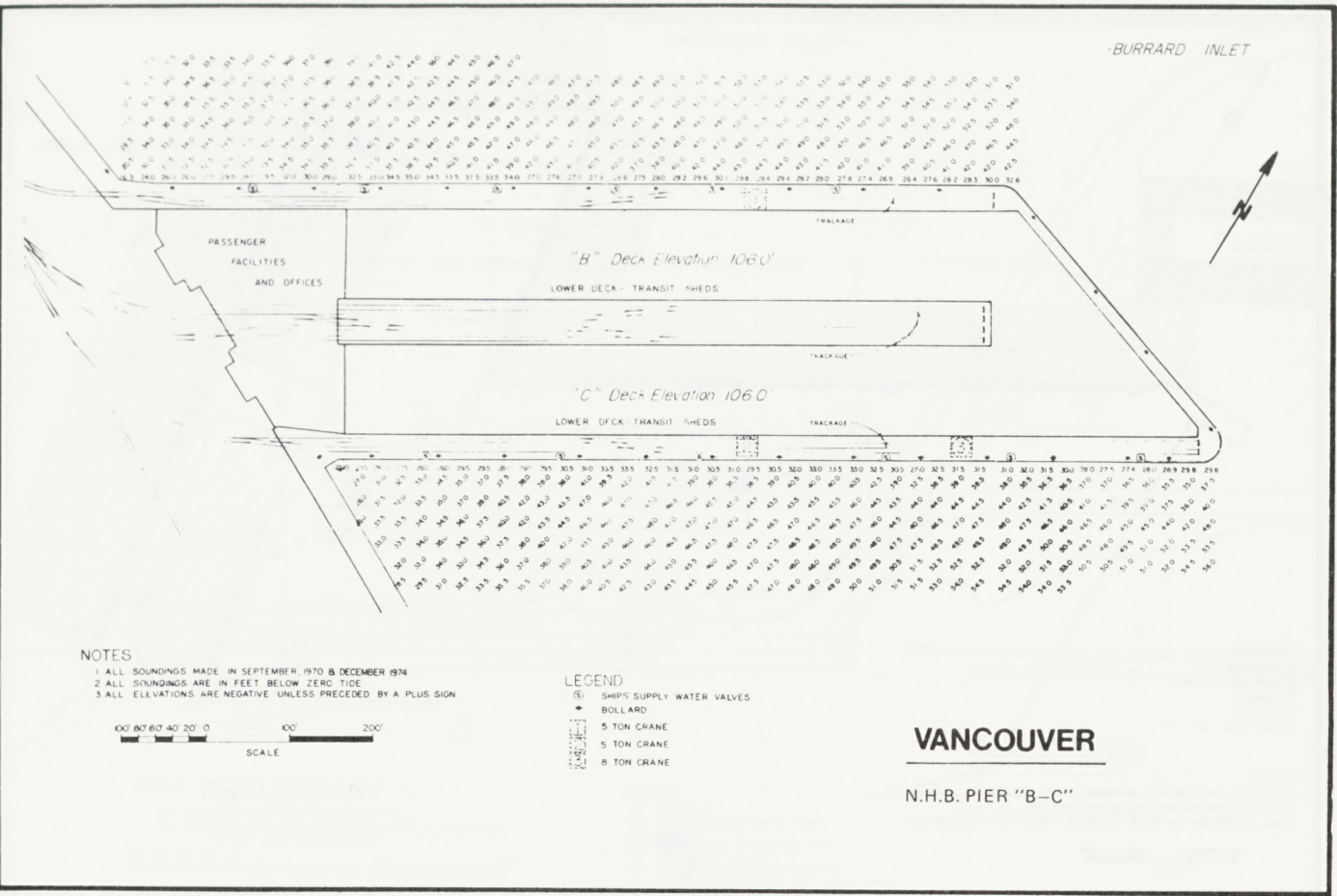


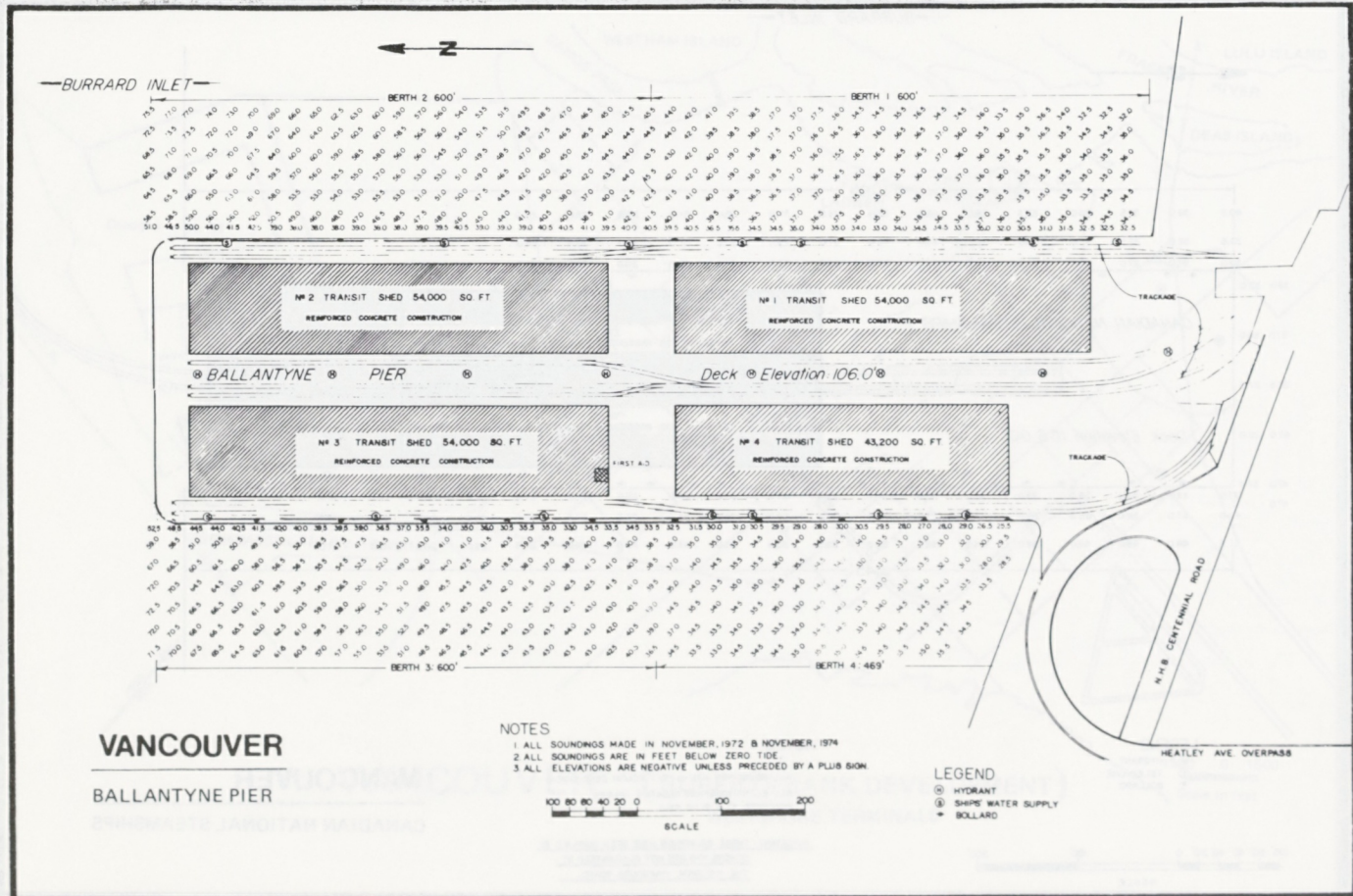
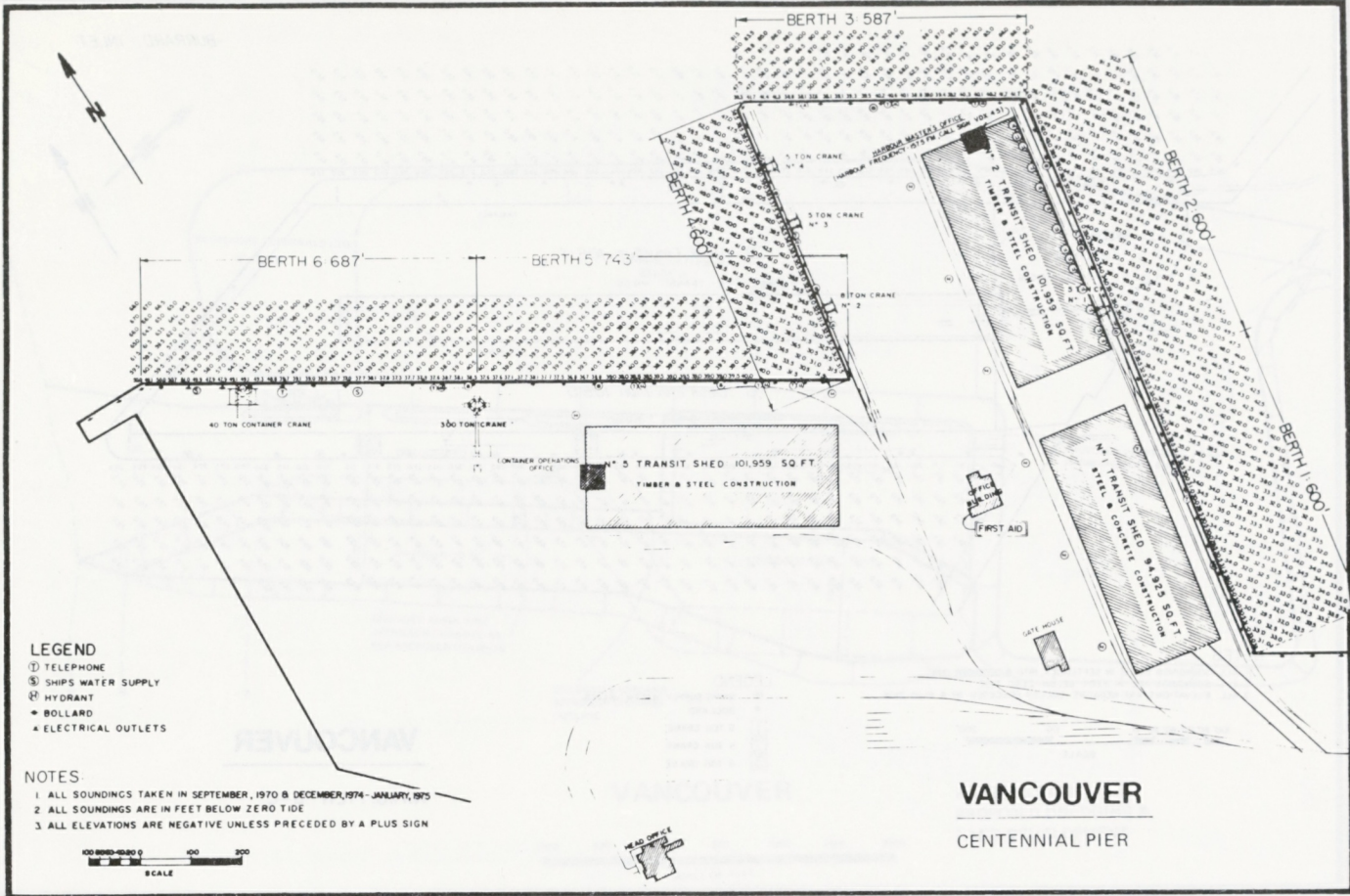


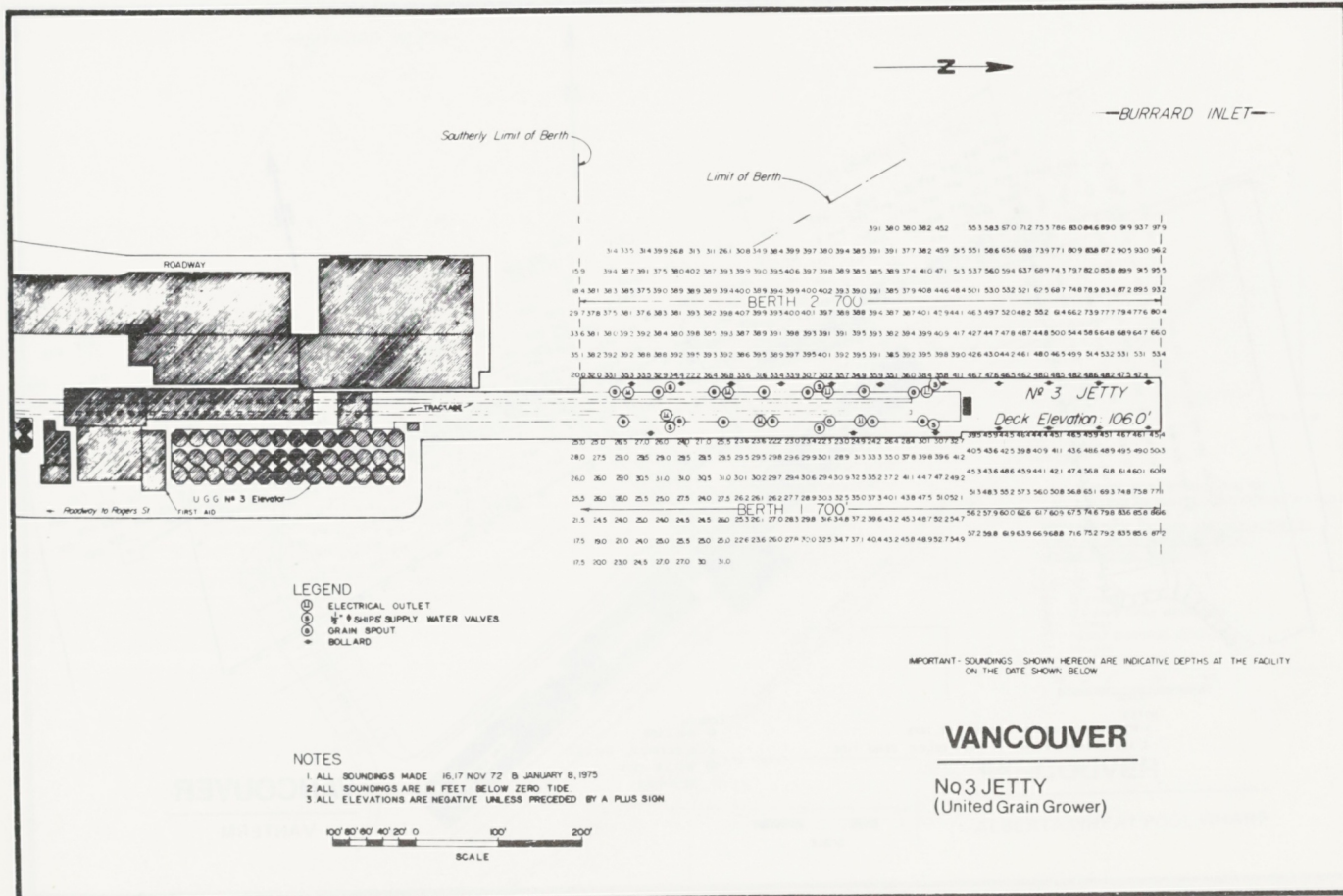
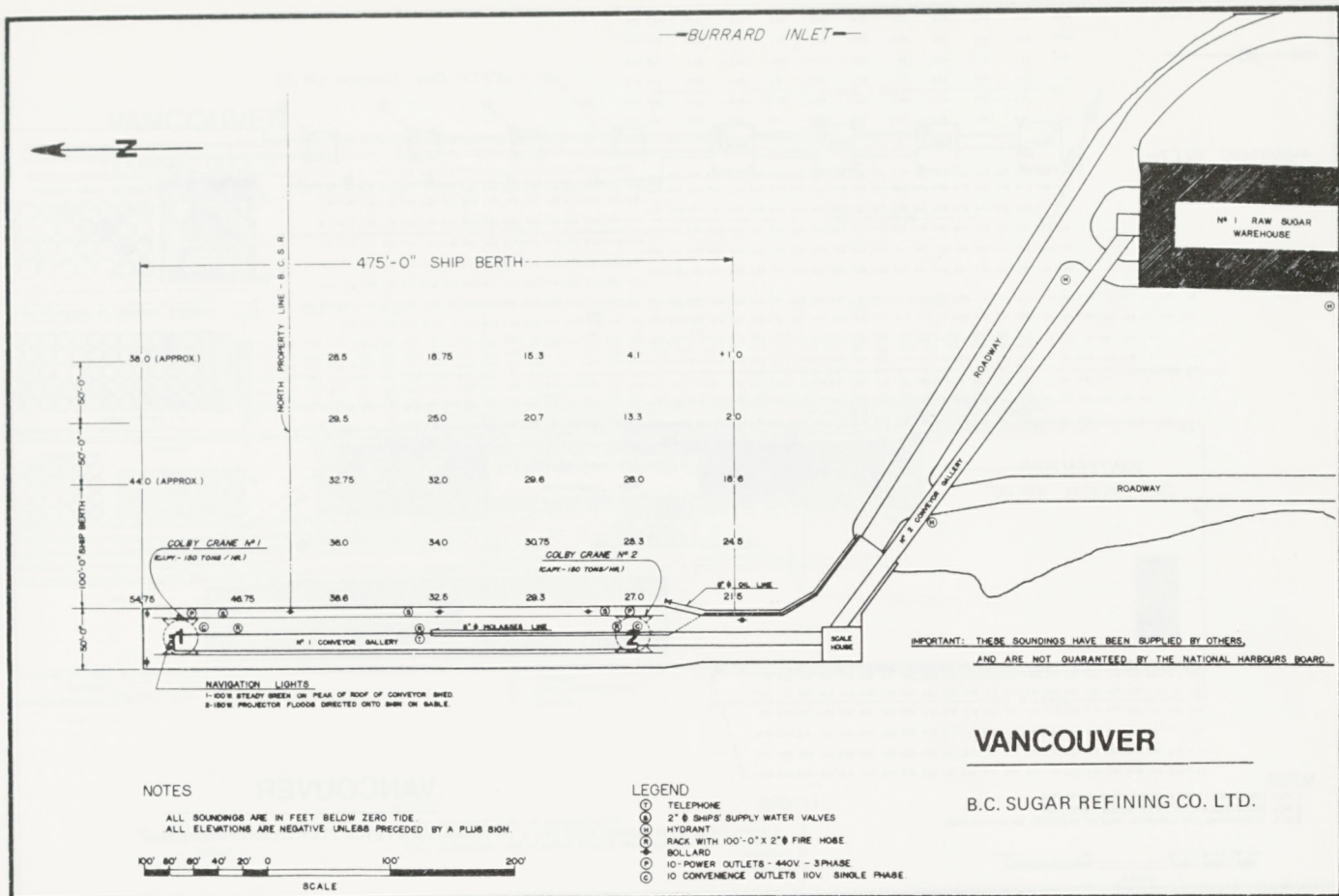


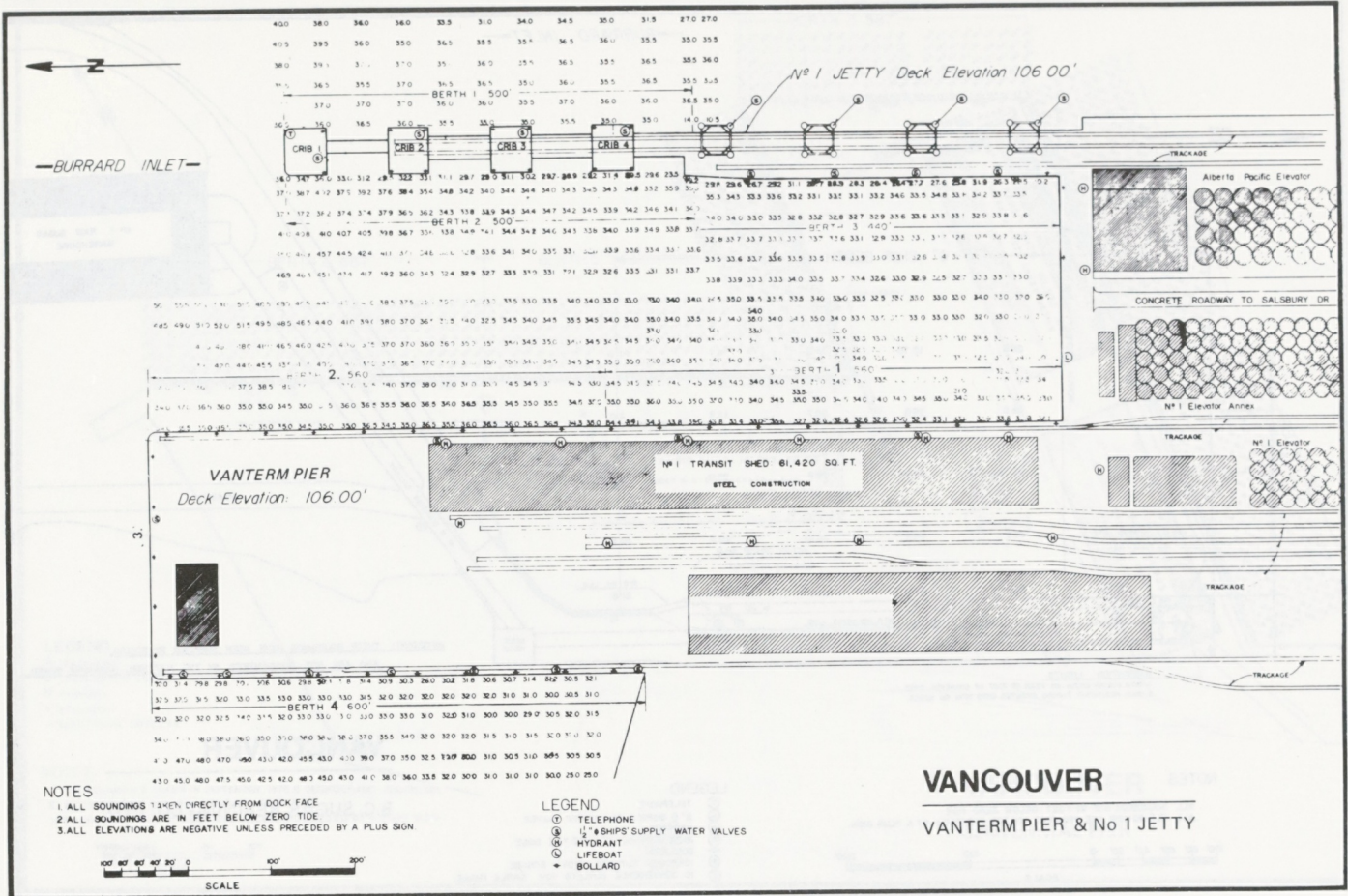




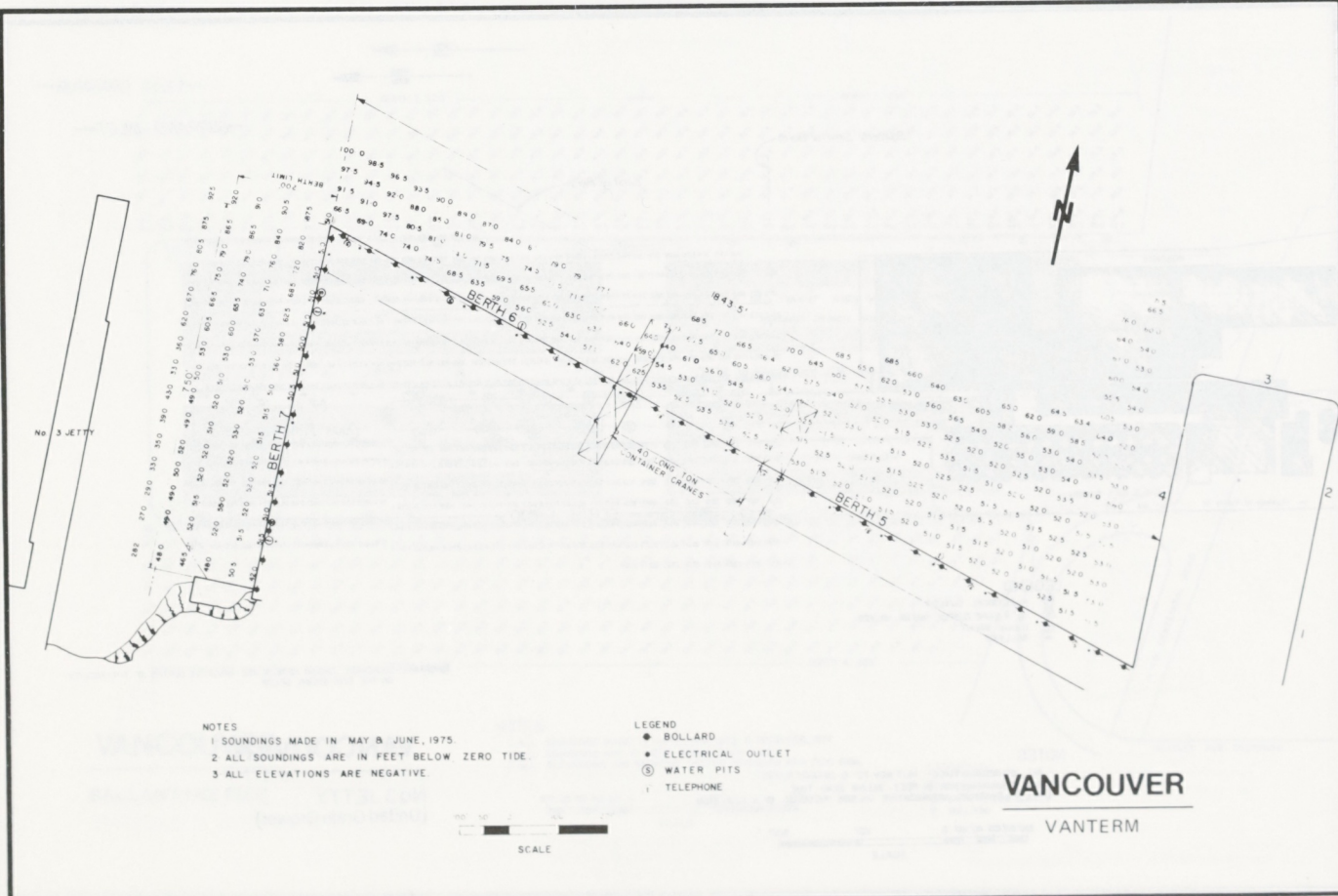








VANCOUVER
VANterm PIER & No 1 JETTY

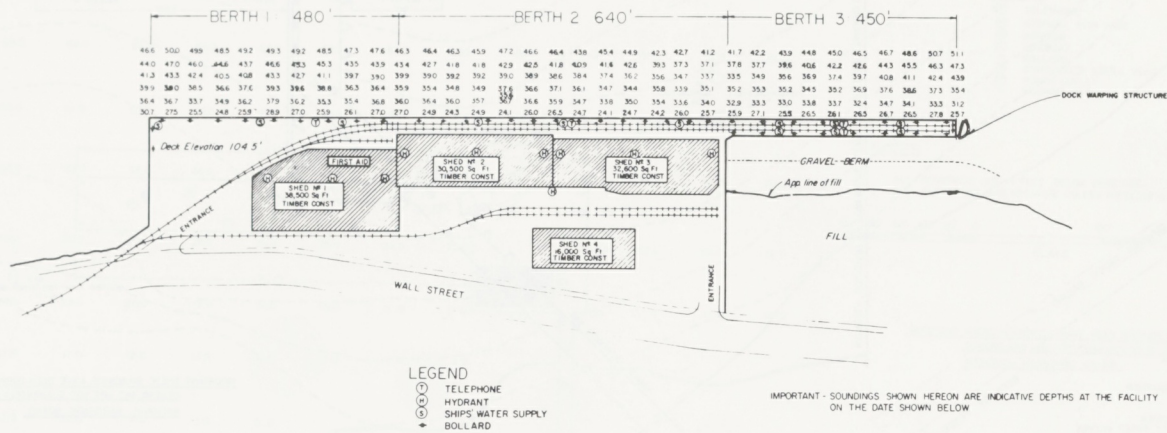


VANCOUVER
VANterm

VANCOUVER

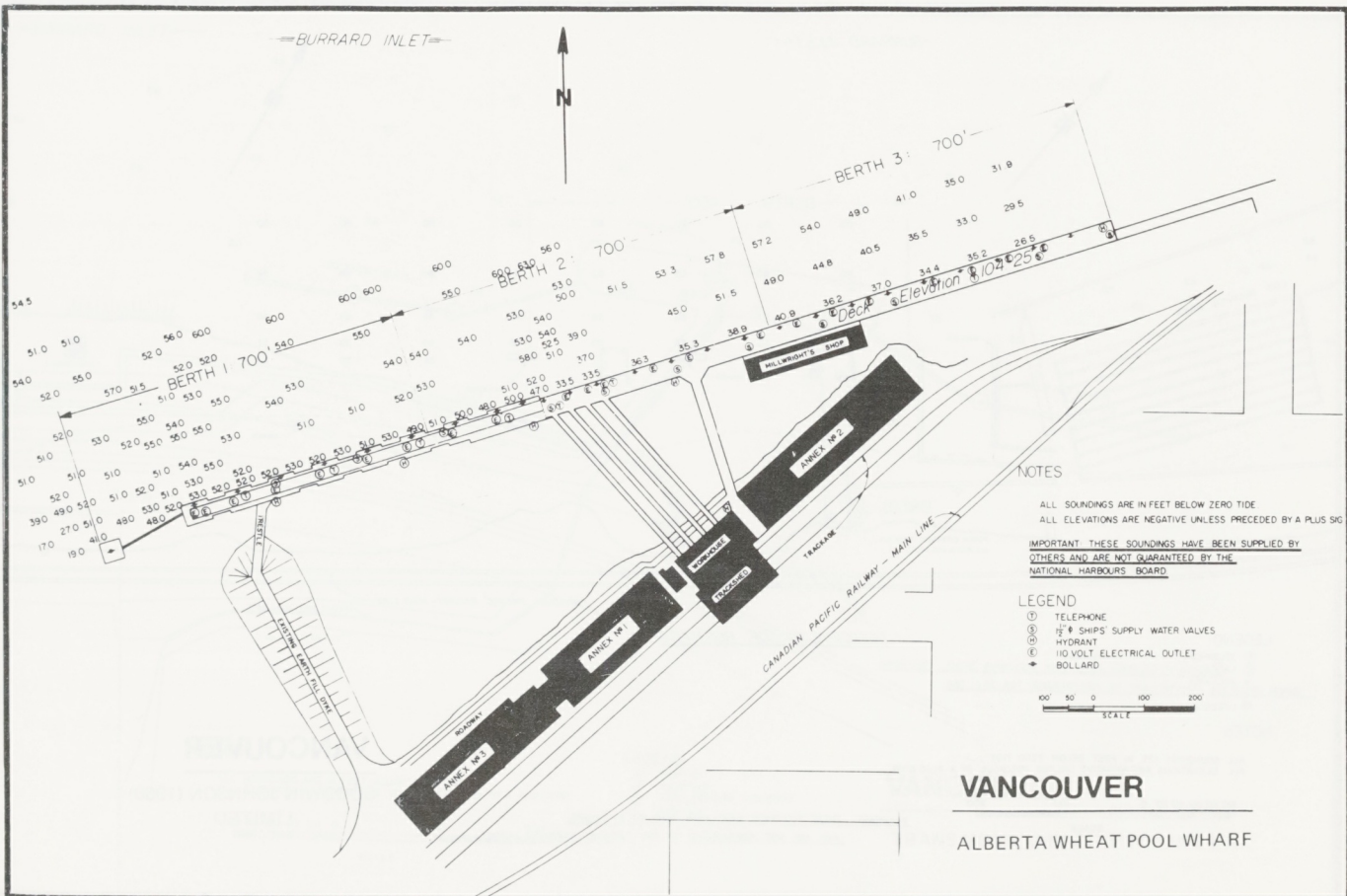
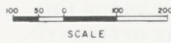
TERMINAL DOCK &
WAREHOUSE CO.

BURRARD INLET



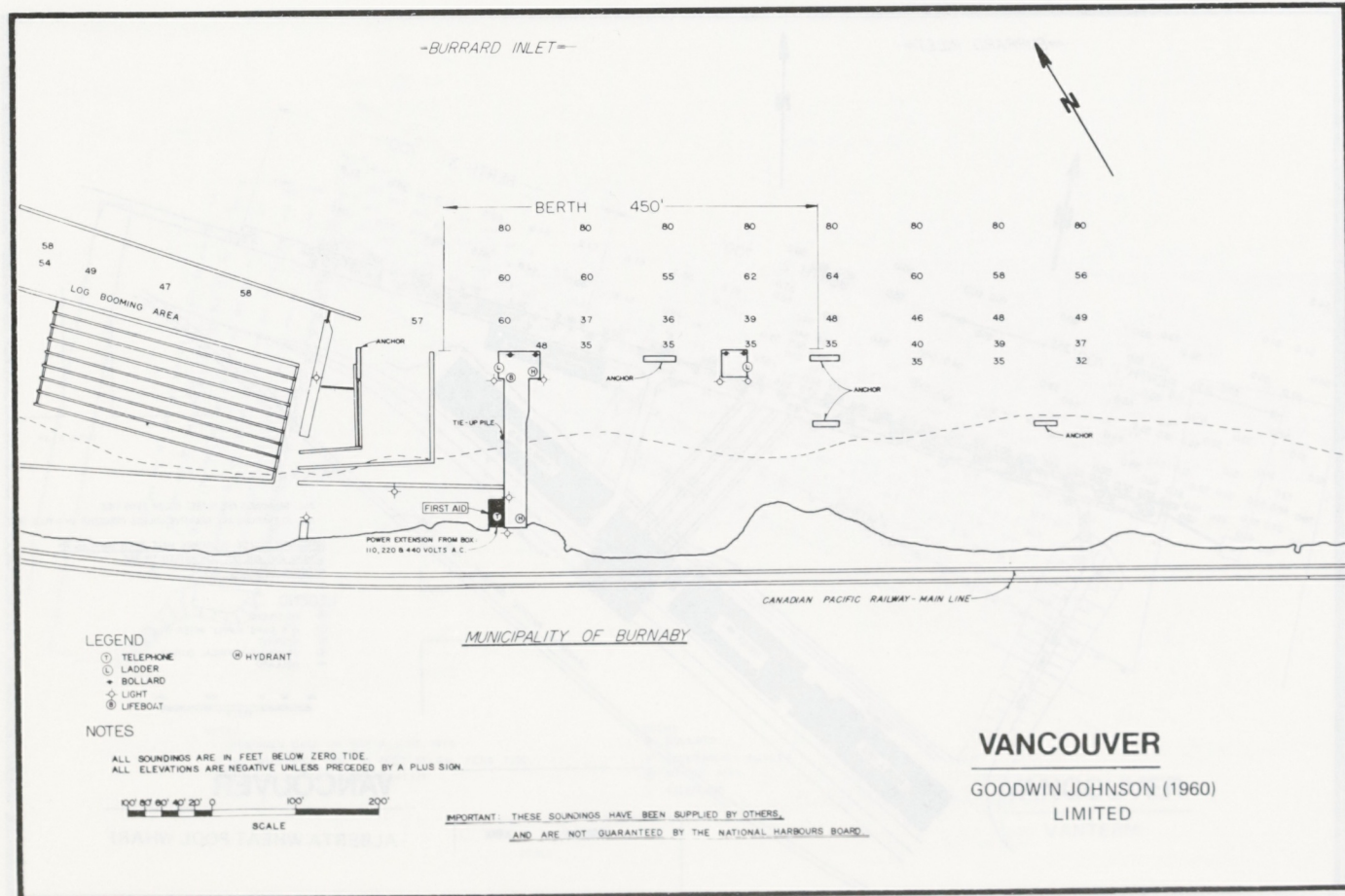
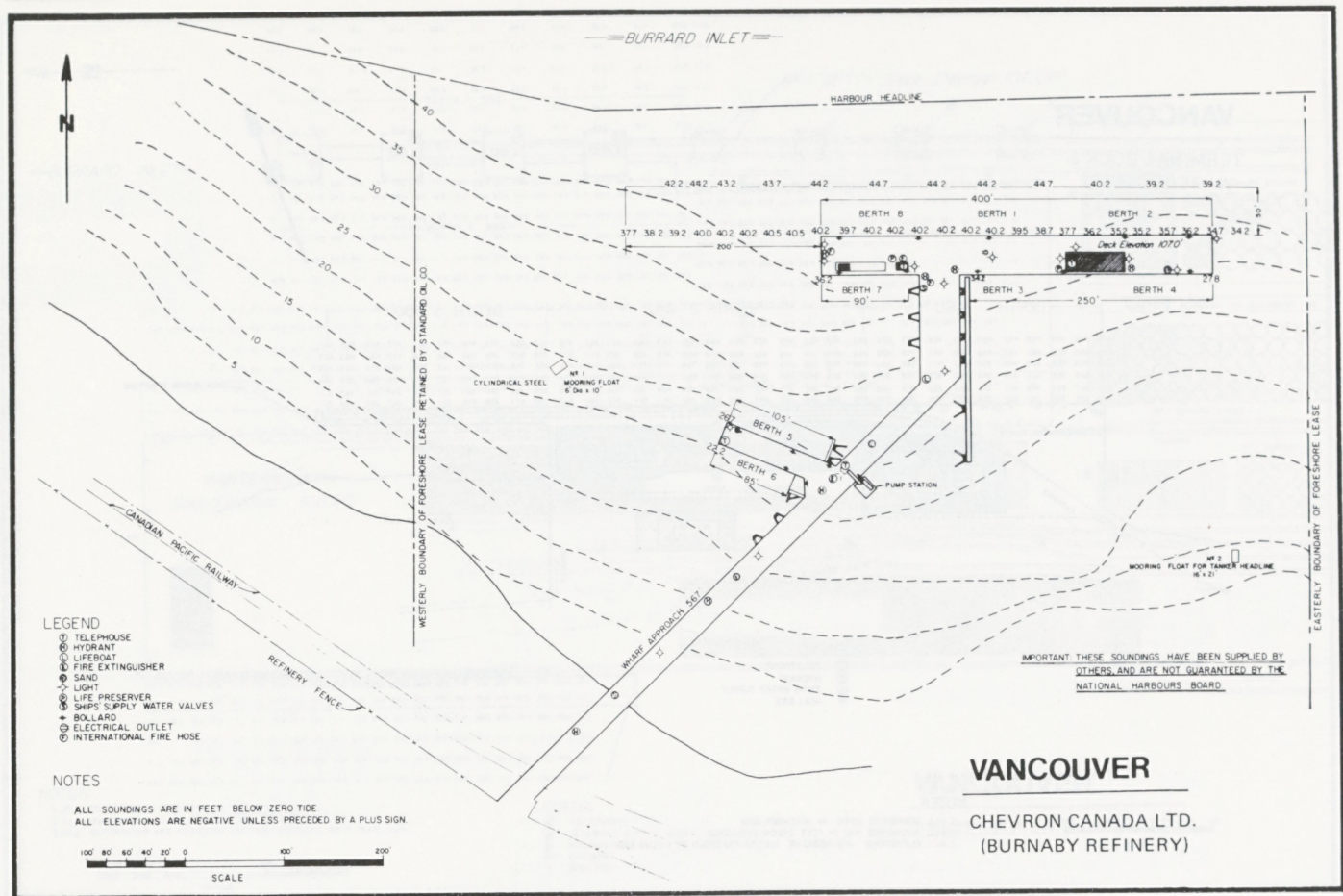
NOTES

1. ALL SOUNDINGS MADE IN NOVEMBER, 1972
2. ALL SOUNDINGS ARE IN FEET BELOW ZERO TIDE
3. ALL ELEVATIONS ARE NEGATIVE UNLESS PRECEDED BY A PLUS SIGN

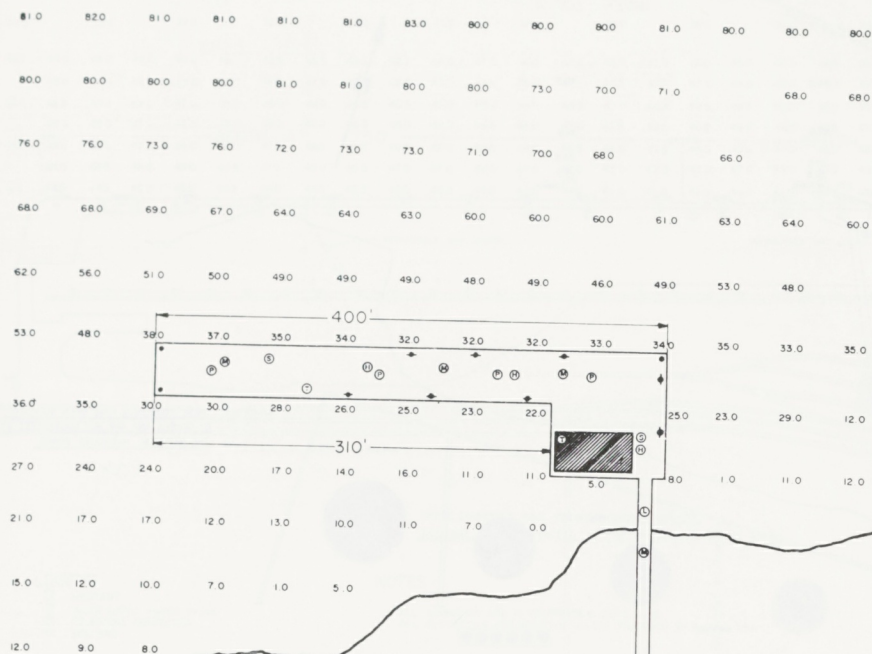


VANCOUVER

ALBERTA WHEAT POOL WHARF



BURRARD INLET

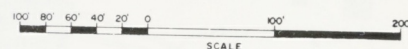


LEGEND

- ① TELEPHONE
- ② HYDRANT WITH HOSE
- ③ MONITOR
- ④ LIFEBOAT
- ⑤ BOLLARD
- ⑥ SHIP'S WATER SUPPLY VALVE
- ⑦ POWER OUTLET
- ⑧ MOORING PILE

NOTES

ALL SOUNDINGS ARE IN FEET BELOW ZERO TIDE.
ALL ELEVATIONS ARE NEGATIVE UNLESS PRECEDED BY A PLUS SIGN.



IMPORTANT THESE SOUNDINGS HAVE BEEN SUPPLIED BY
OTHERS AND ARE NOT GUARANTEED BY THE
NATIONAL HARBOURS BOARD.

VANCOUVER
SHELL CANADA LIMITED

BURRARD INLET

62

56

46

34

44

52

81

60

25

20

32

45

53

61

53

20

23

44

41

56

42

28

20

LABORATORY

DOLPHINS (WEST)

DOCK

HOSE CRANE

24

35

23

DOLPHINS (EAST)

C.P.R. R/W

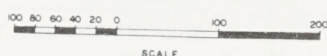
12" BALLAST LINE (WATER)

PROPERTY LINE

IMPORTANT THESE SOUNDINGS HAVE BEEN SUPPLIED BY
OTHERS AND ARE NOT GUARANTEED BY THE NATIONAL HARBOURS BOARD.

NOTES

ALL SOUNDINGS ARE IN FEET BELOW ZERO TIDE.
ALL ELEVATIONS ARE NEGATIVE UNLESS PRECEDED BY A PLUS SIGN.

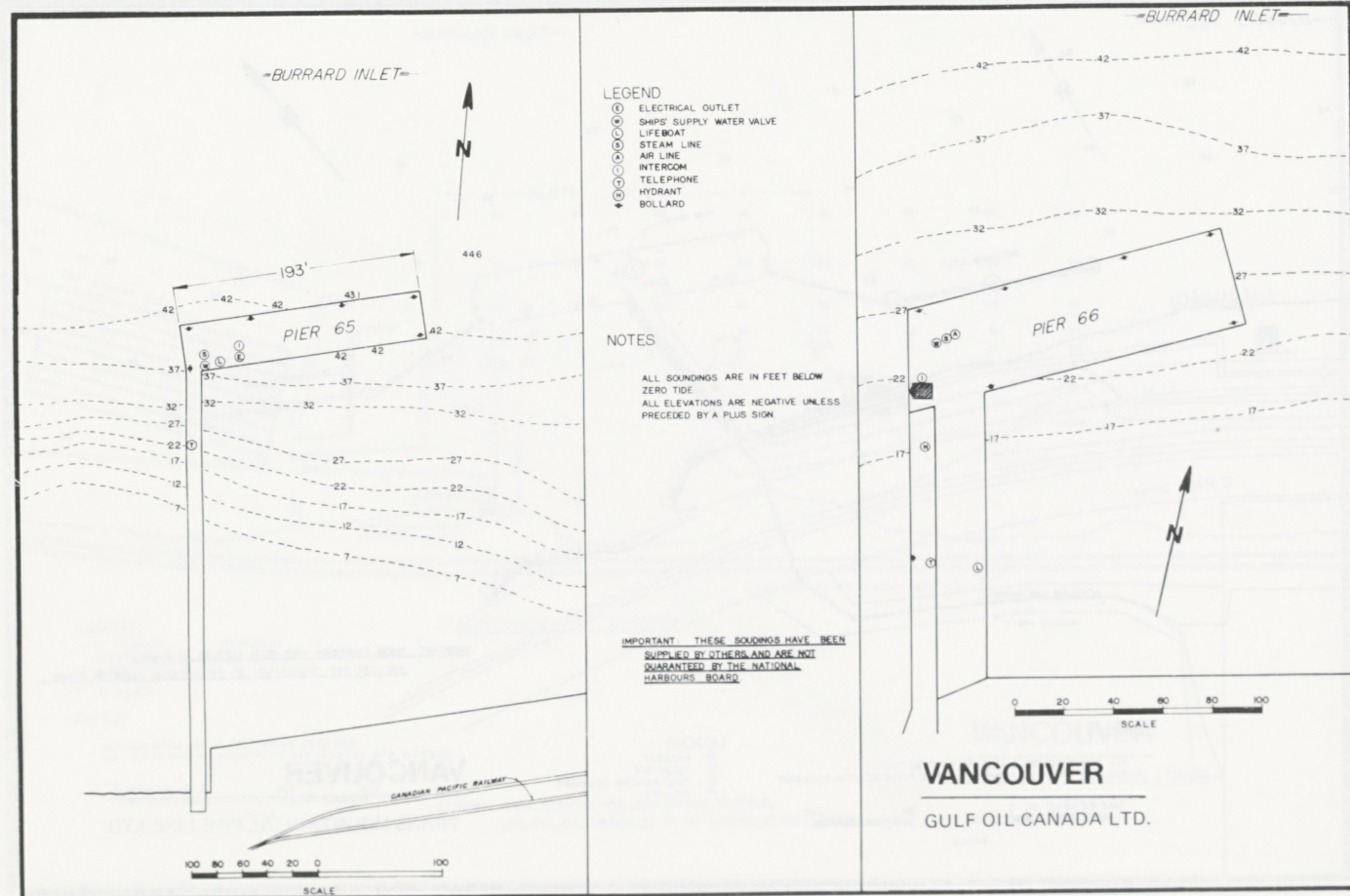
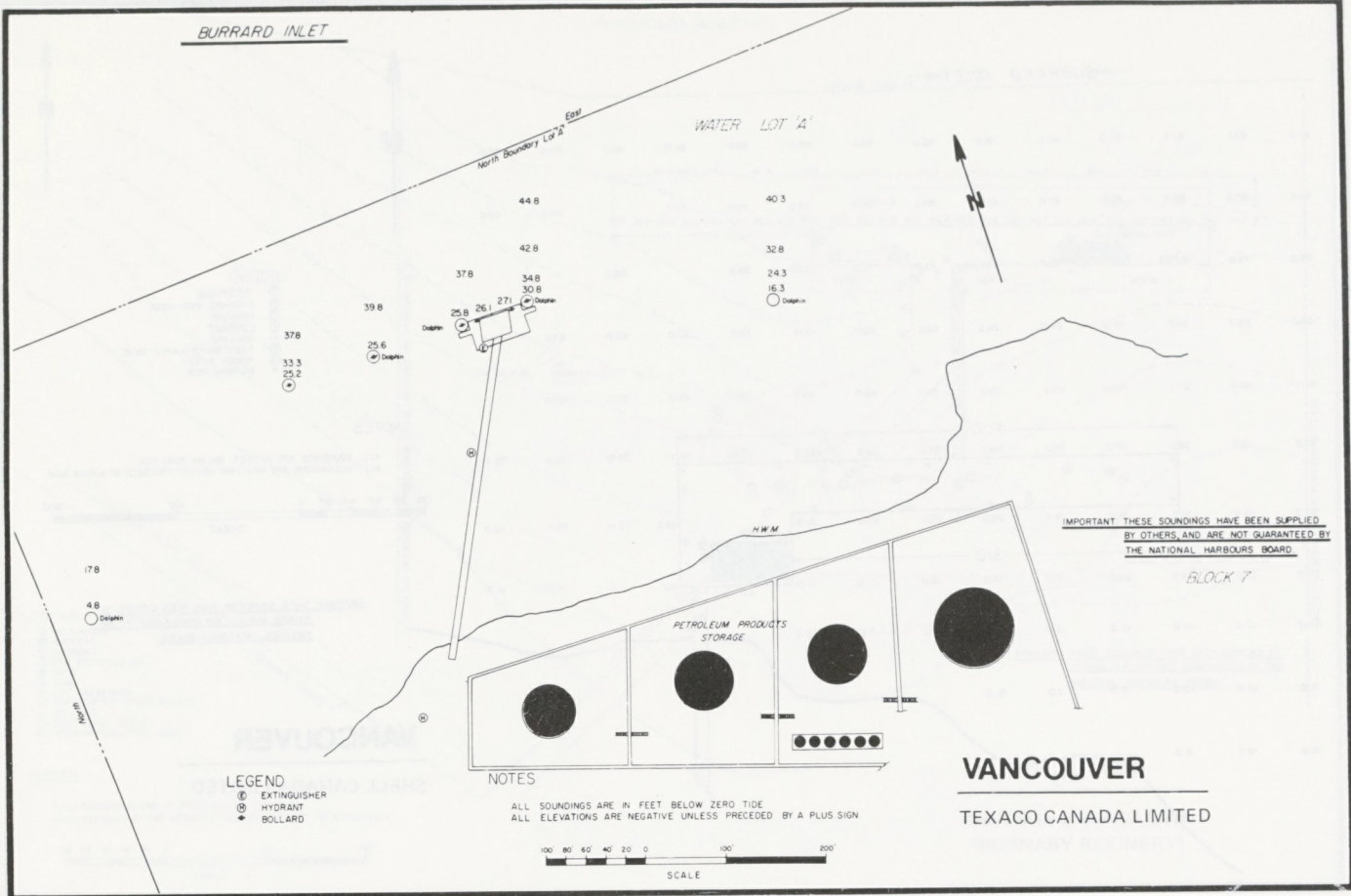


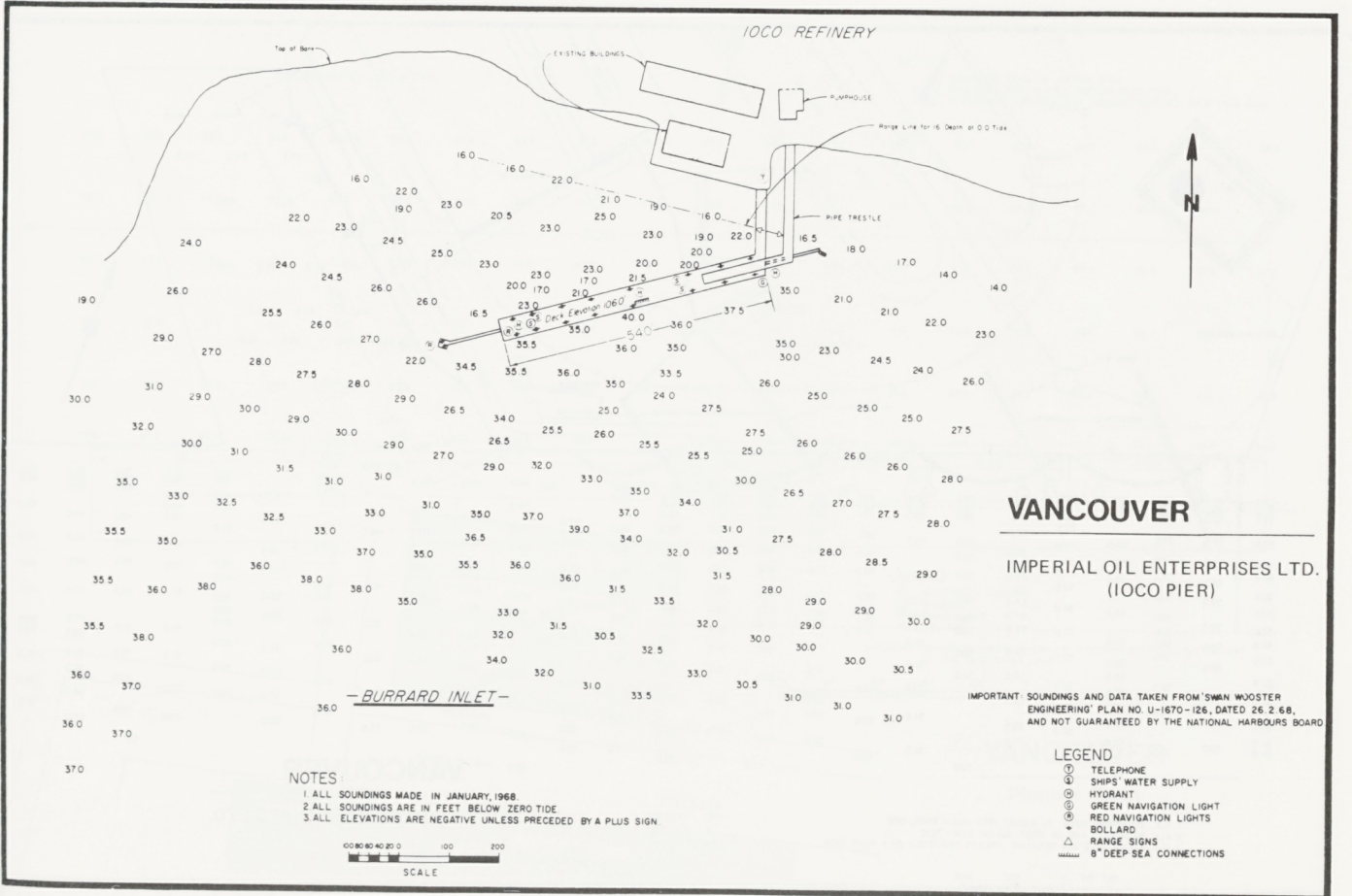
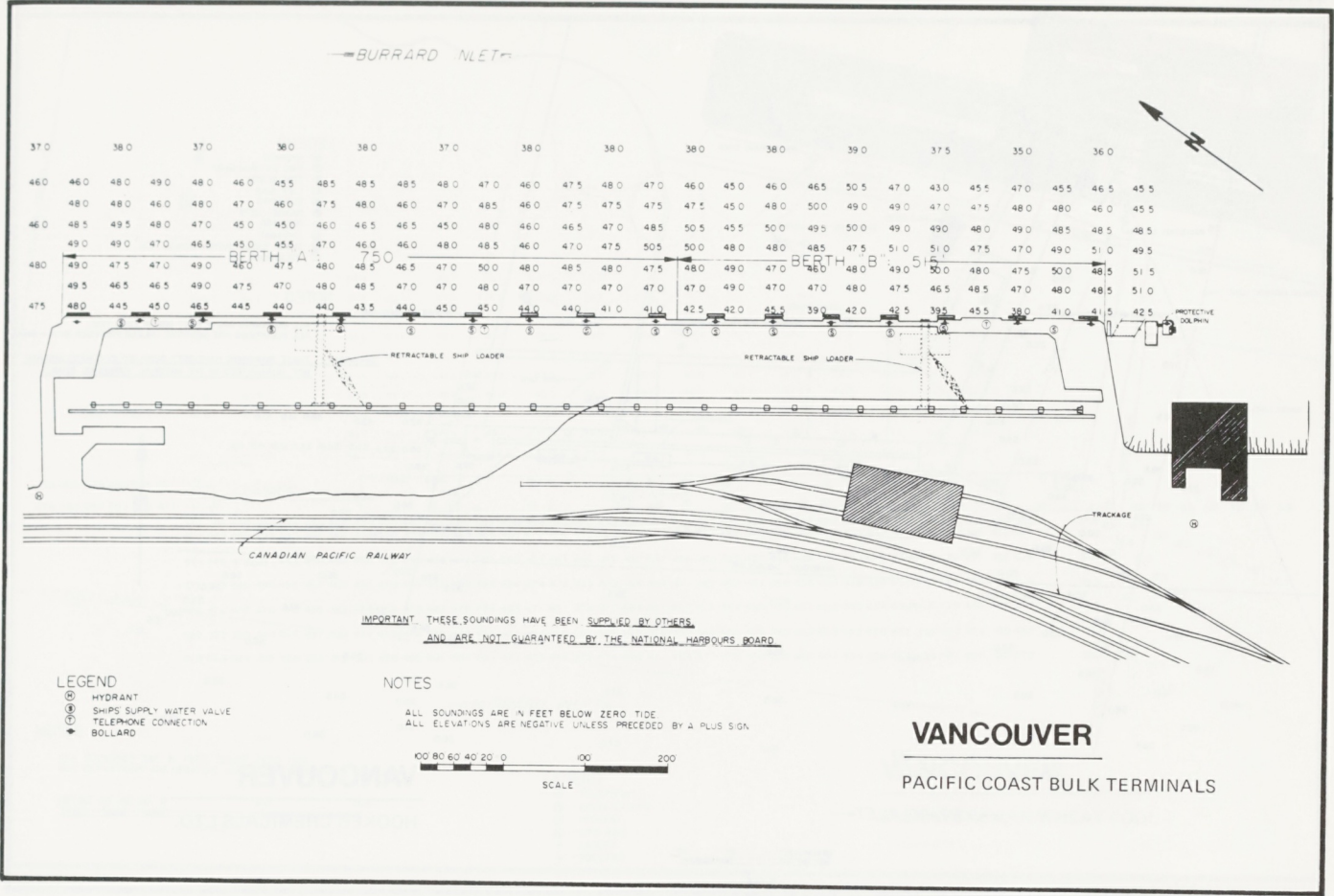
LEGEND

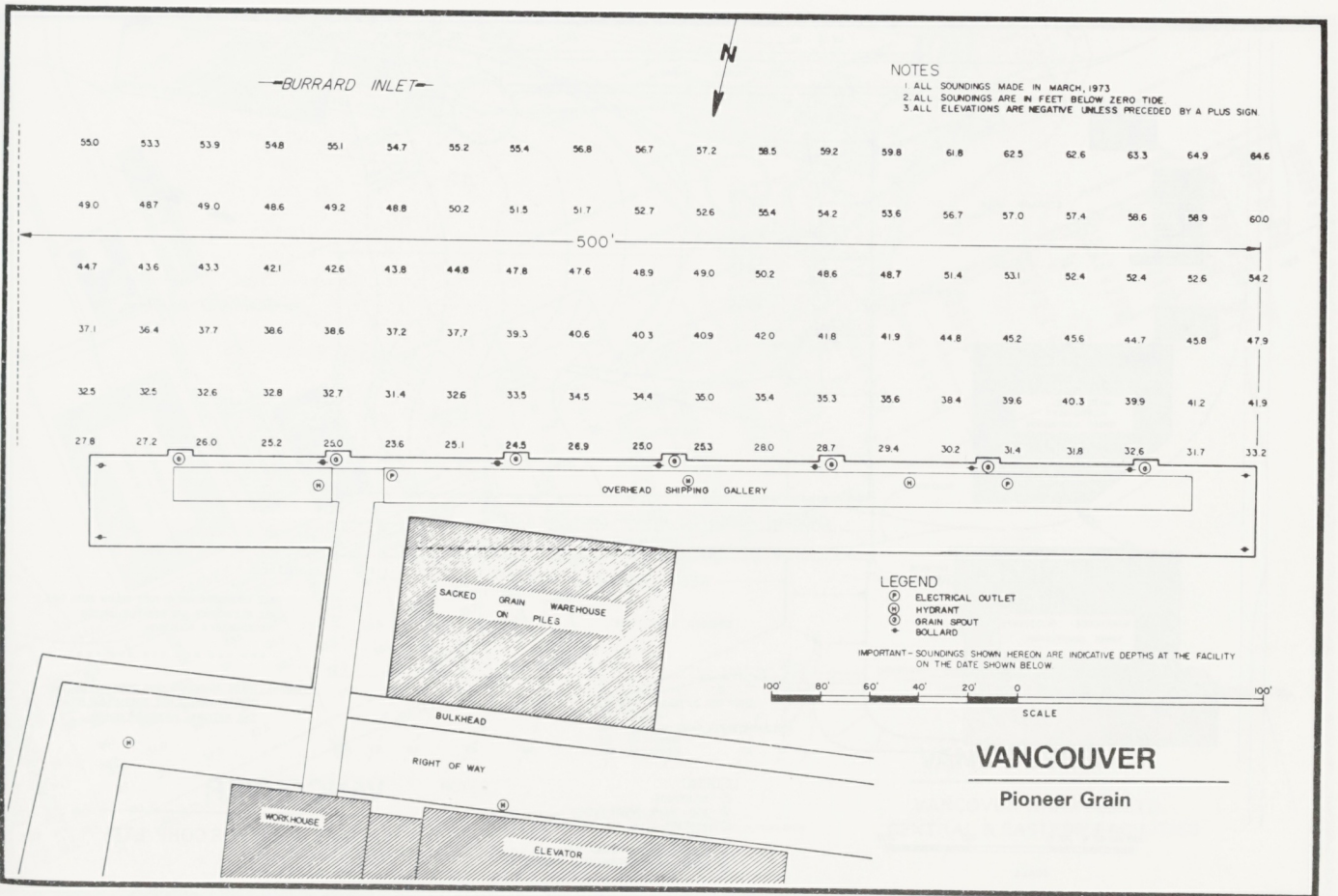
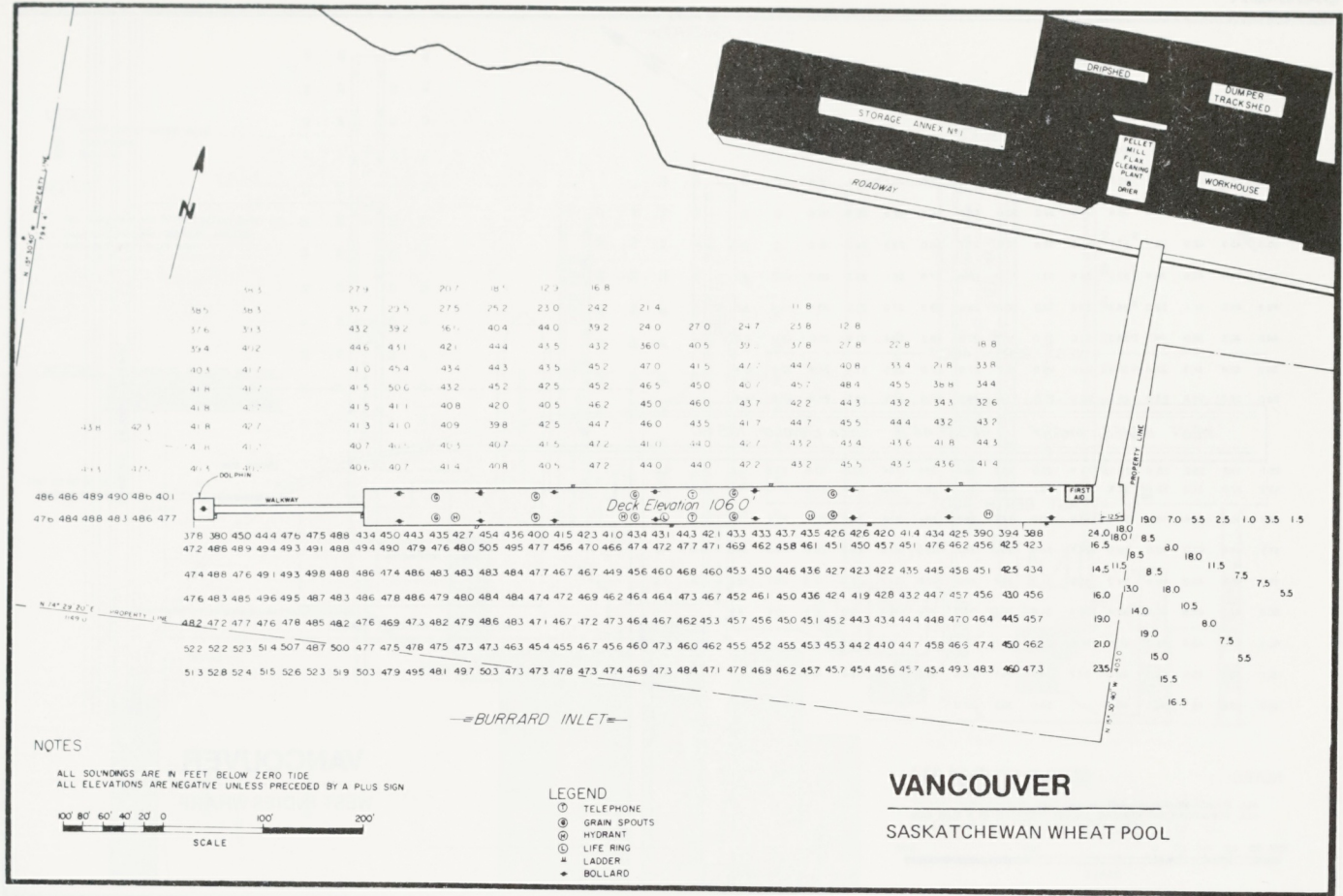
- ① HYDRANT
- ② TELEPHONE
- ③ FIRE FIGHTING EQUIPMENT
- ④ BOLLARD

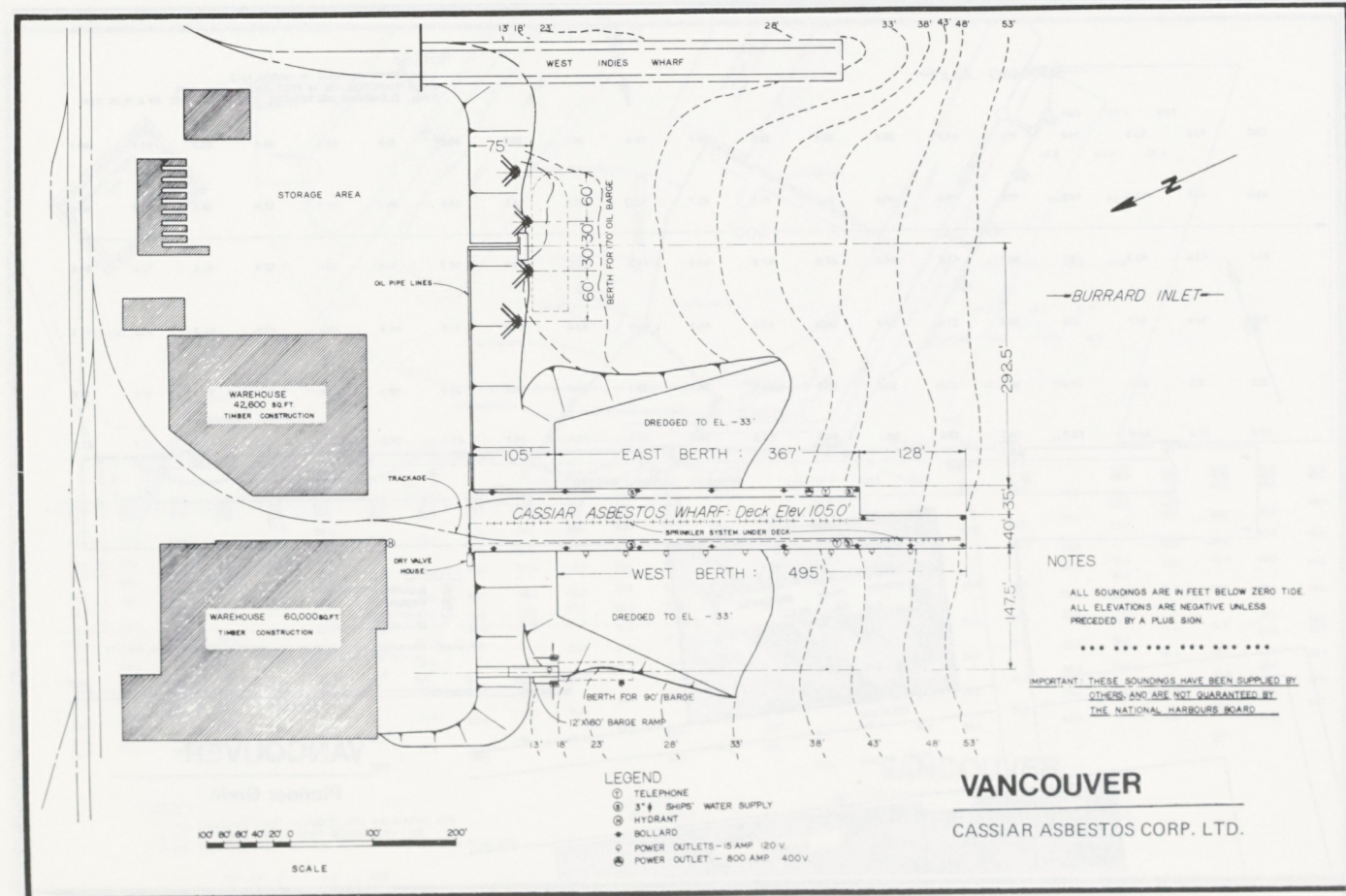
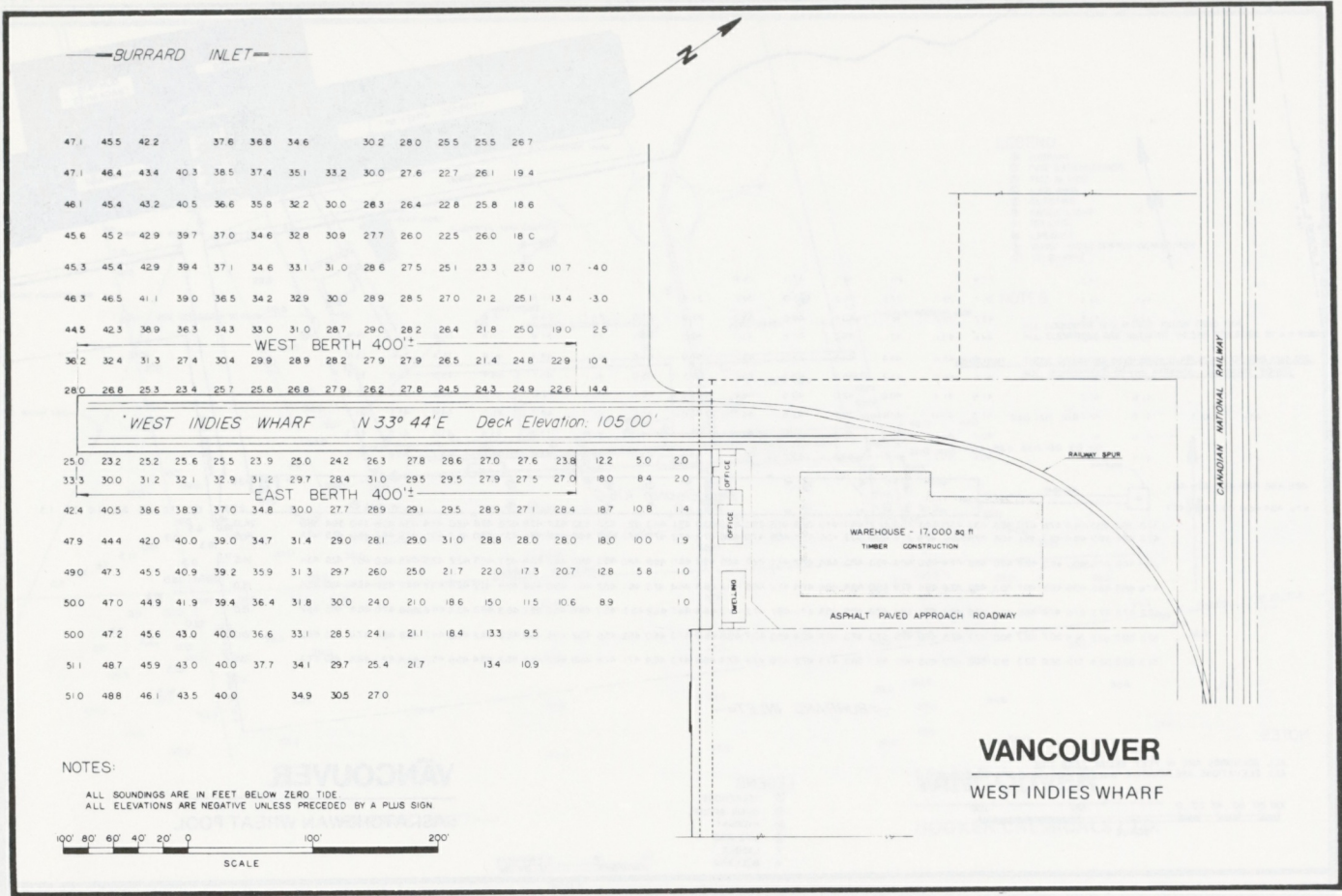
VANCOUVER

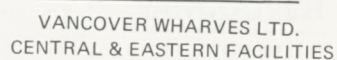
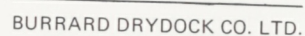
TRANS MOUNTAIN OIL PIPE LINE LTD.

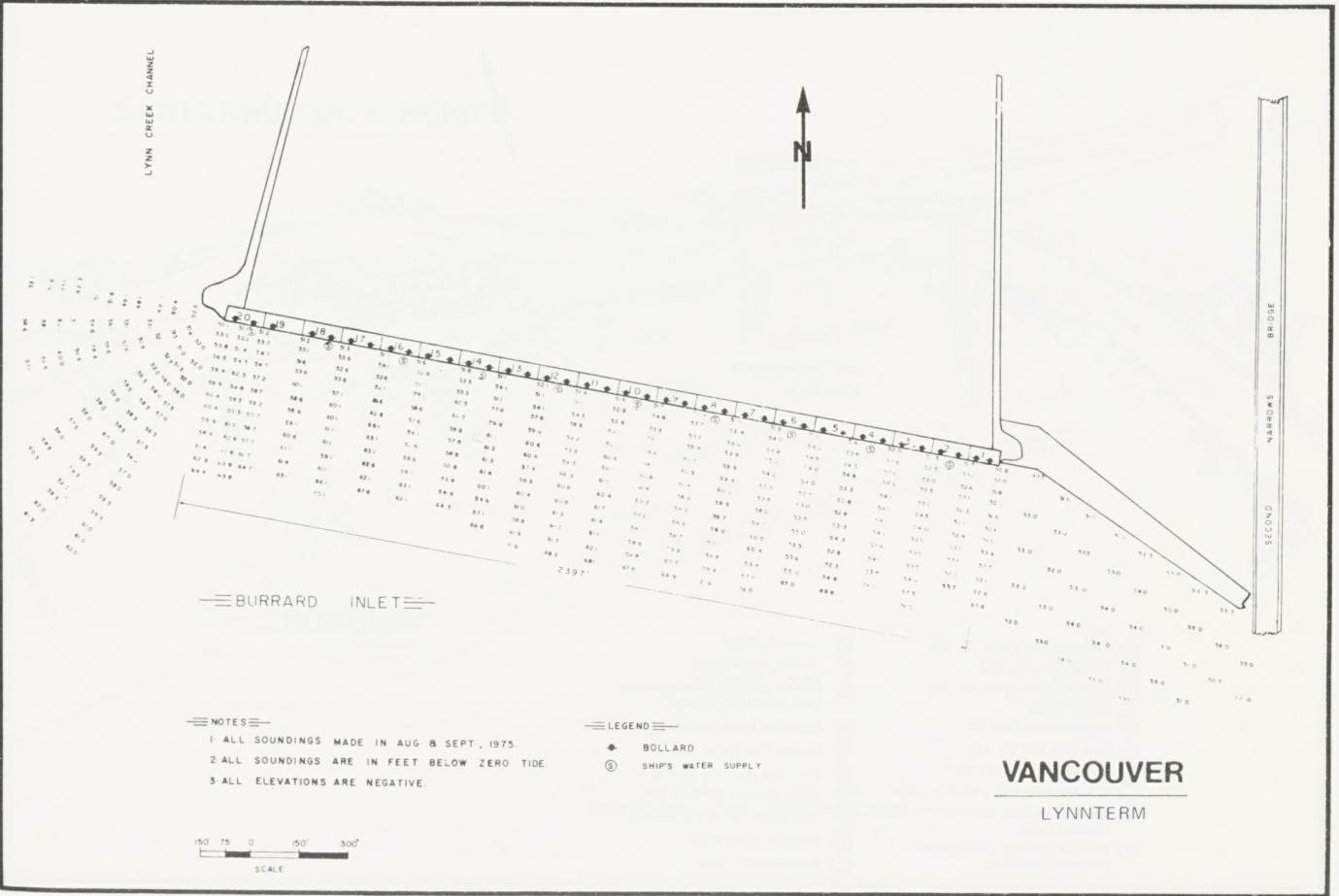
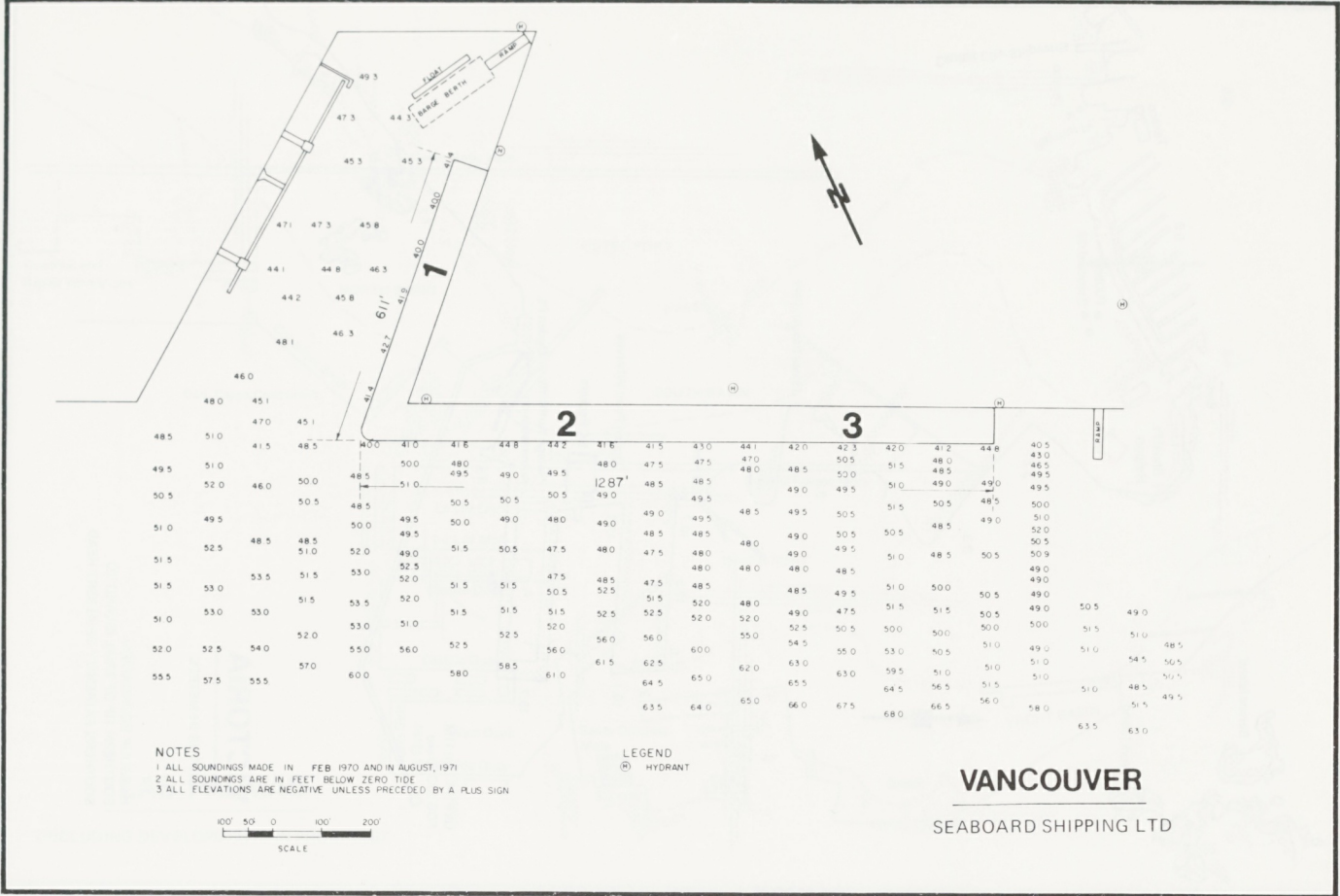


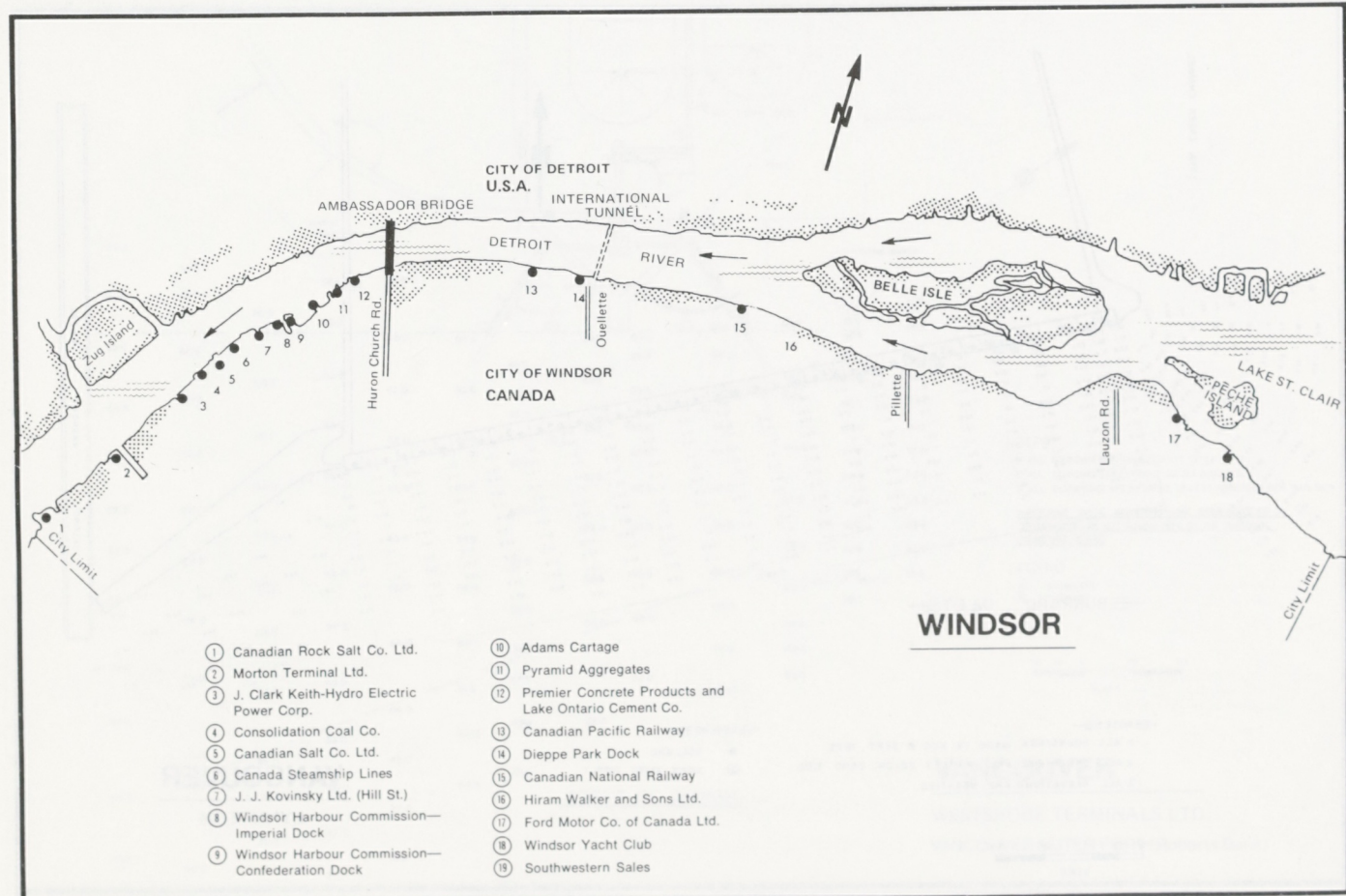
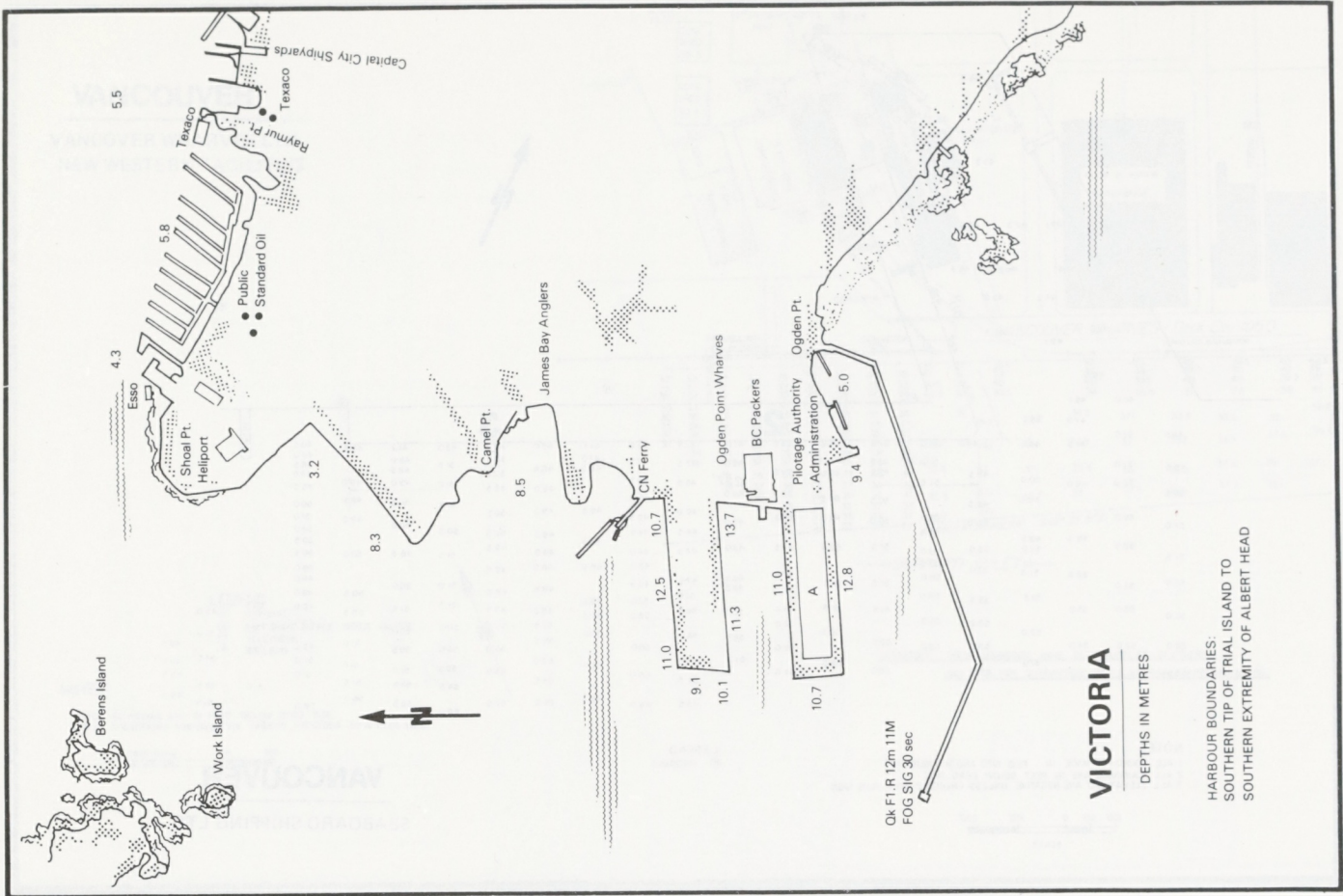


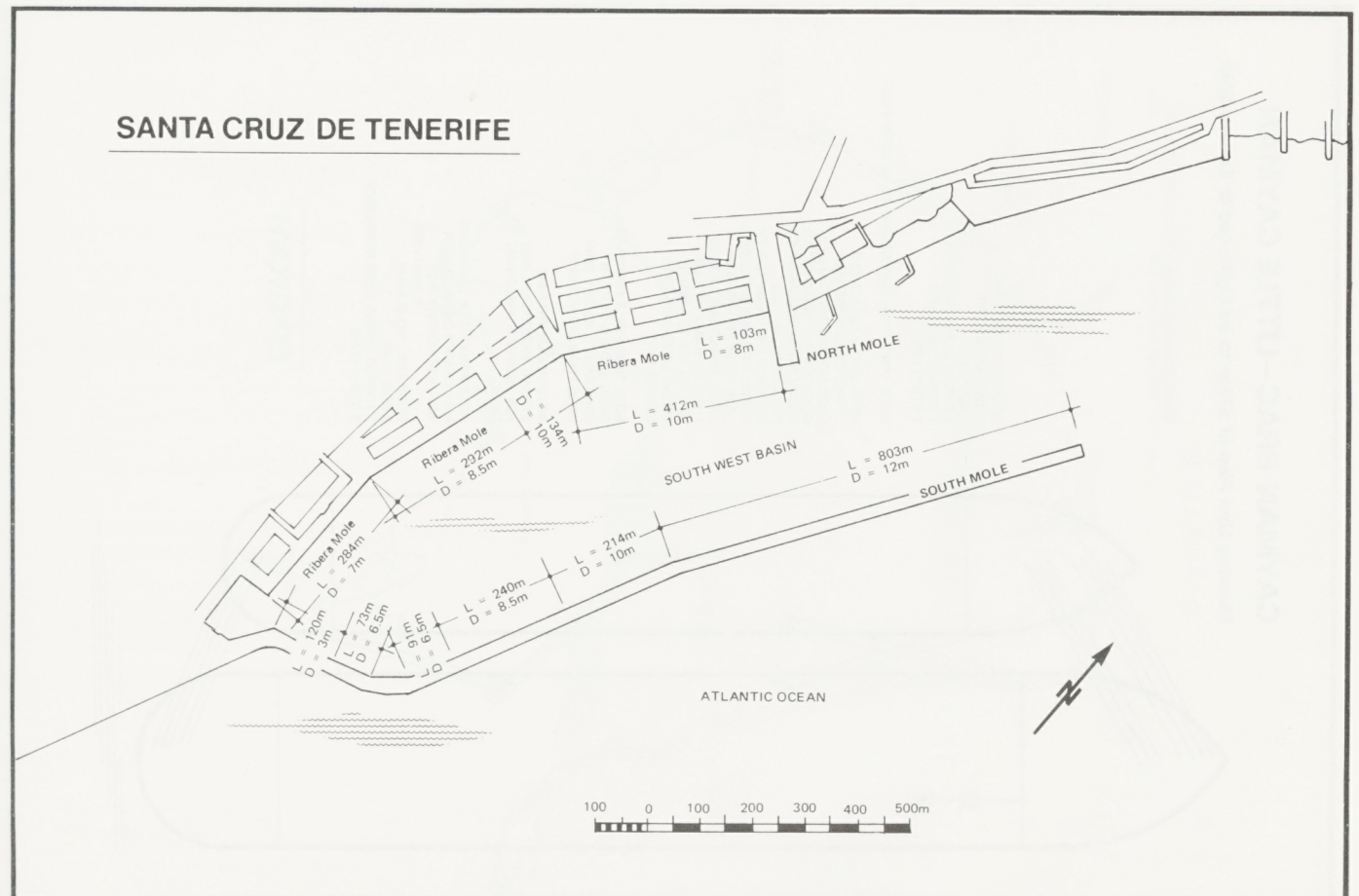
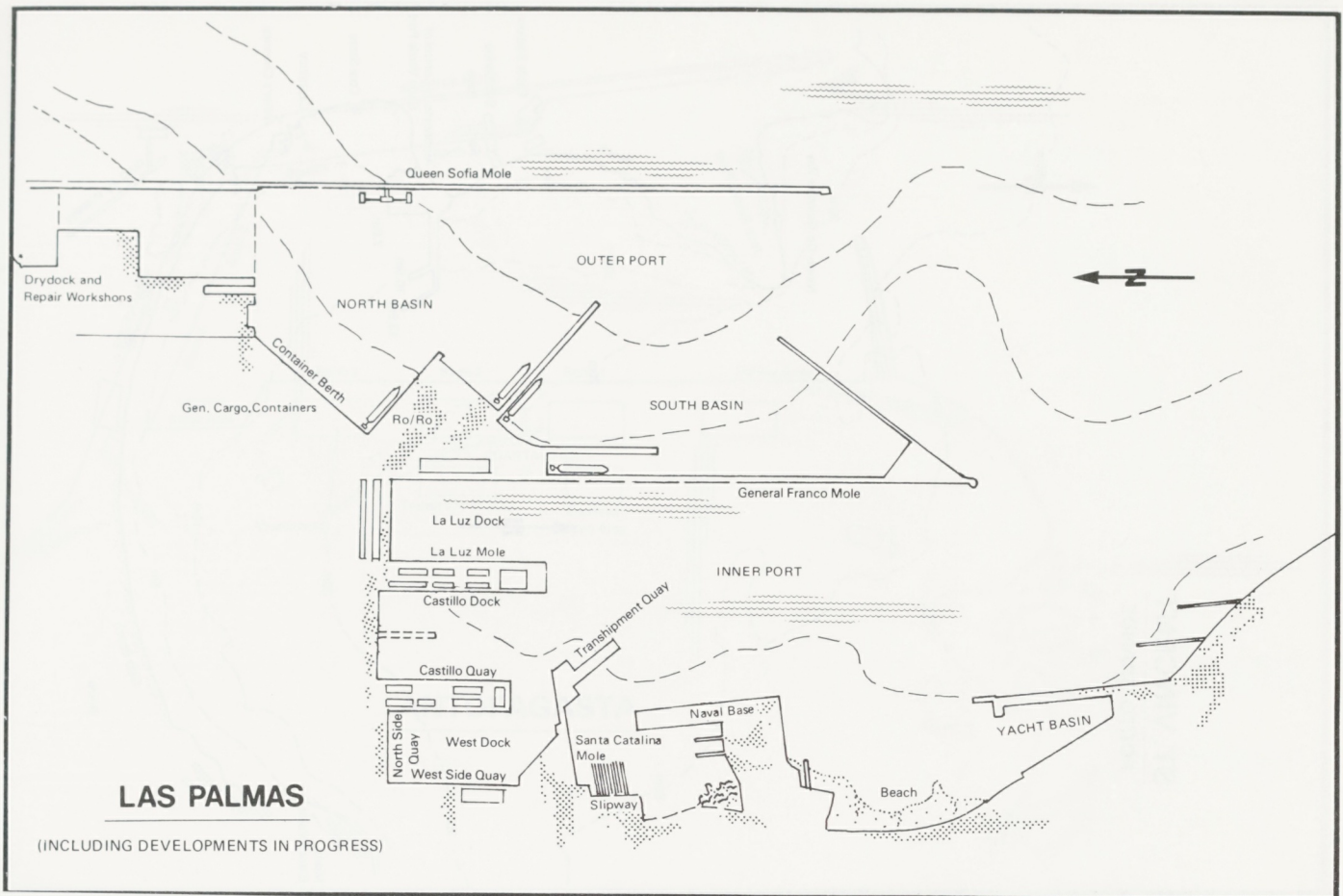






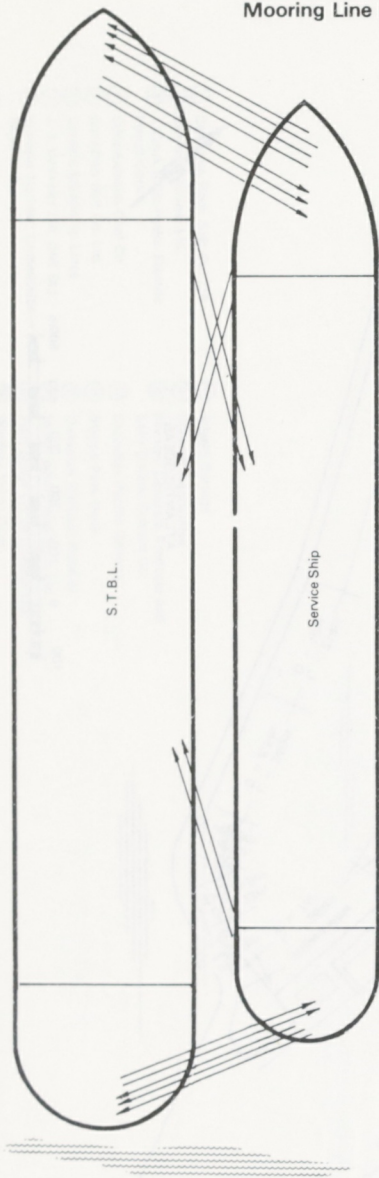






CAYMAN BRAC – LITTLE CAYMAN

Mooring Line Plan of Ships to be Lightened & Service Ship



"MOORING LINES PLAN"

FROM SERVICE SHIP:
4 BOW LINES
2 SPRING LINES (FORWARD)
2 SPRING LINES (AFT)
3 STERN LINES

NOTE: LINES FROM SERVICE SHIP TO BE GIVEN FIRST

NOTE: 2 BOW LINES AND 2 SPRING LINES (FORWARD) FROM SERVICE SHIP WILL BE GIVEN ALL AT THE SAME TIME; THEREFORE PLEASE ARRANGE FOR AFTER GANG ON BERTHING SHIP TO STAND-BY FORWARD TO RECEIVE SPRING LINES FROM SERVICE SHIP. AFTER SPRING LINES ARE ON THE BITS, GANG SHOULD RETURN AFT TO RECEIVE SPRING LINES (AFT) FROM SERVICE SHIP.

NOTE: MEANWHILE FORWARD GANG SHOULD STAND-BY FORWARD TO RECEIVE BOW LINES FROM SERVICE SHIP

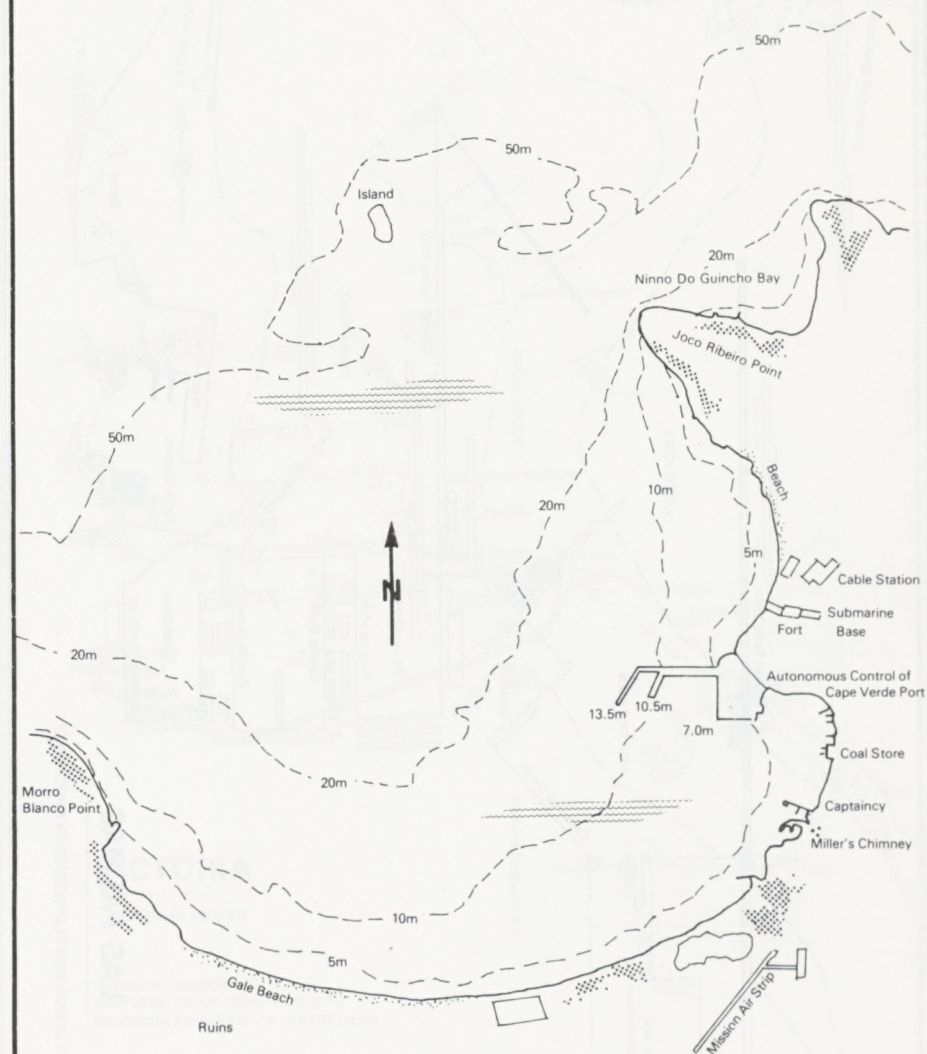
NOTE: PLEASE PREPARE STRONG MESSENGER LINES FOR RECEIVING AND GIVING LINES.

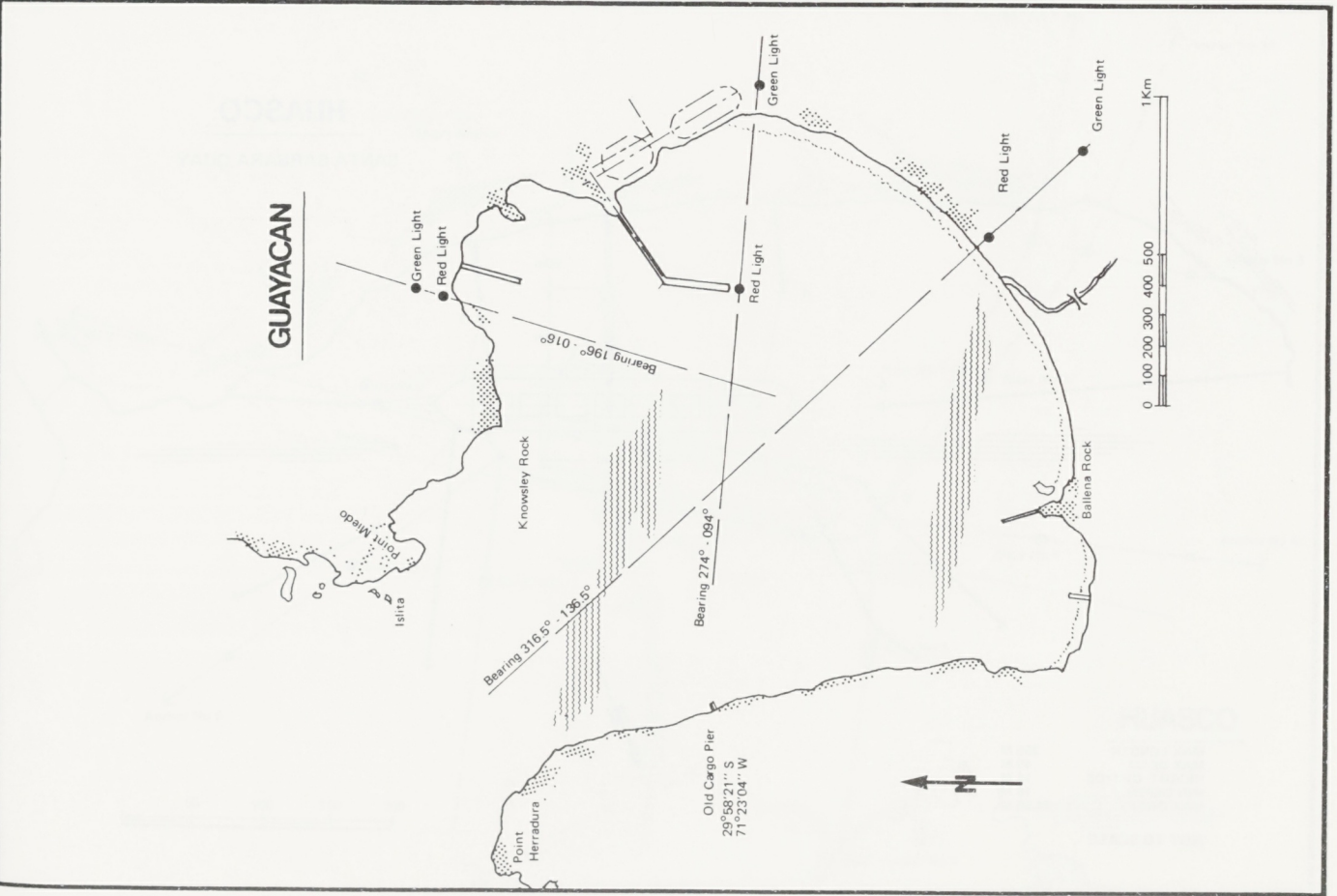
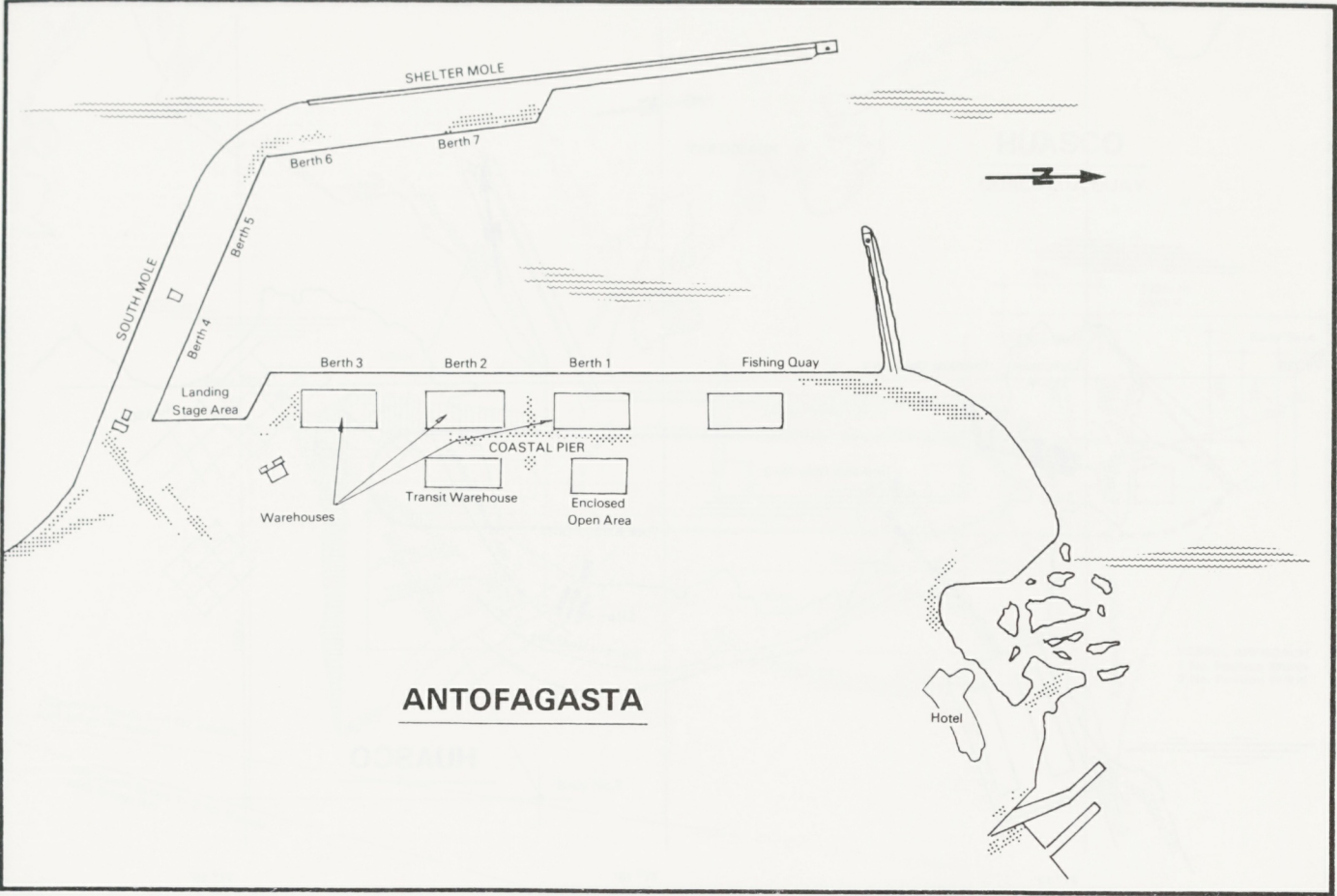
NOTE: AMOUNT OF LINES USED MAY CHANGE DEPENDING ON WEATHER CONDITIONS.

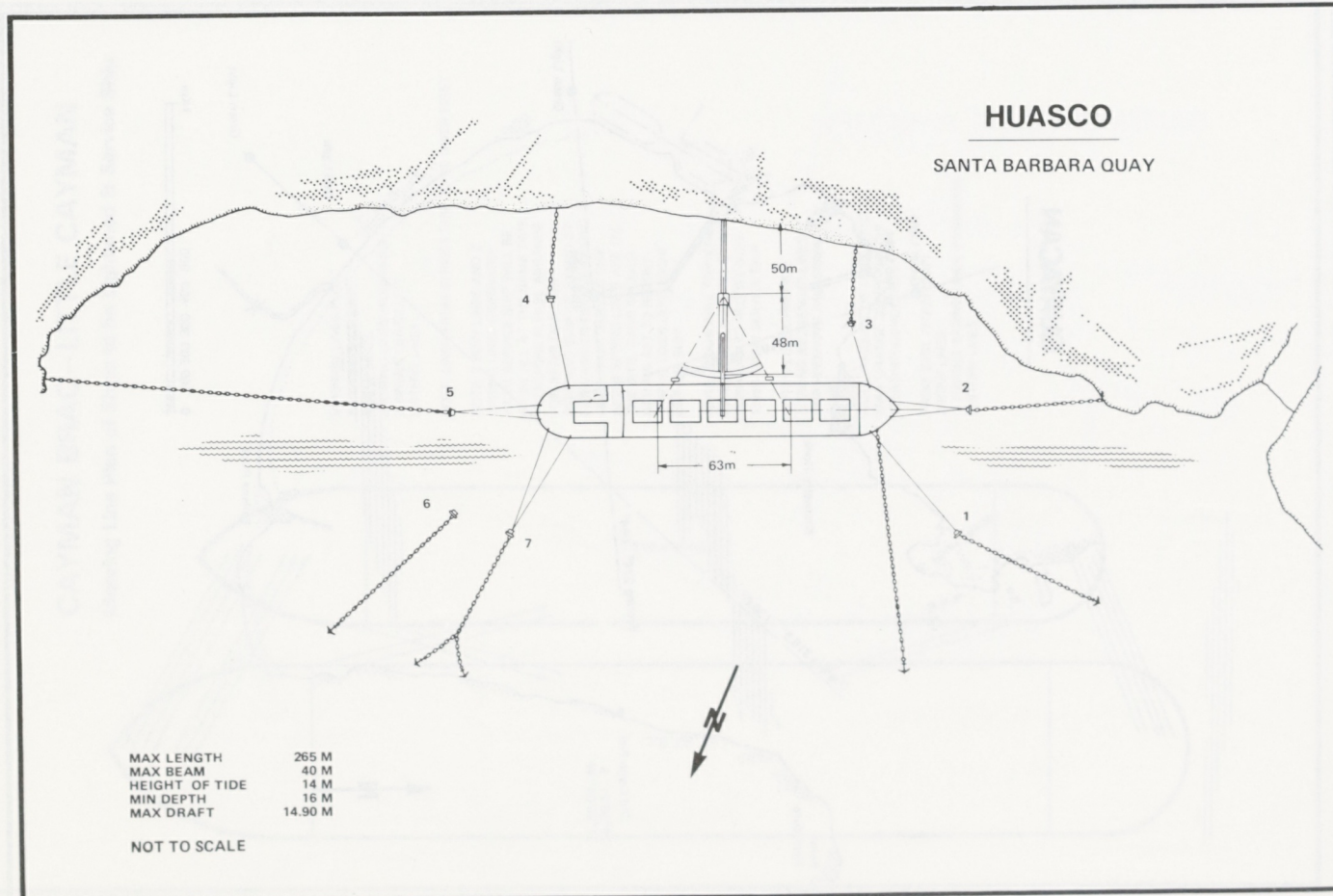
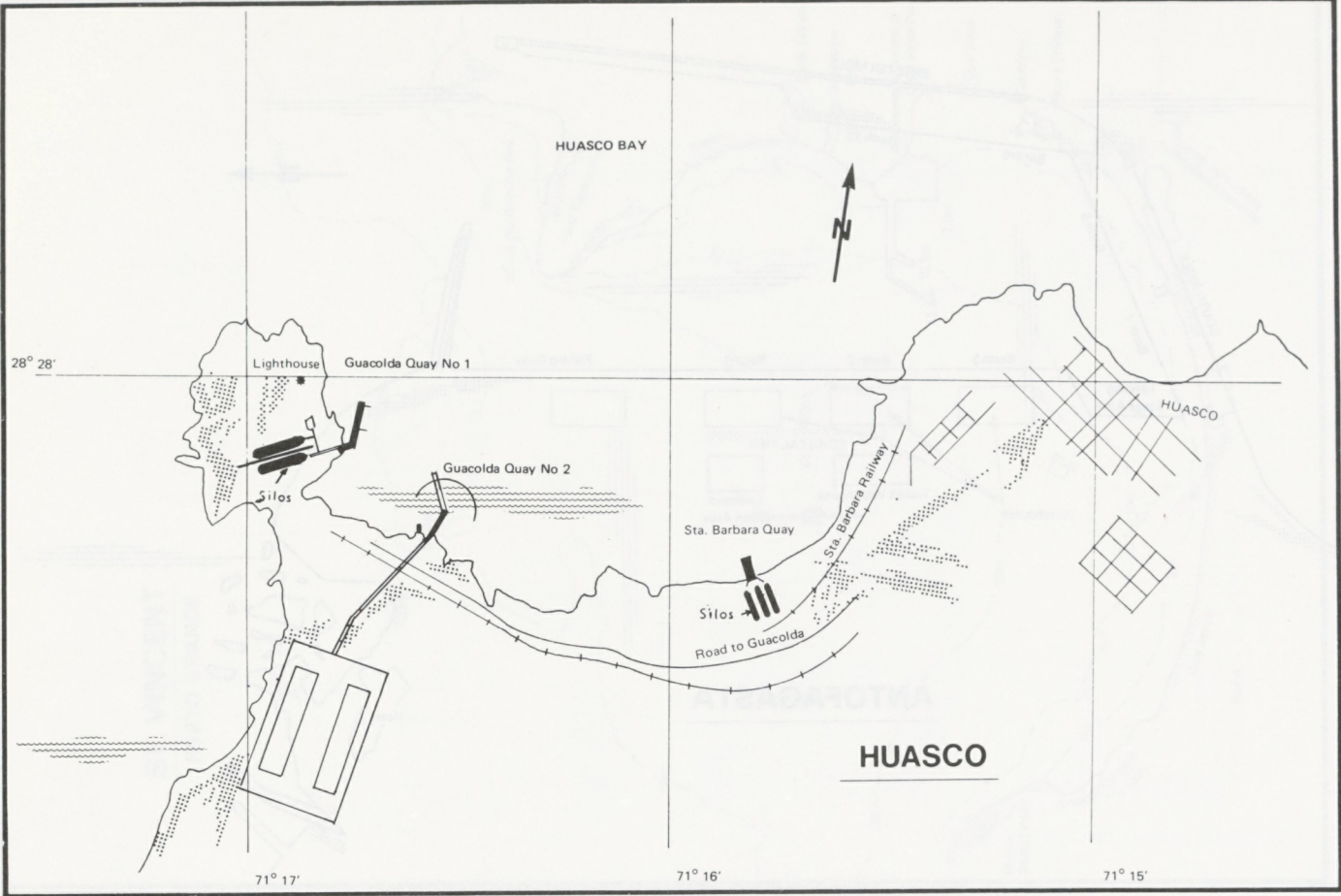
FROM STBL (YOUR SHIP)
3 BOW LINES
2 TOWING SPRING LINES (FORWARD)
2 STERN LINES

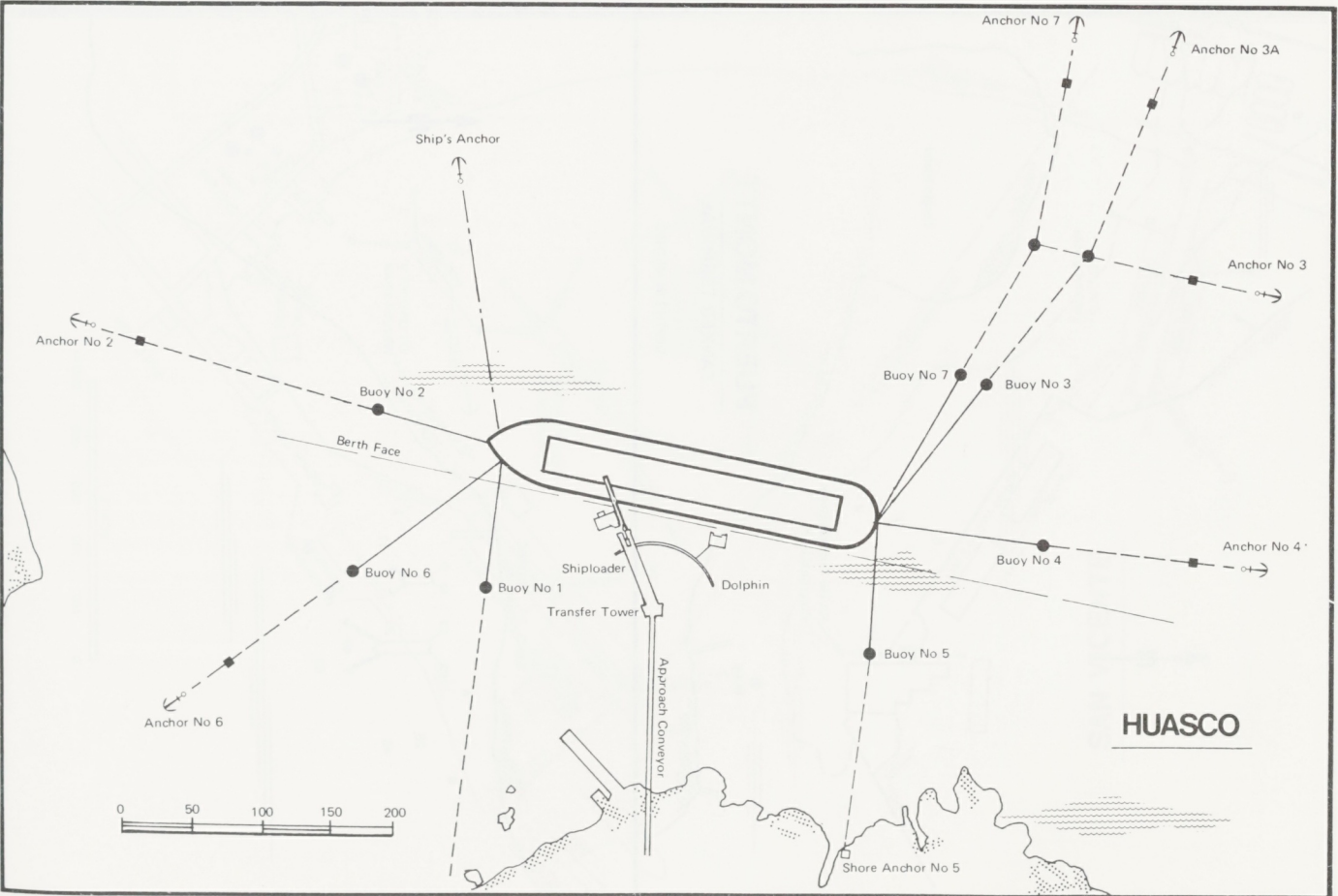
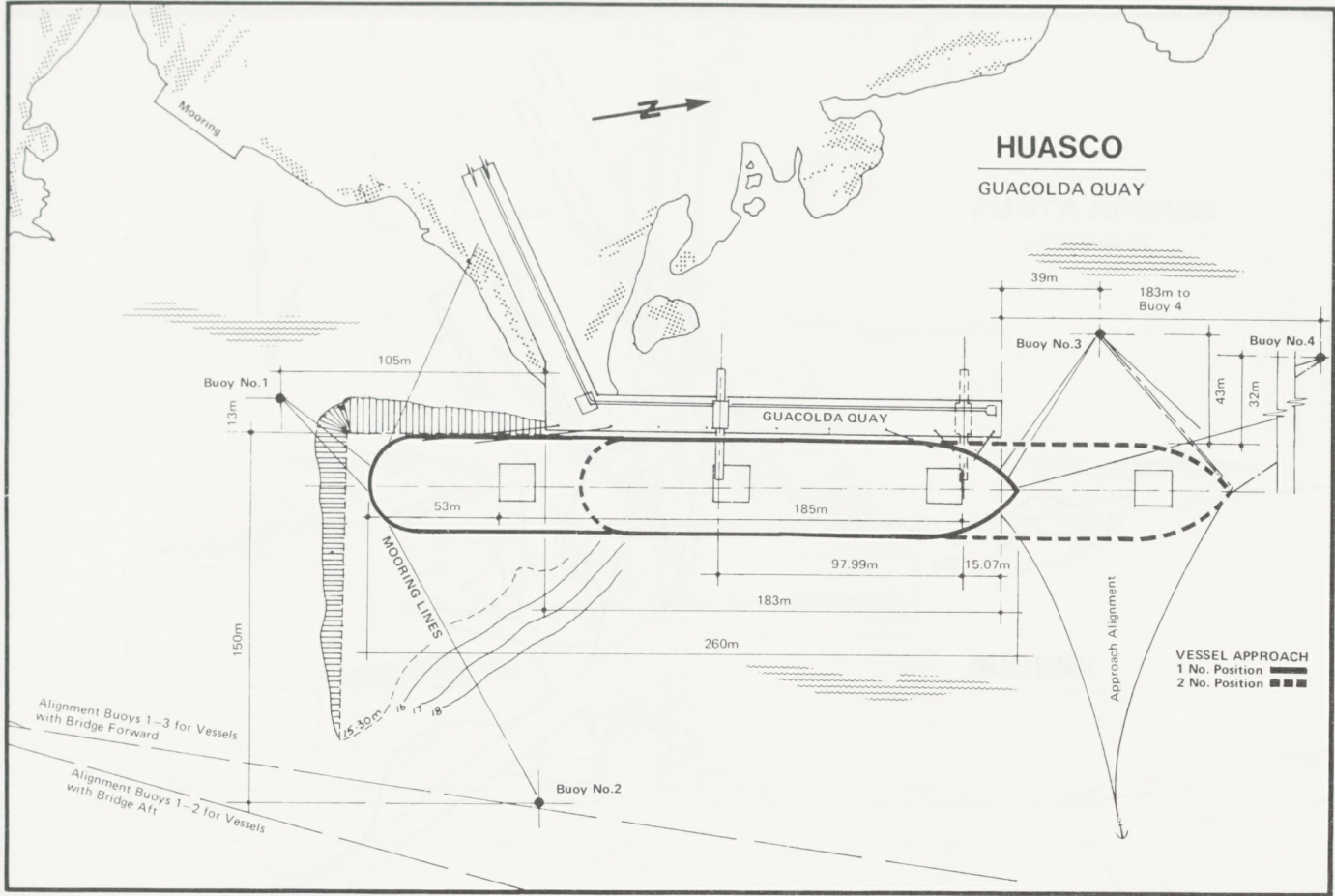
ST. VINCENT

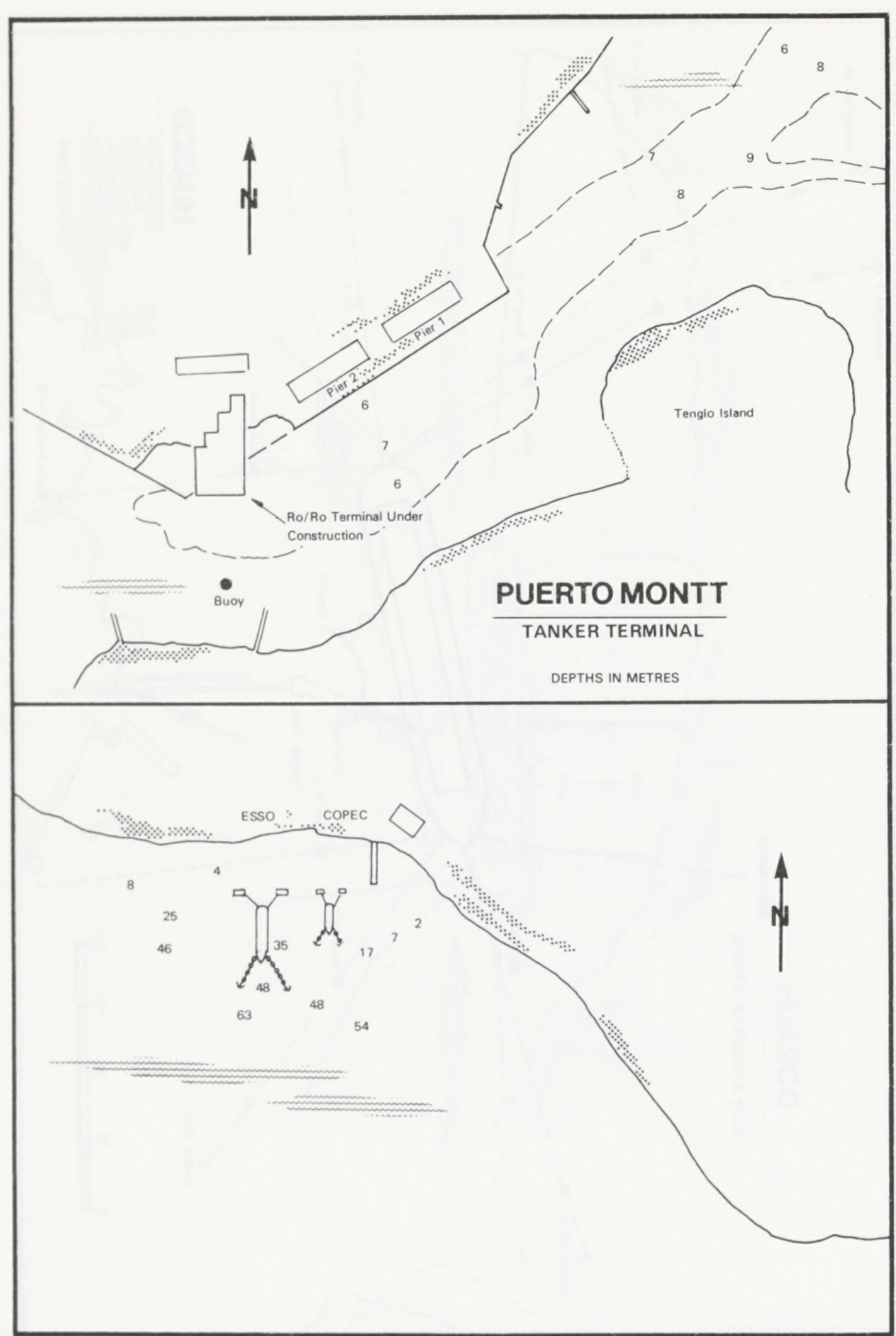
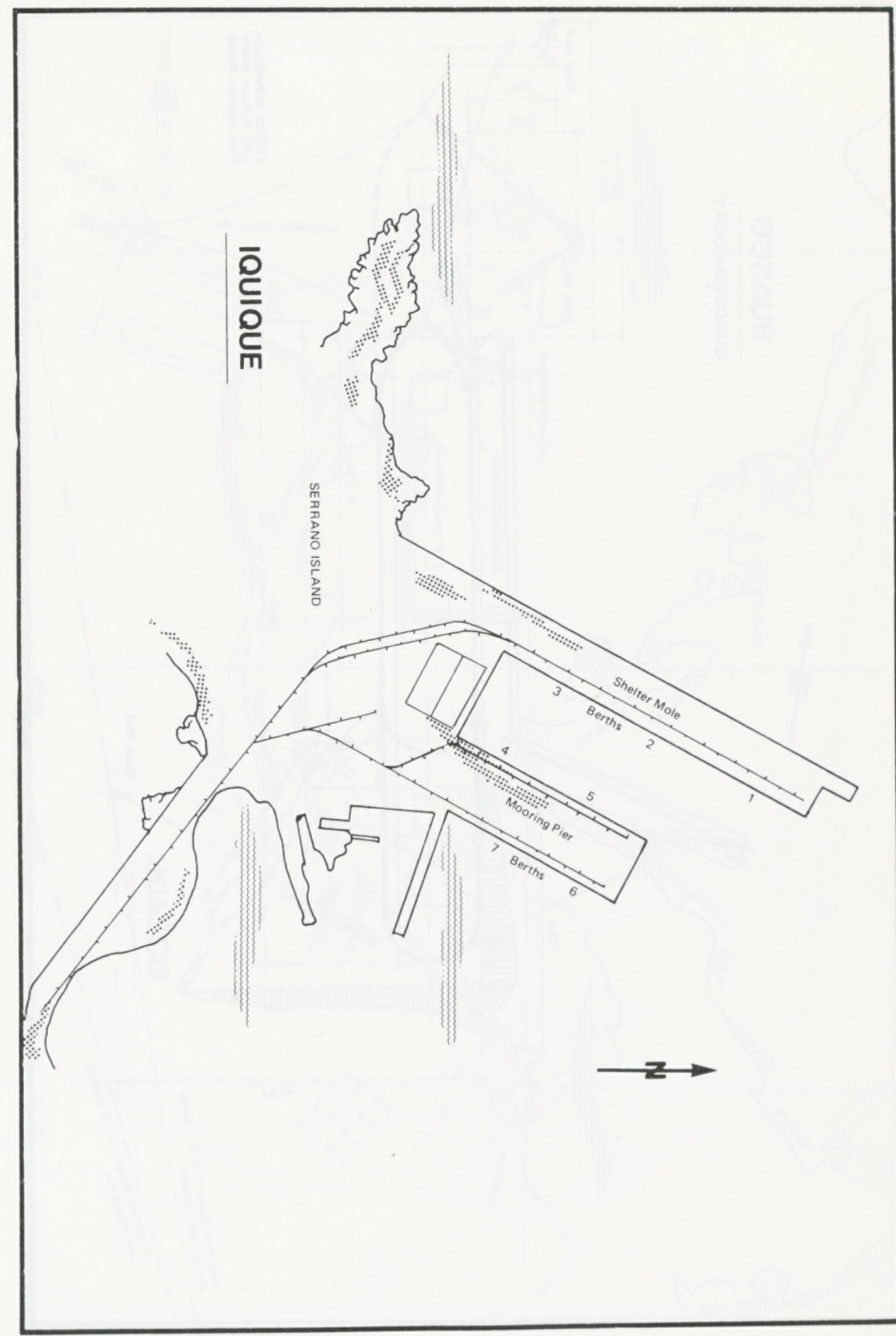
PORTO GRANDE

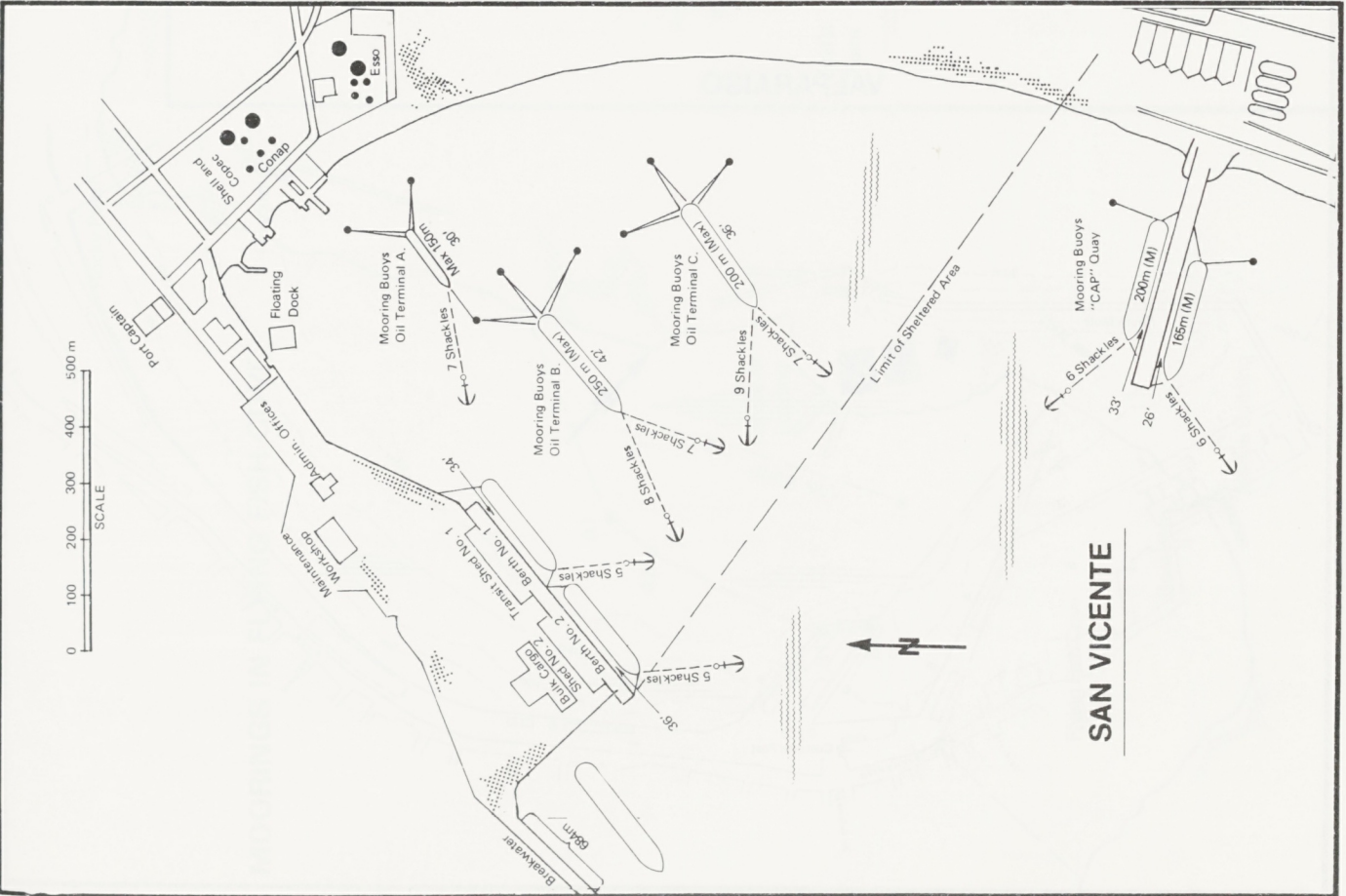
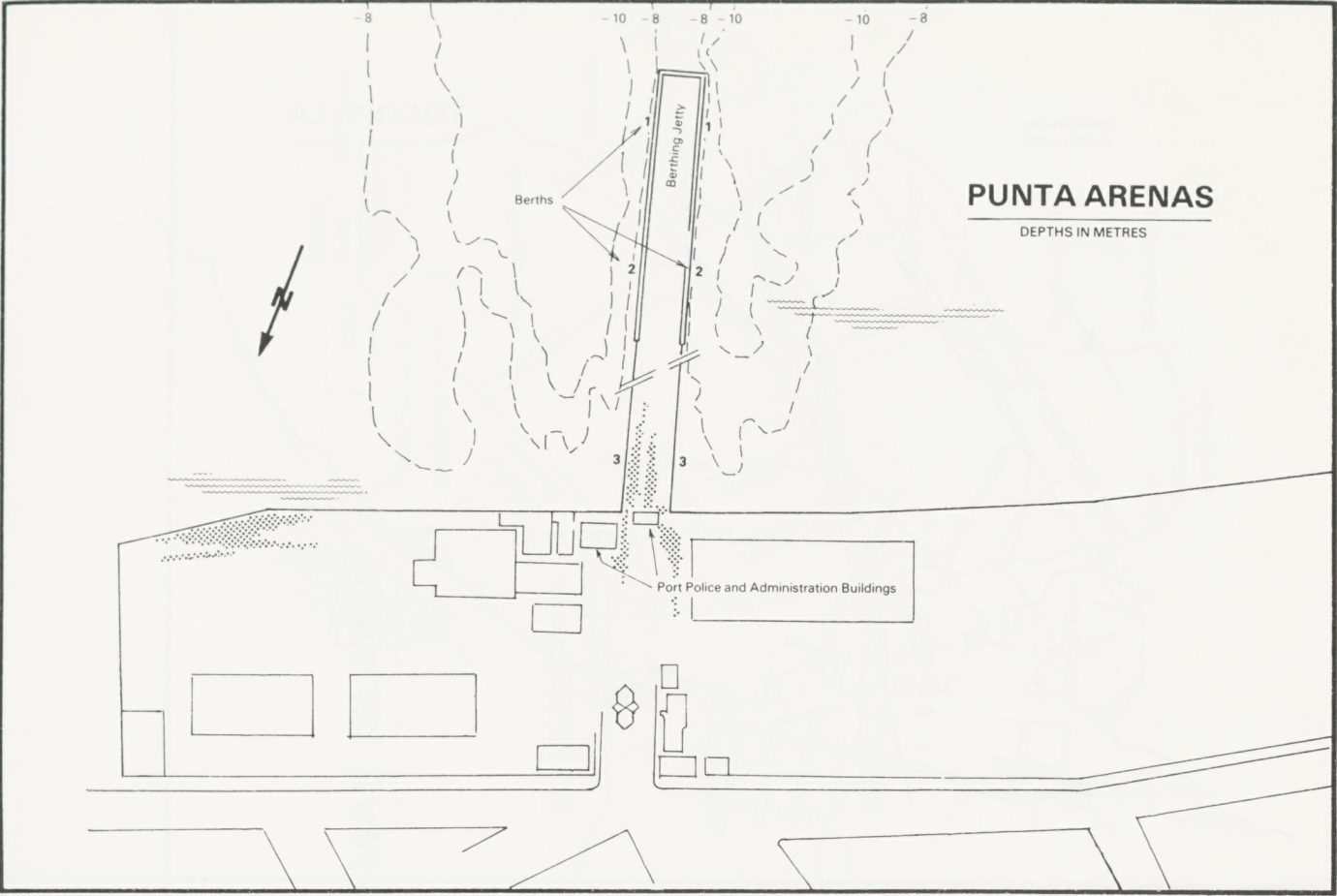


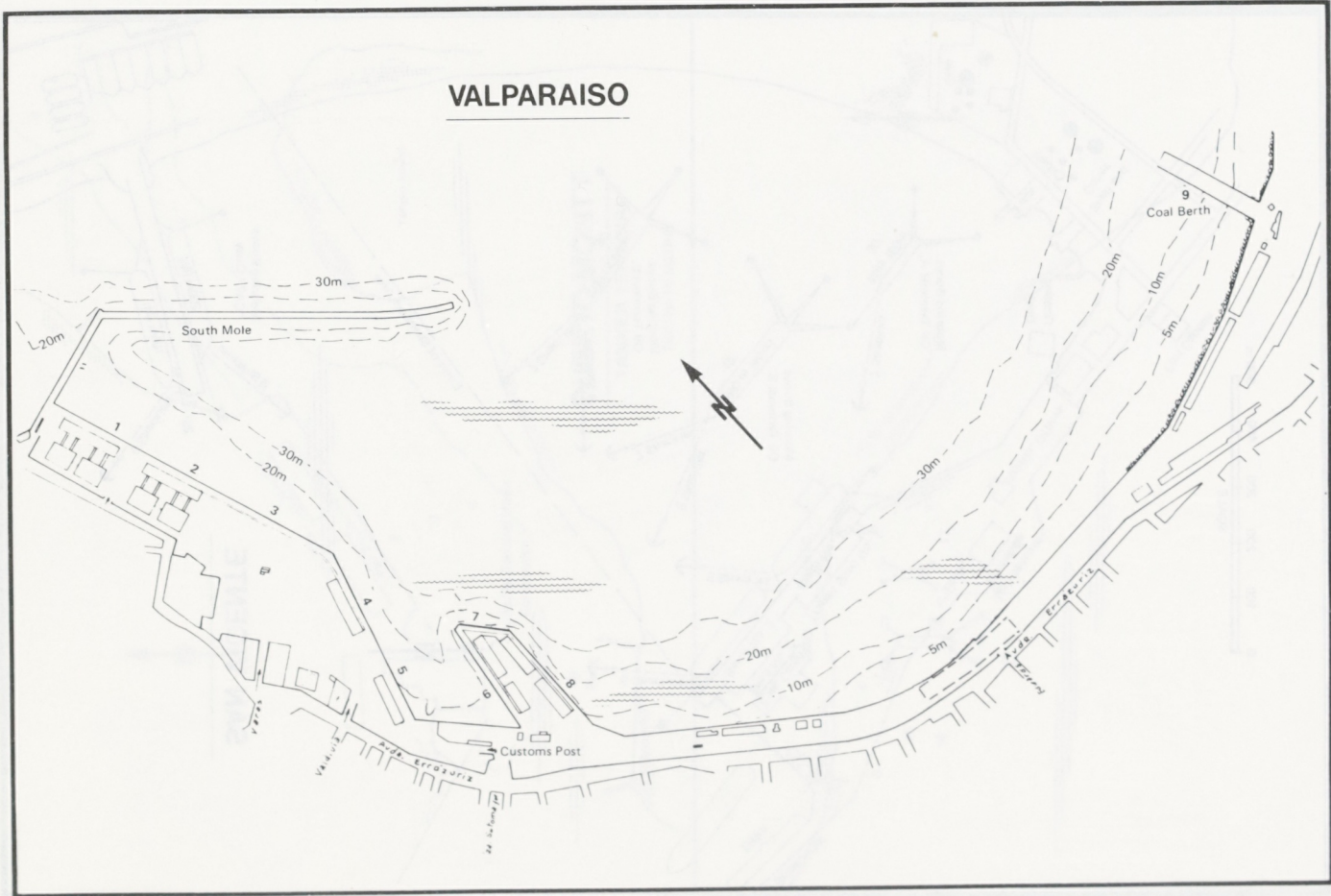
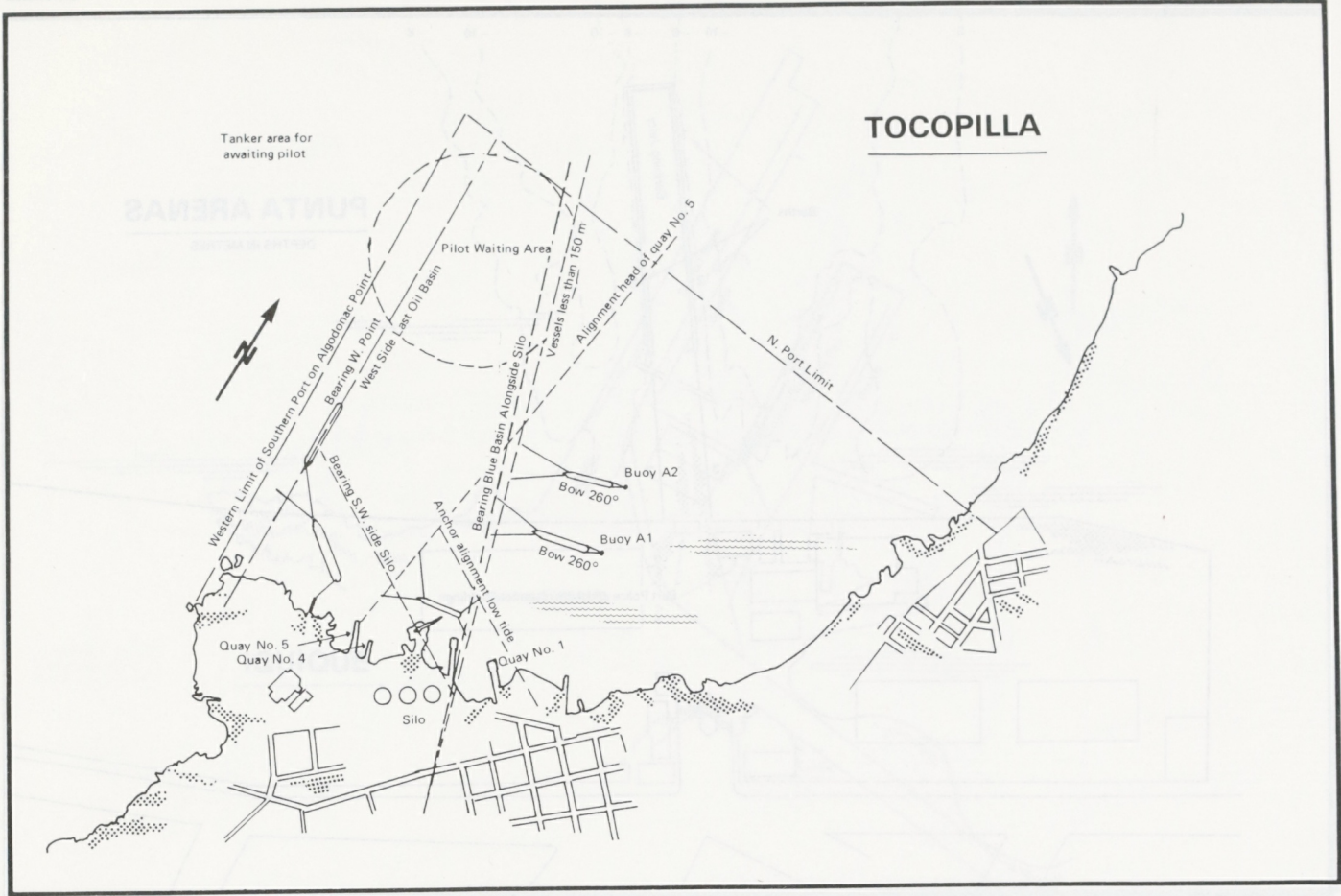




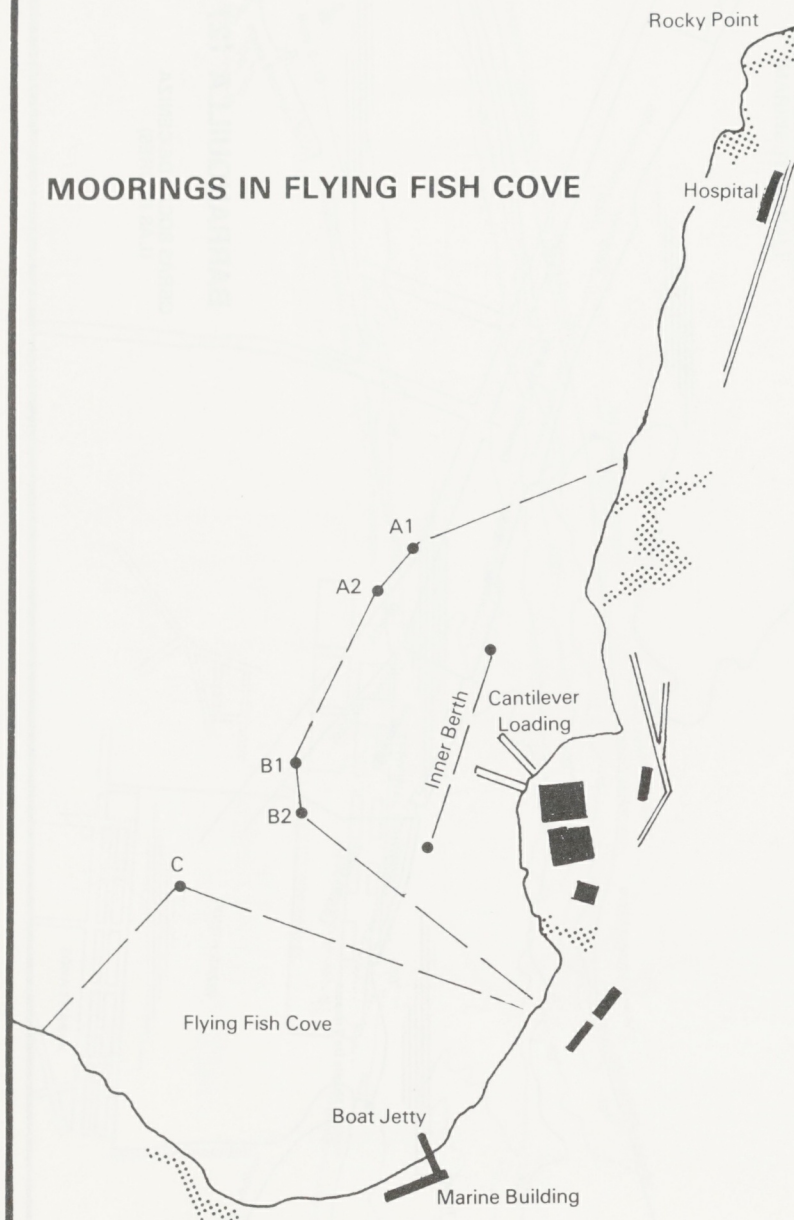




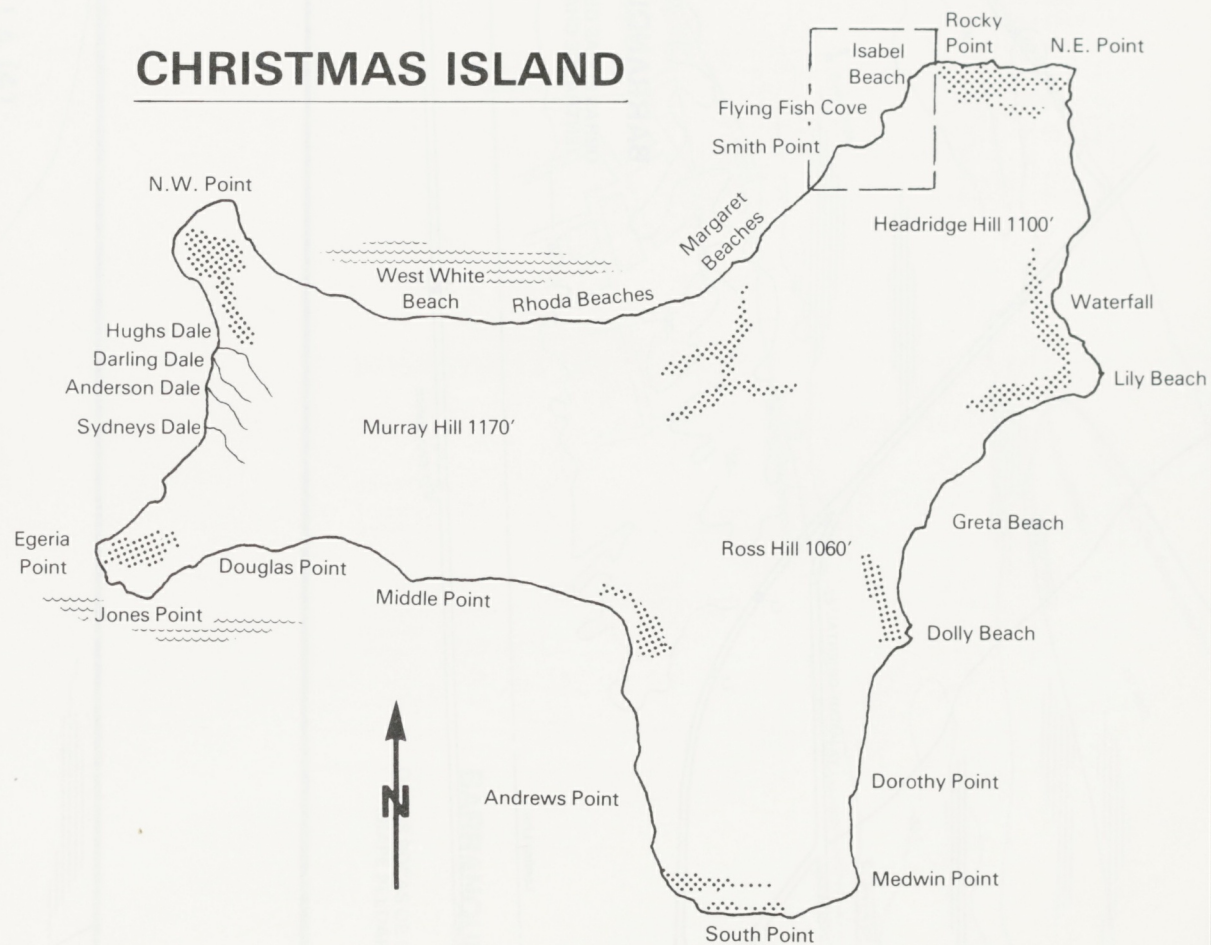


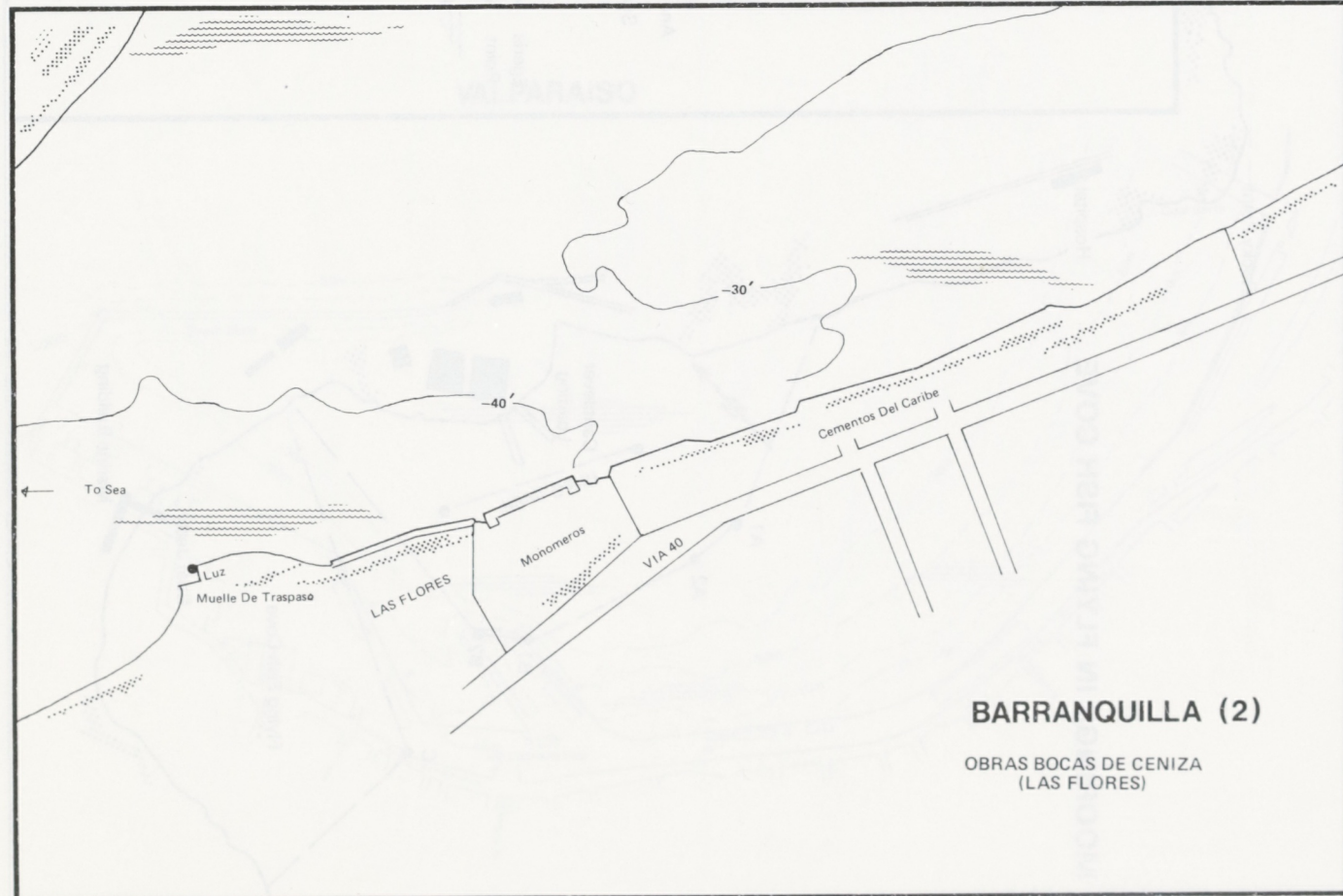
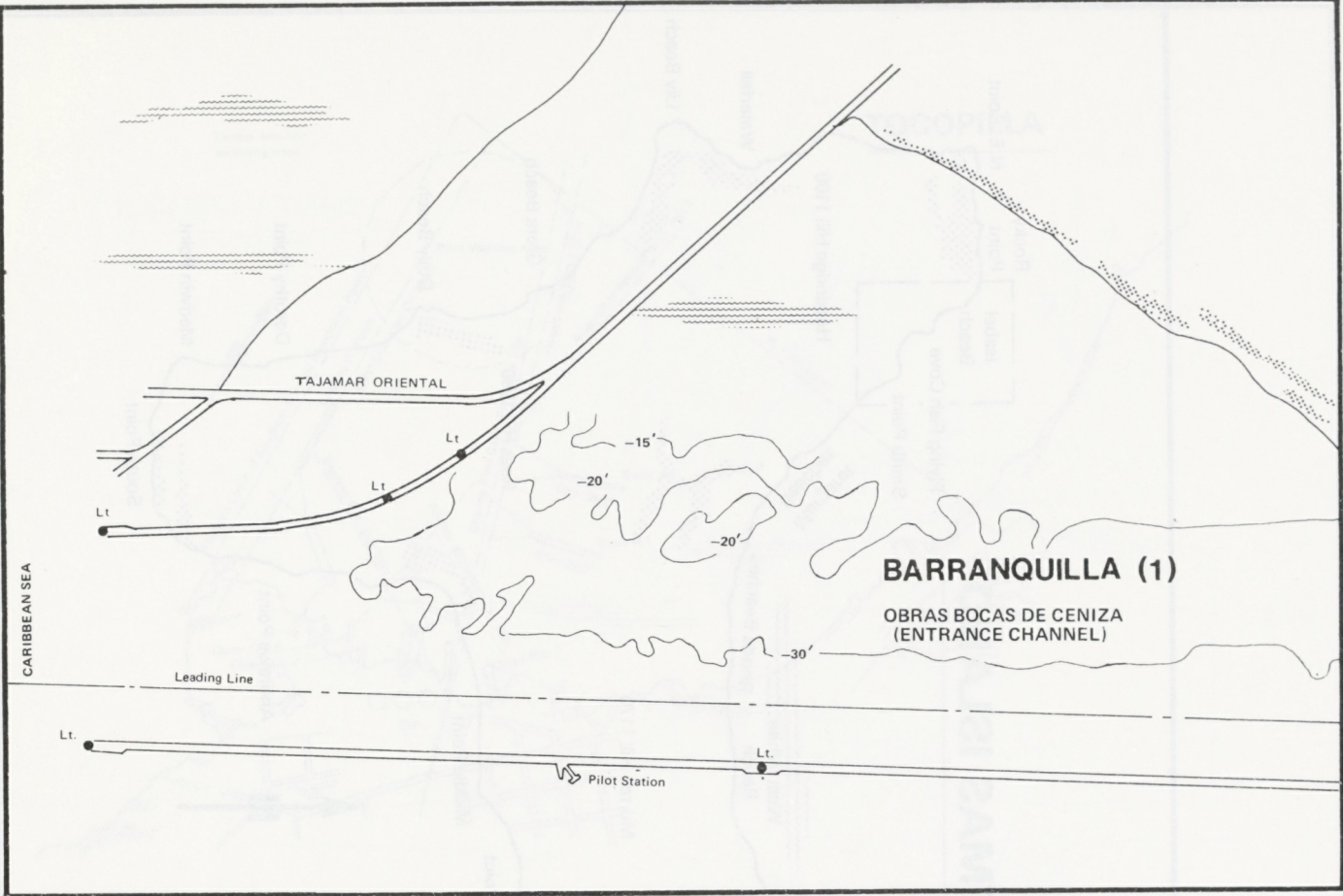


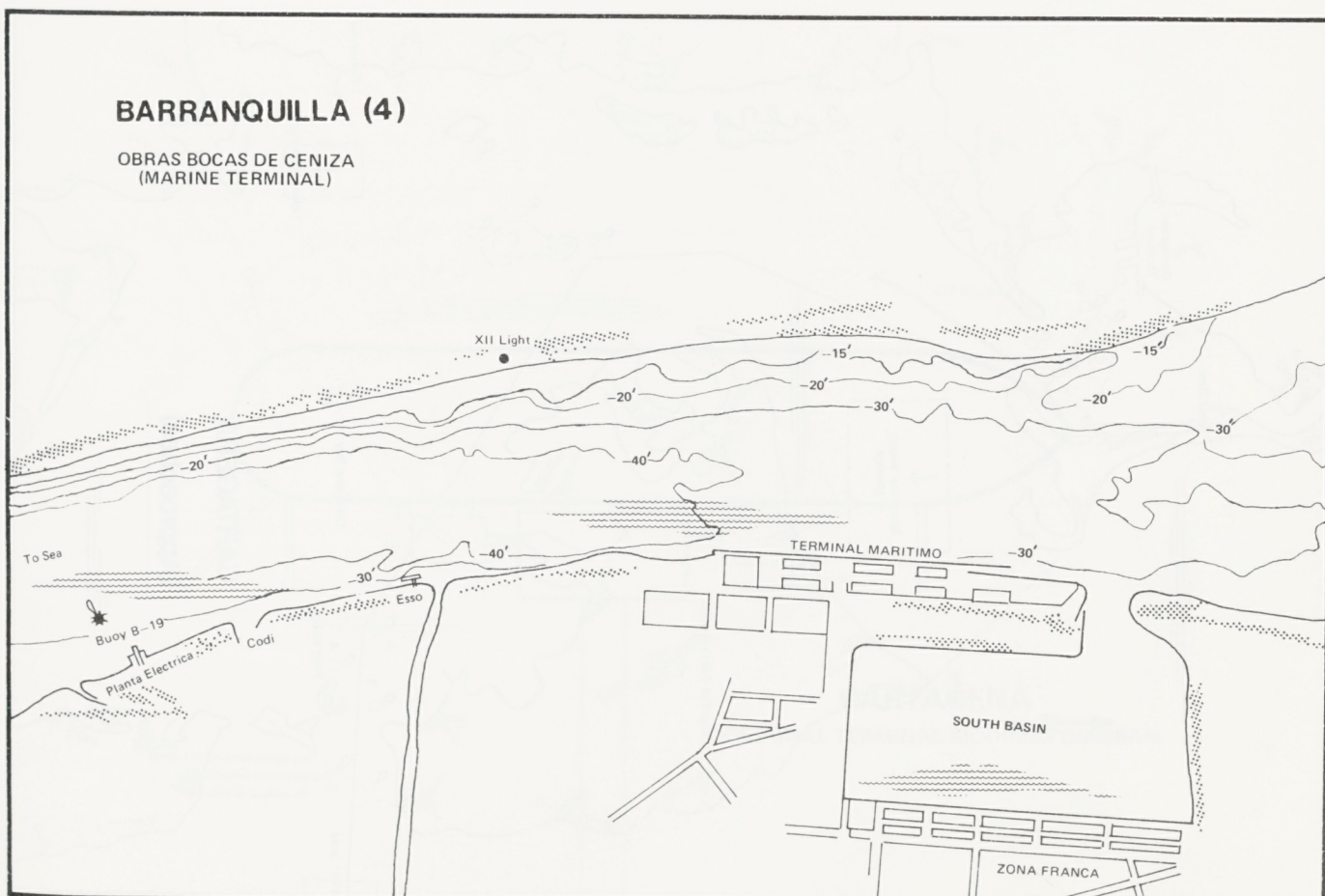
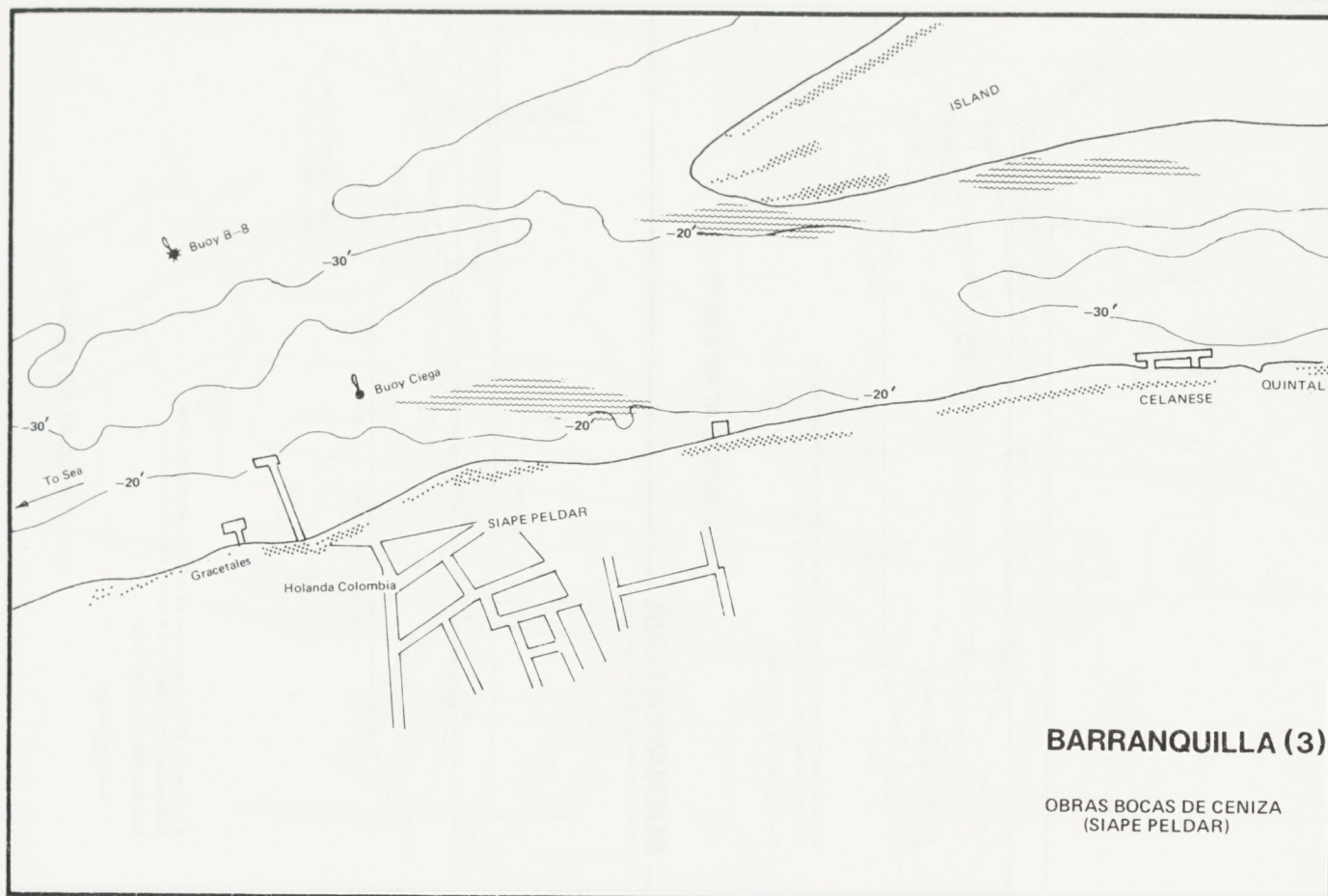
MOORINGS IN FLYING FISH COVE

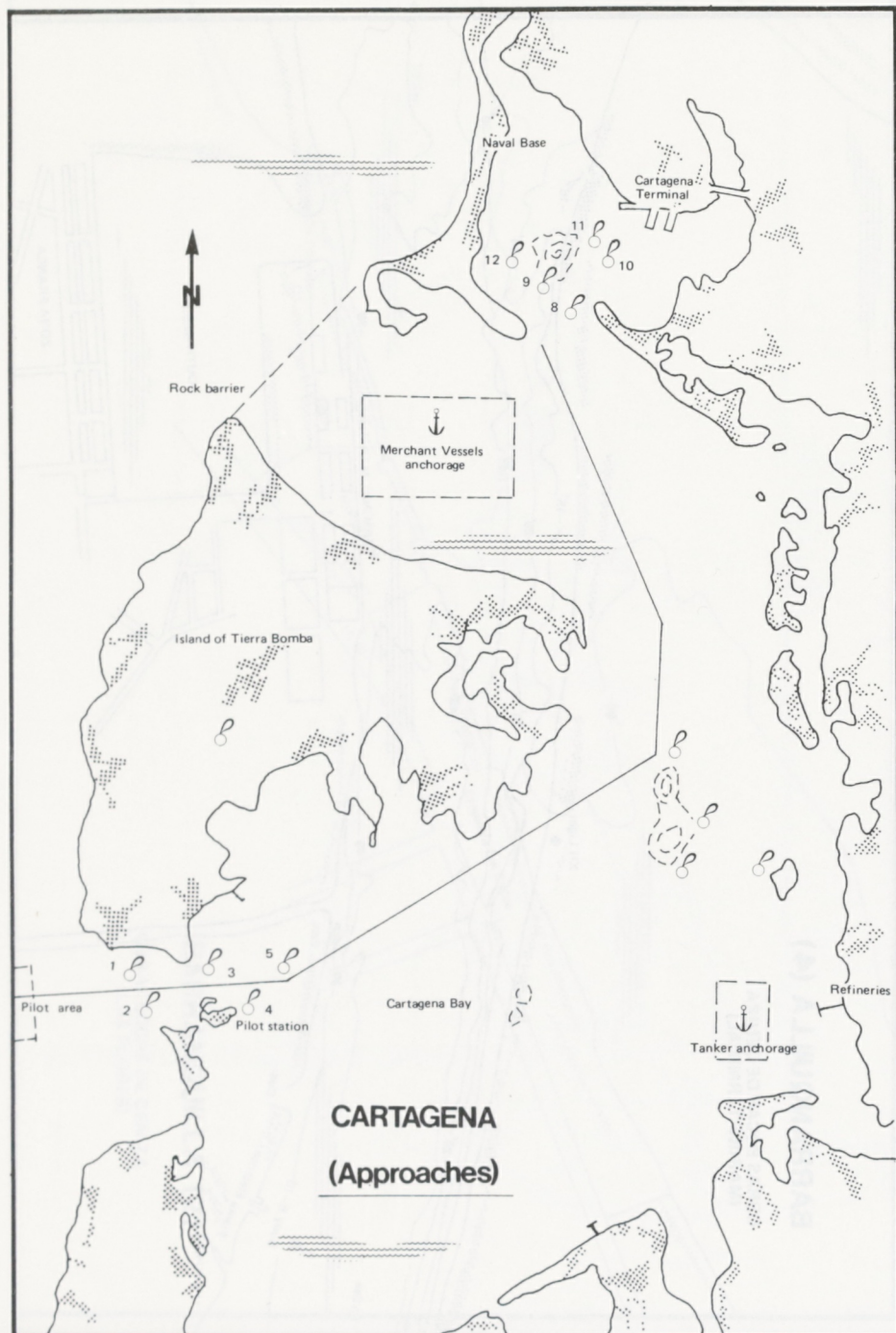
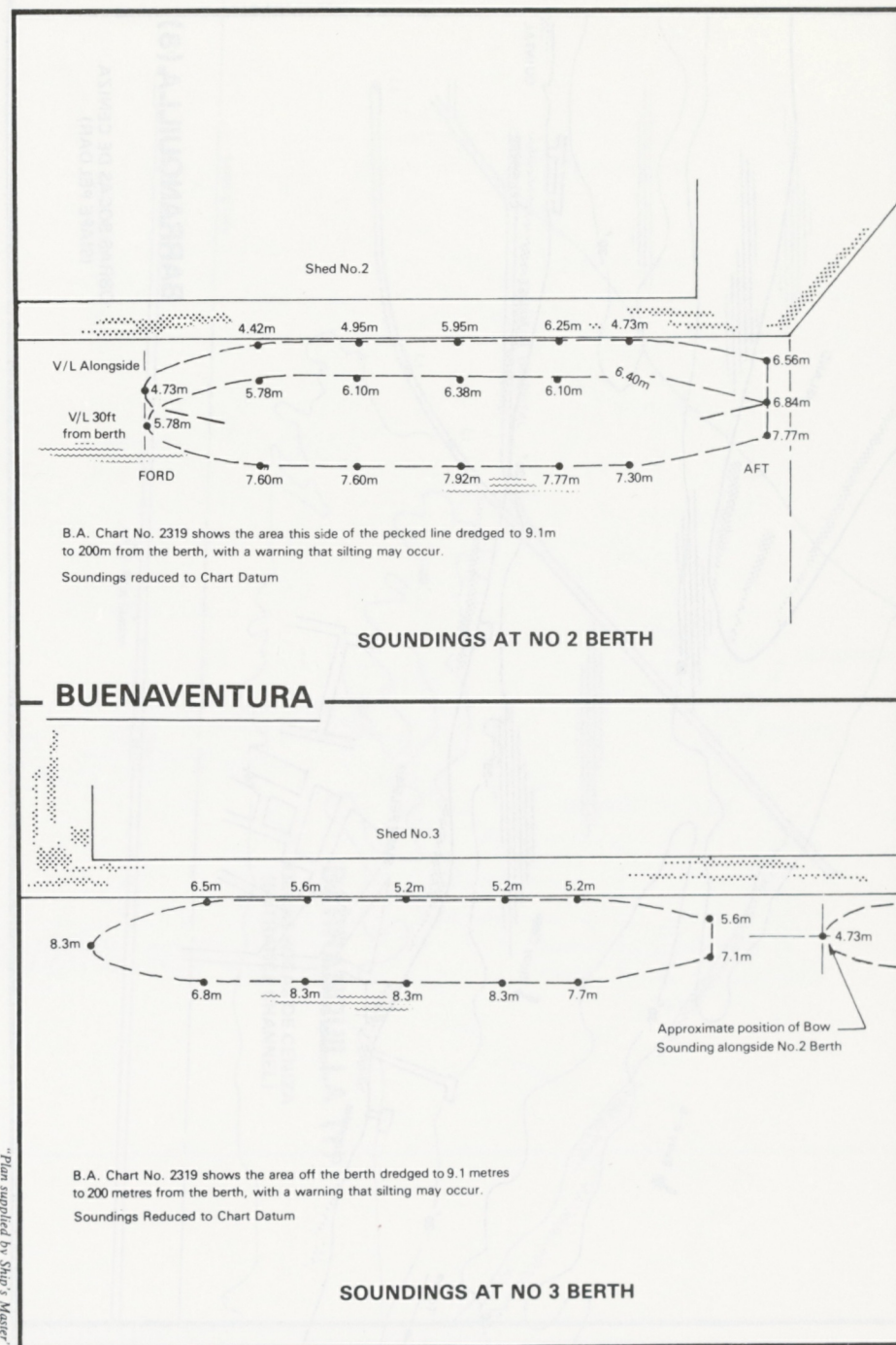


CHRISTMAS ISLAND

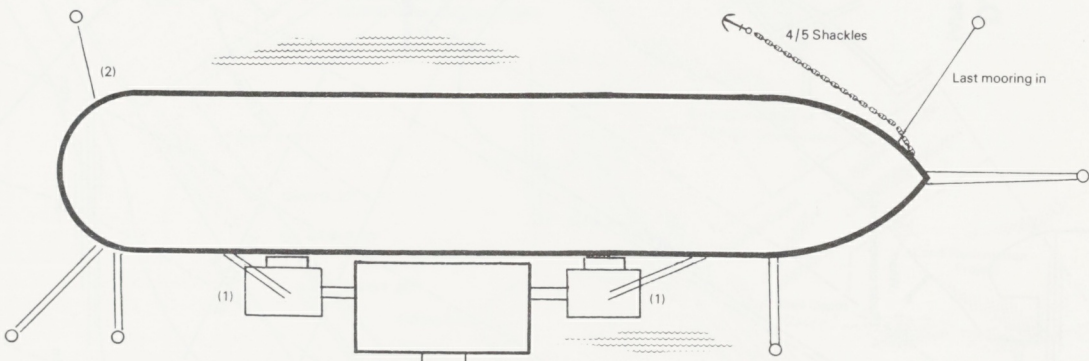
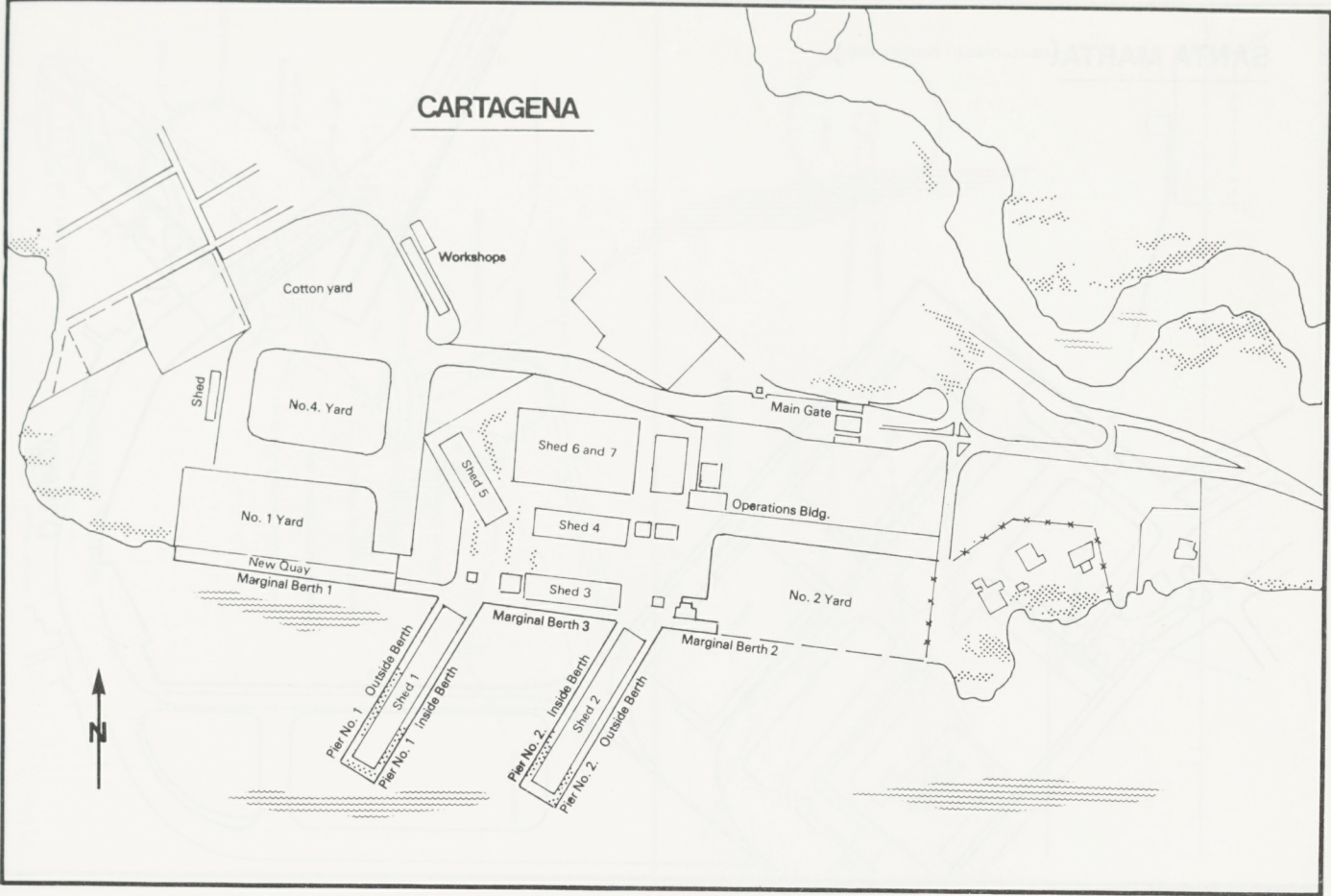








CARTAGENA

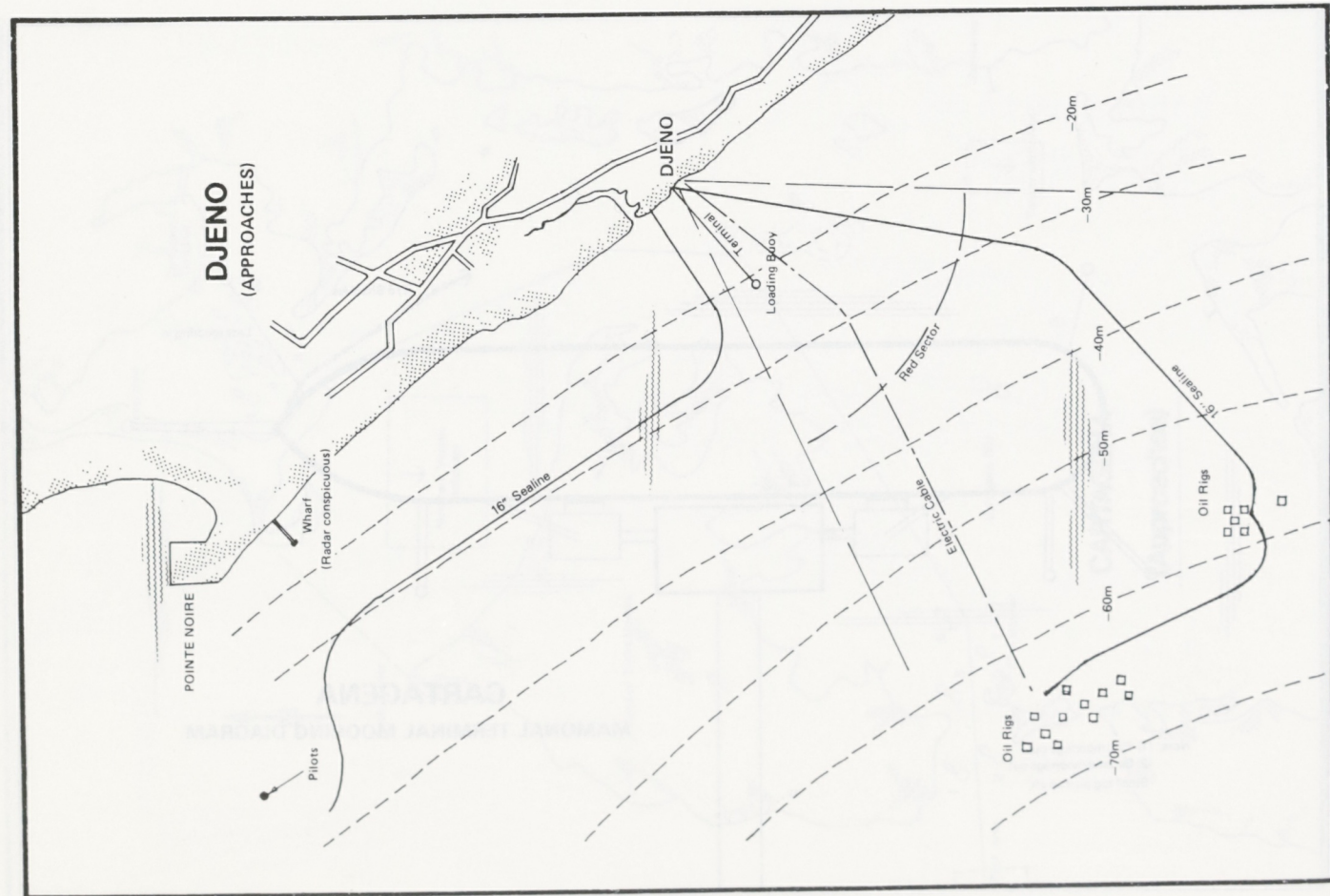
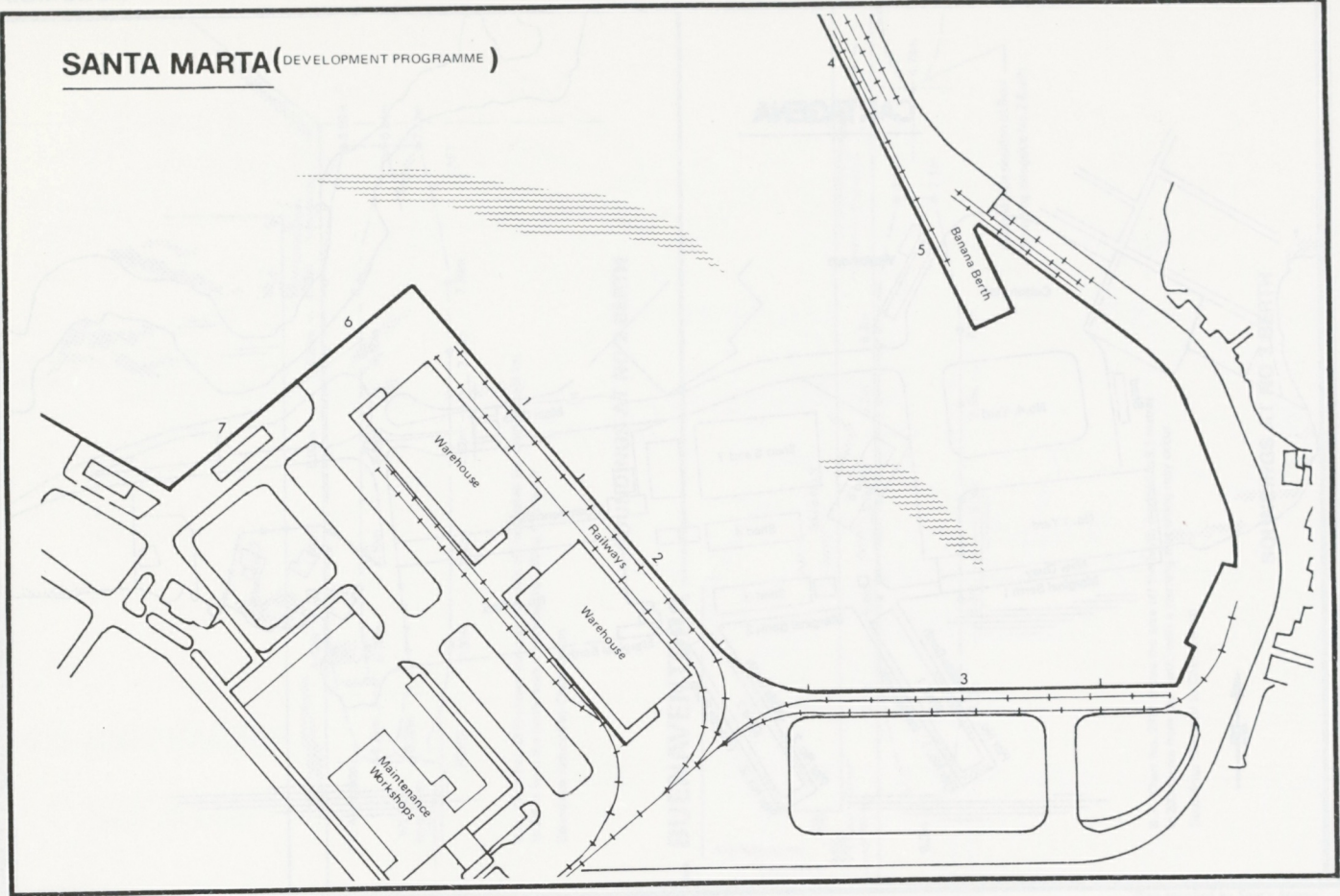


CARTAGENA

MAMONAL TERMINAL MOORING DIAGRAM

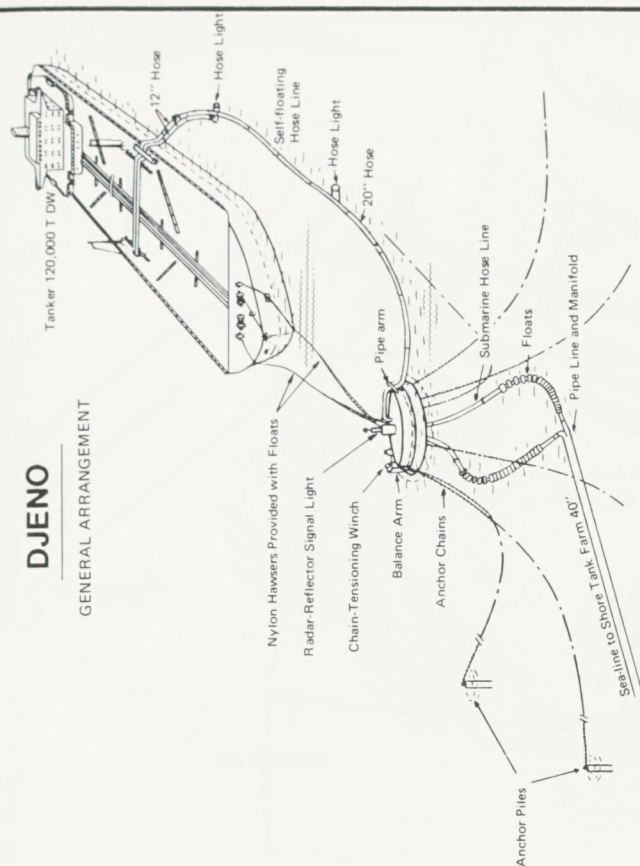
Note: (1) First moorings out
(2) Second moorings out
Small tug pushes aft

SANTA MARTA (DEVELOPMENT PROGRAMME)

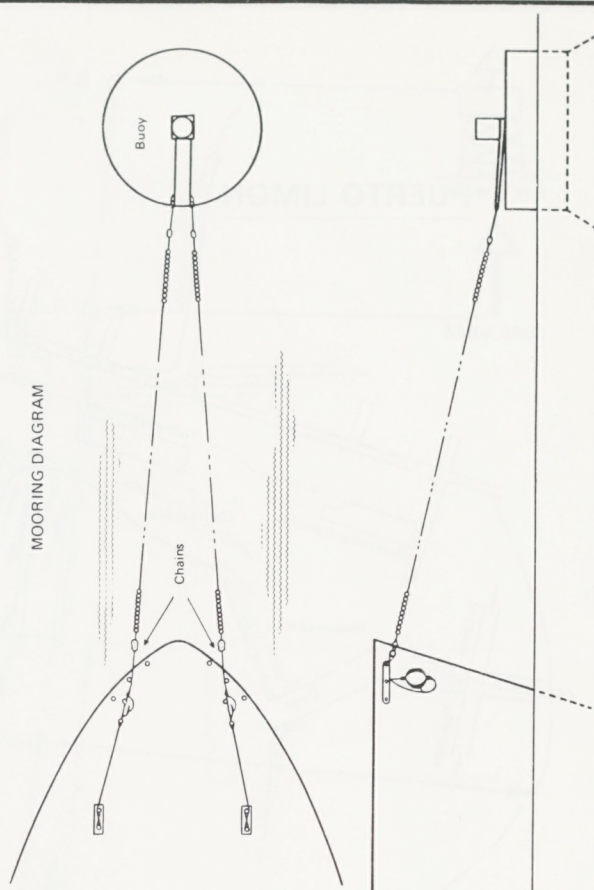


DJENO

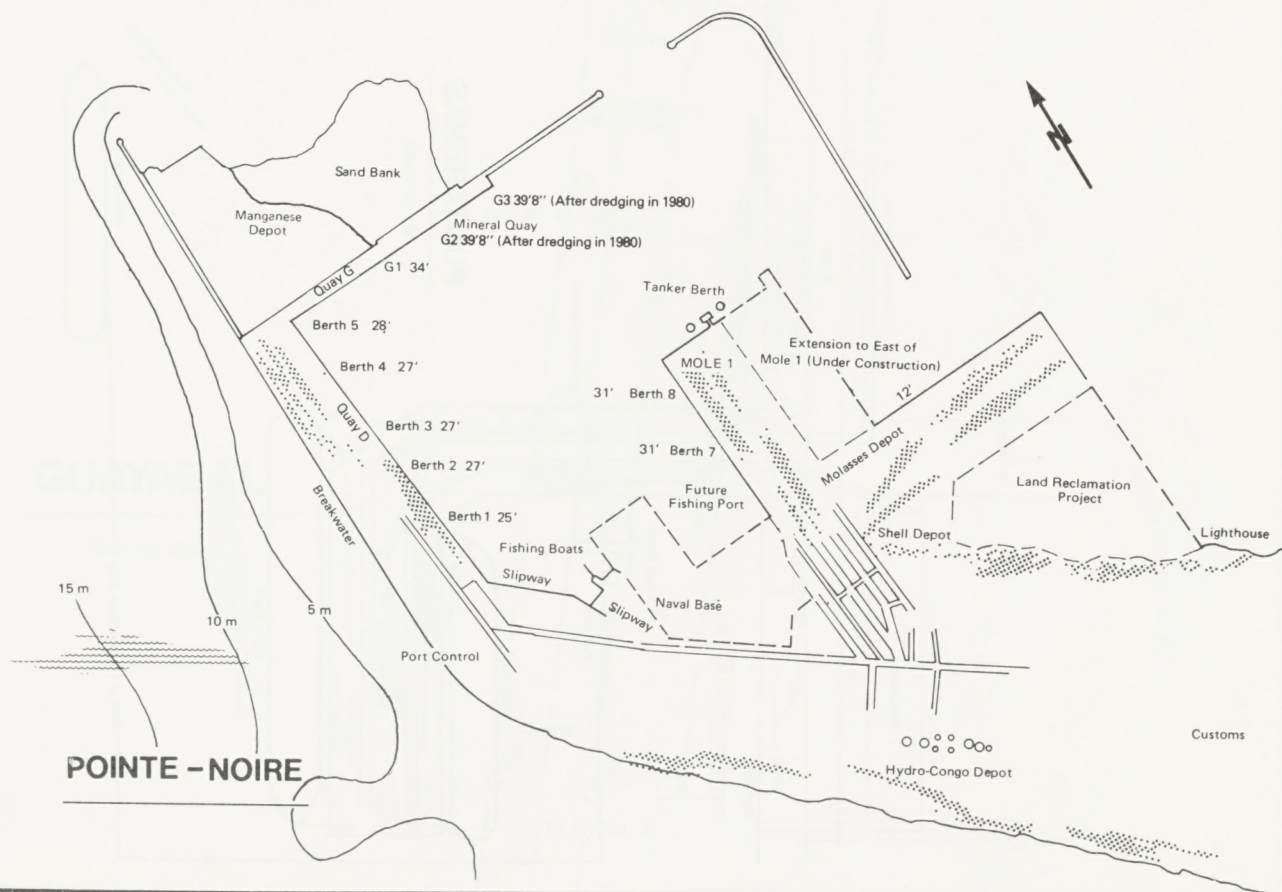
GENERAL ARRANGEMENT

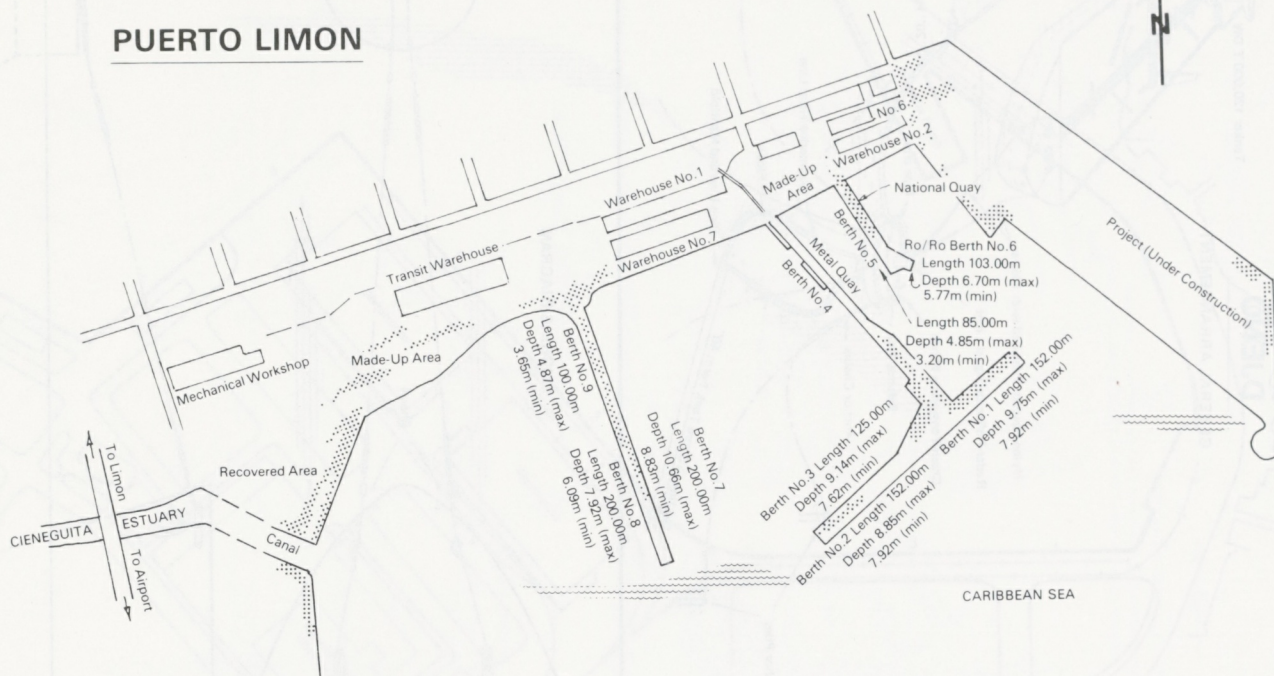


MOORING DIAGRAM



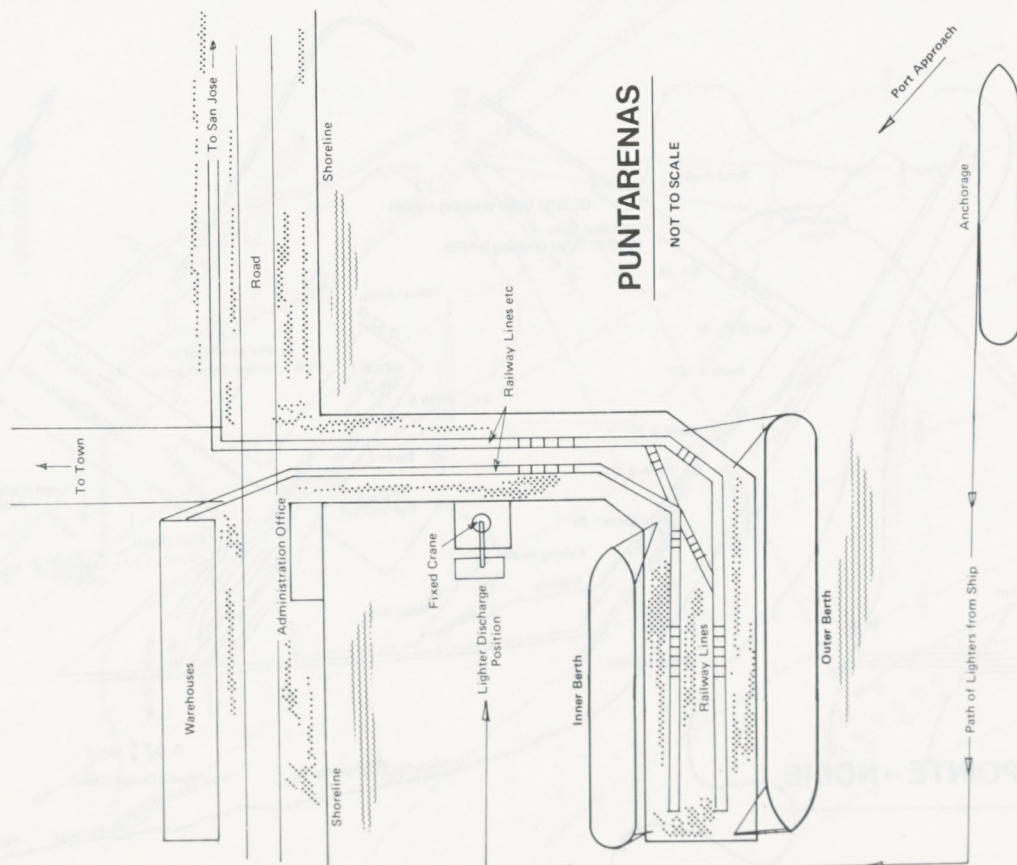
POINTE - NOIRE





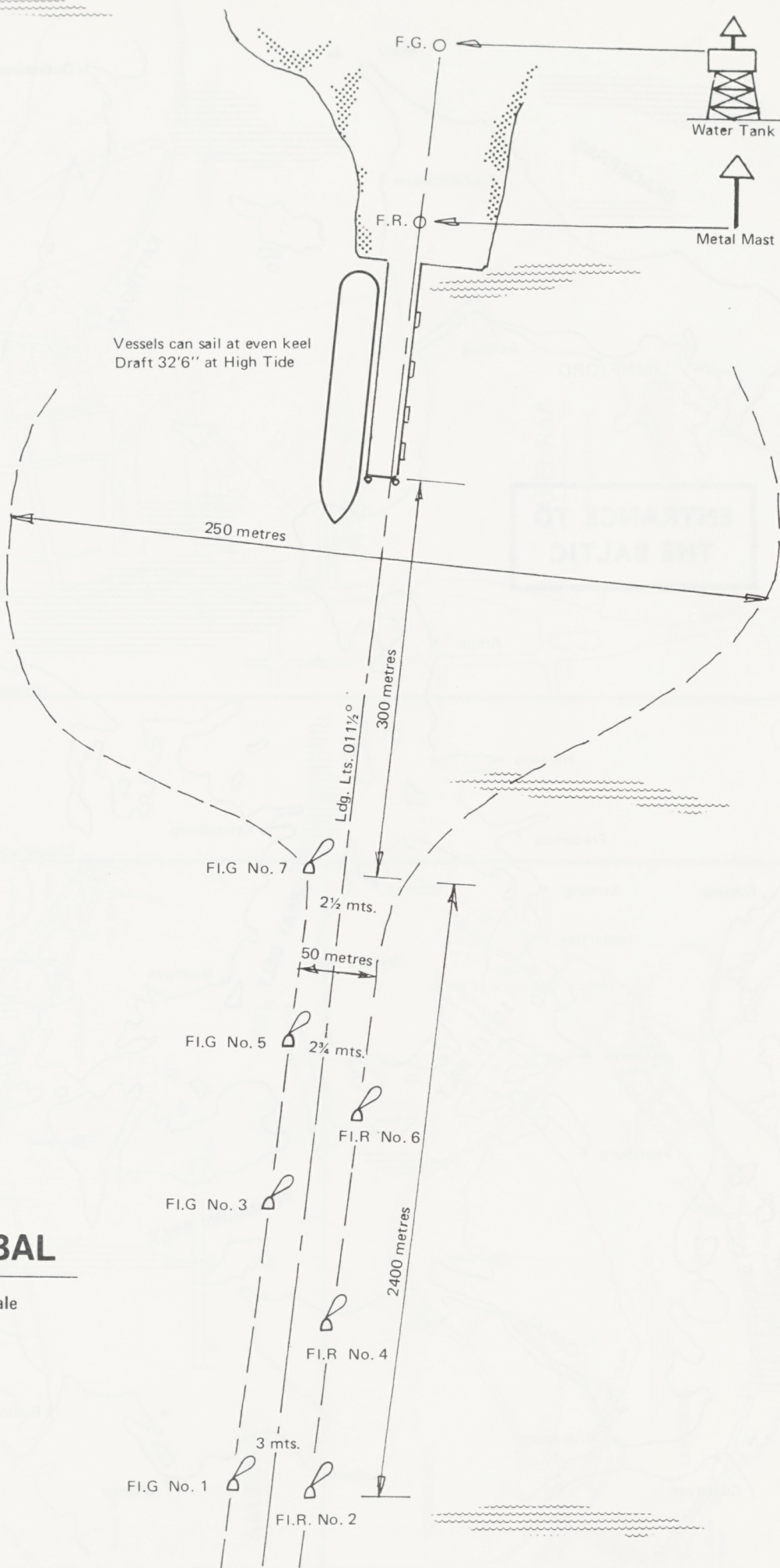
PUNTARENAS

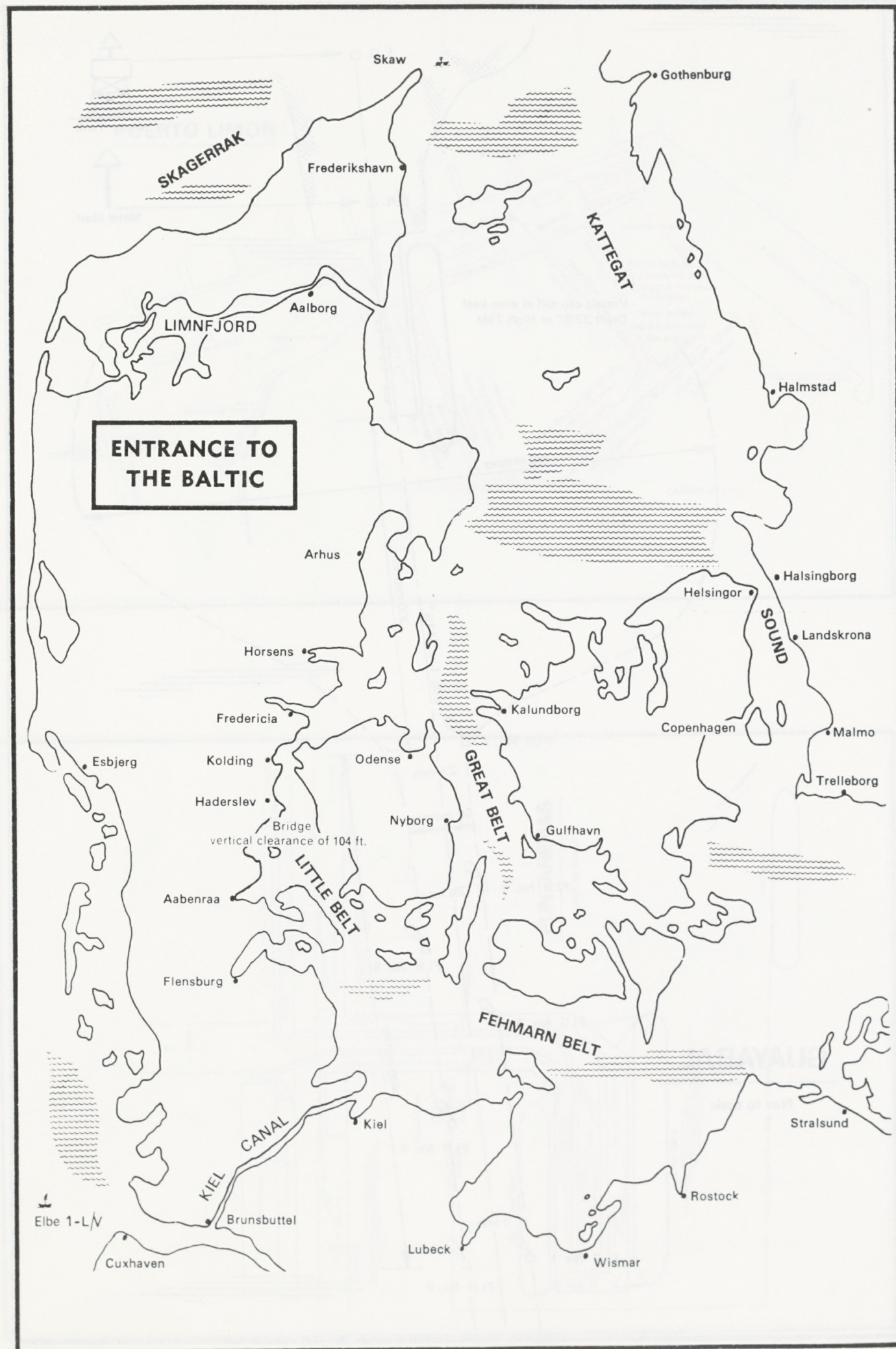
NOT TO SCALE

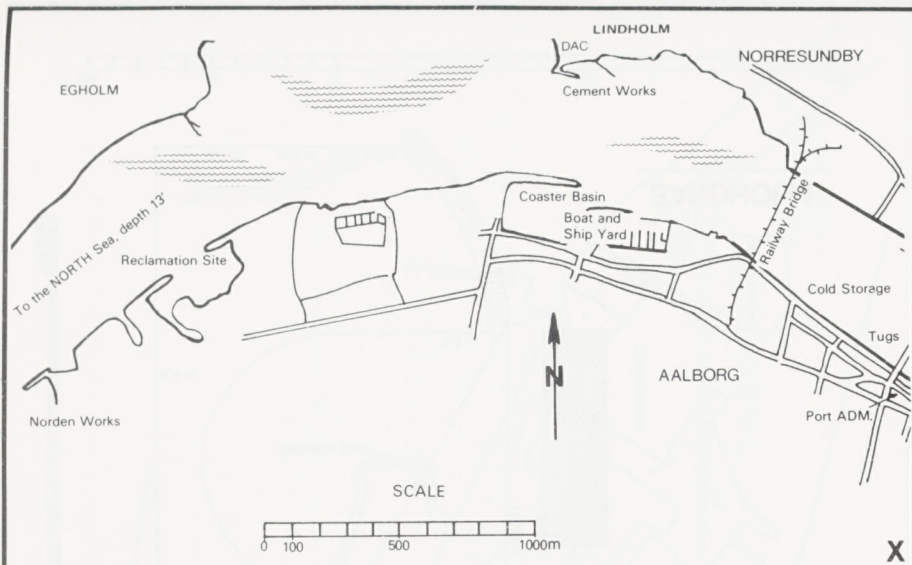


GUAYABAL

Not to scale

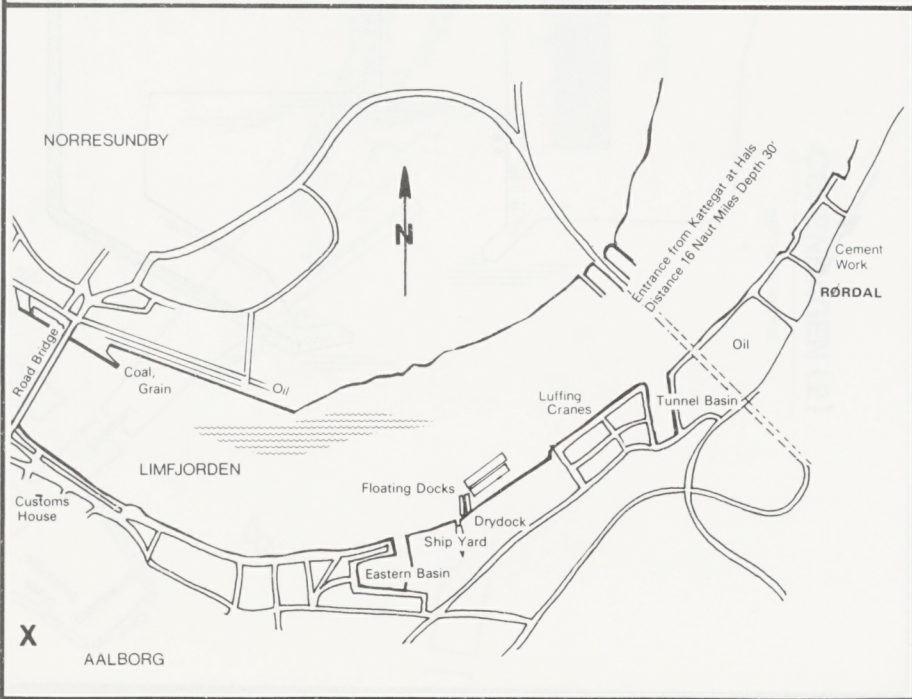




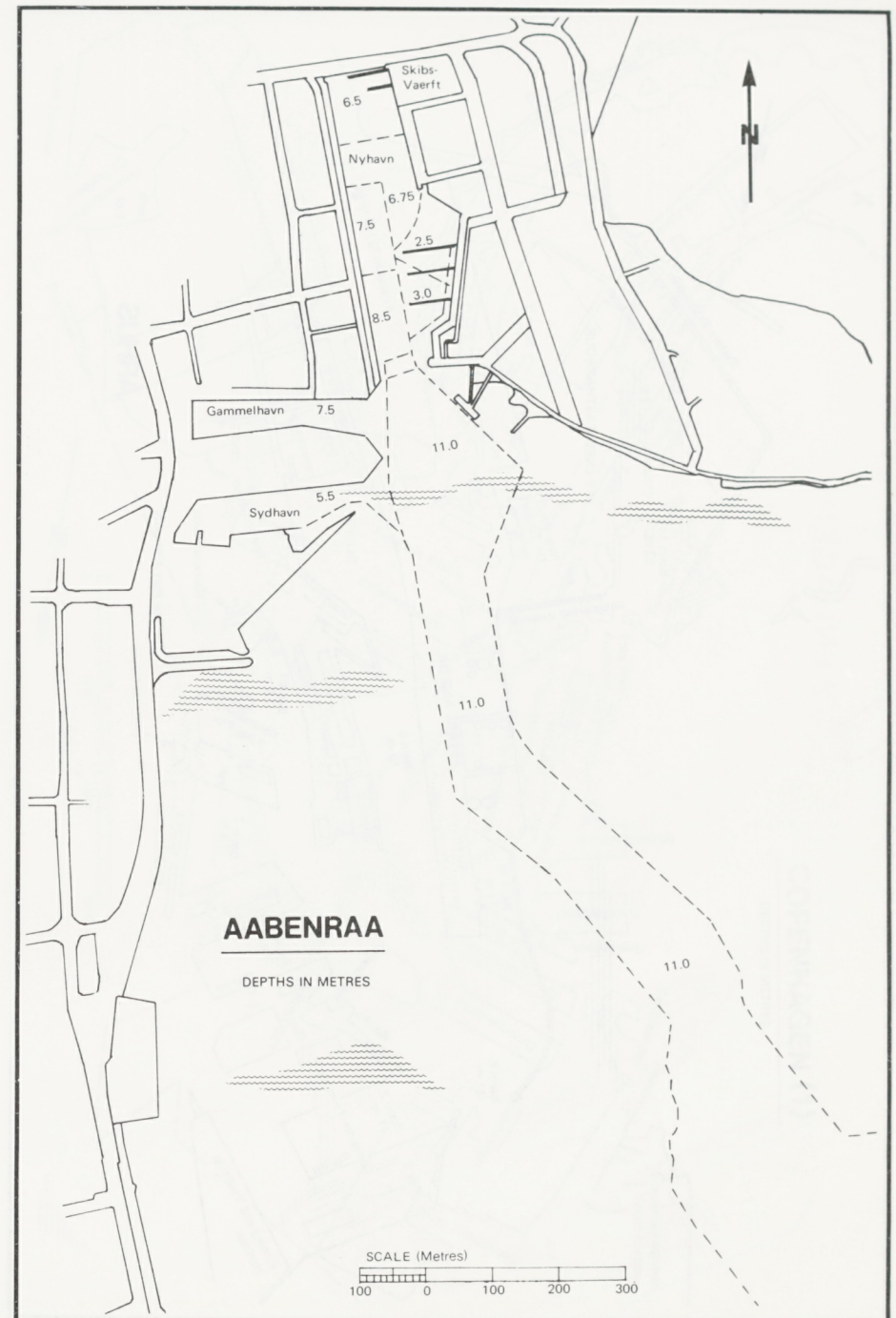


X

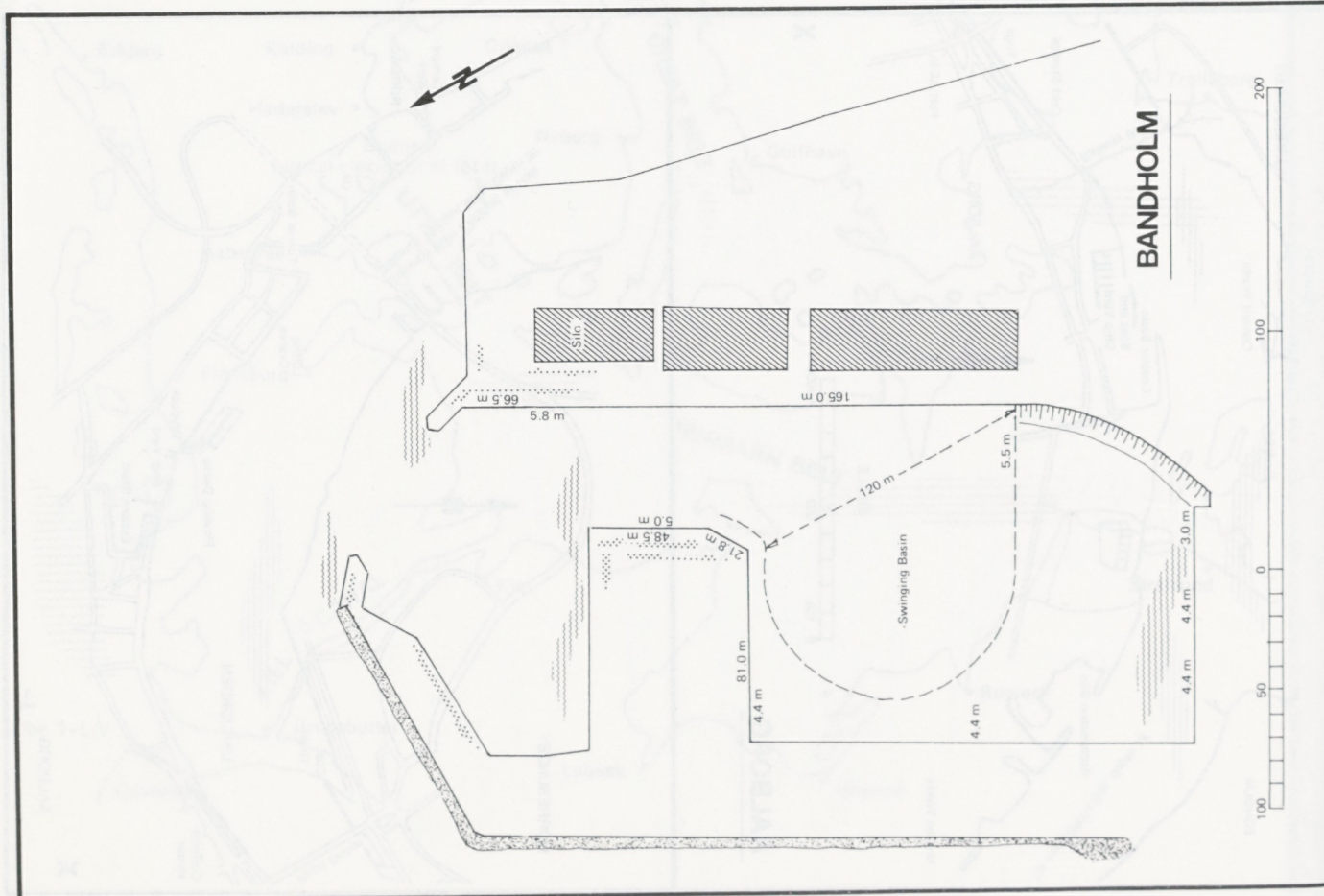
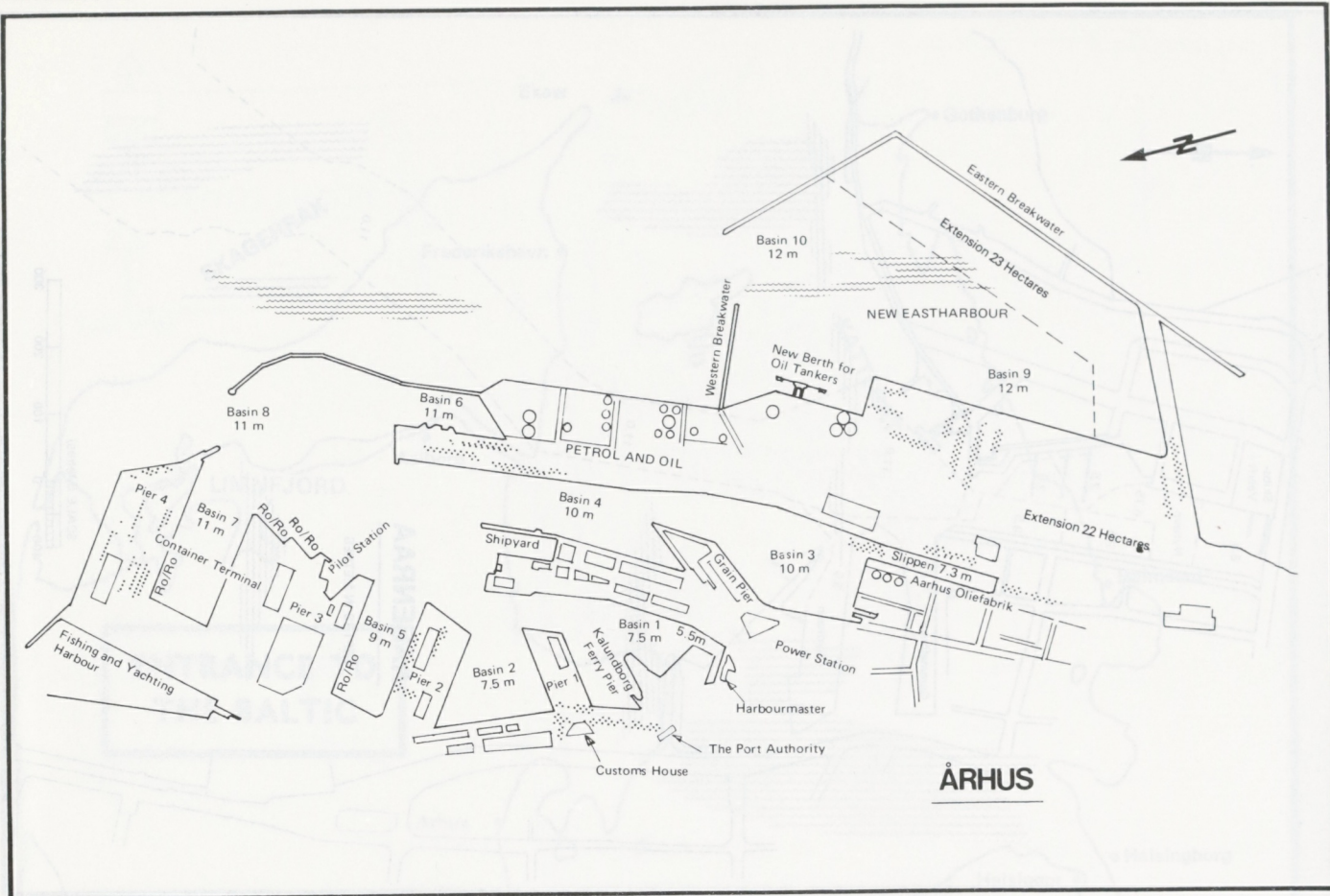
AALBORG

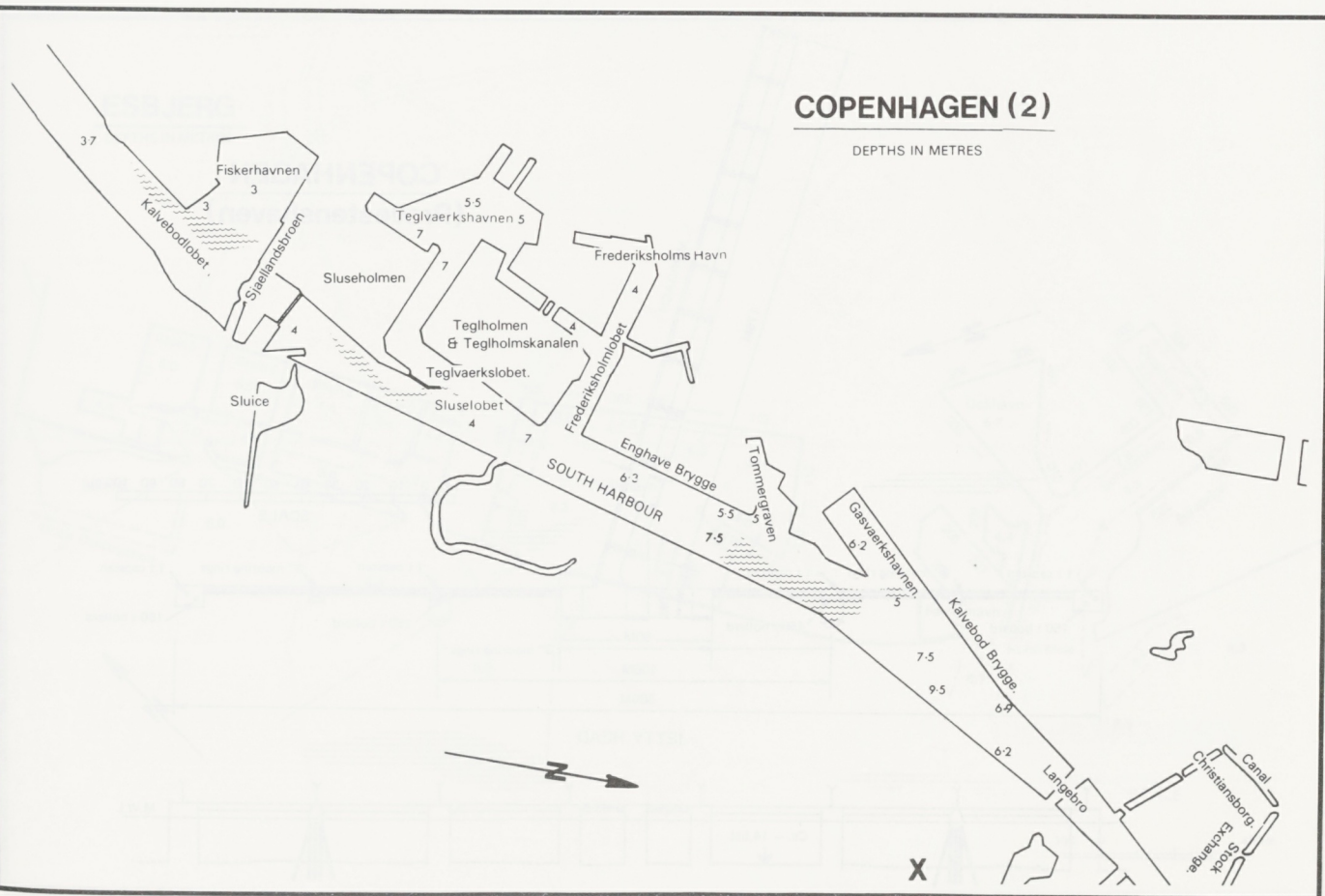
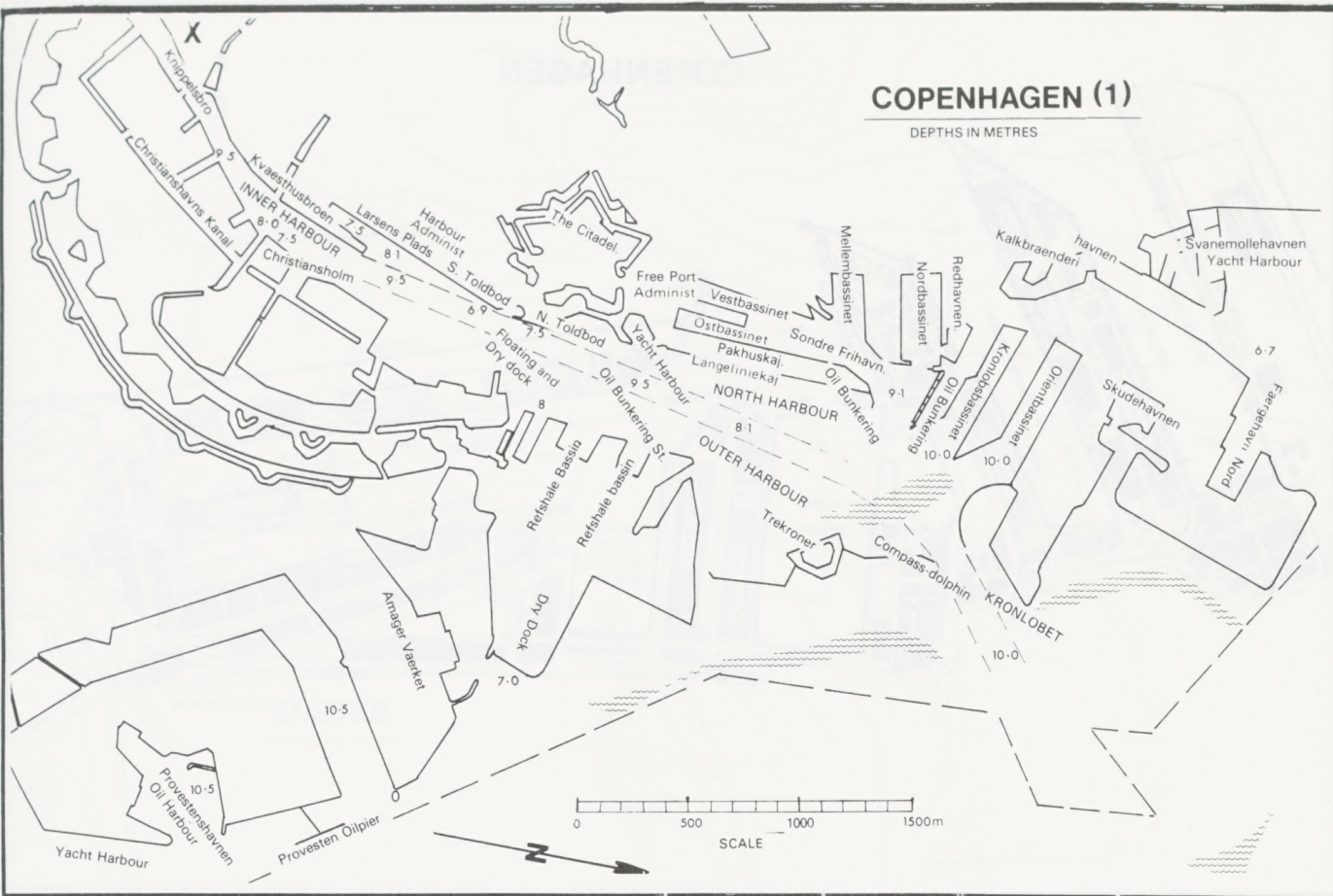


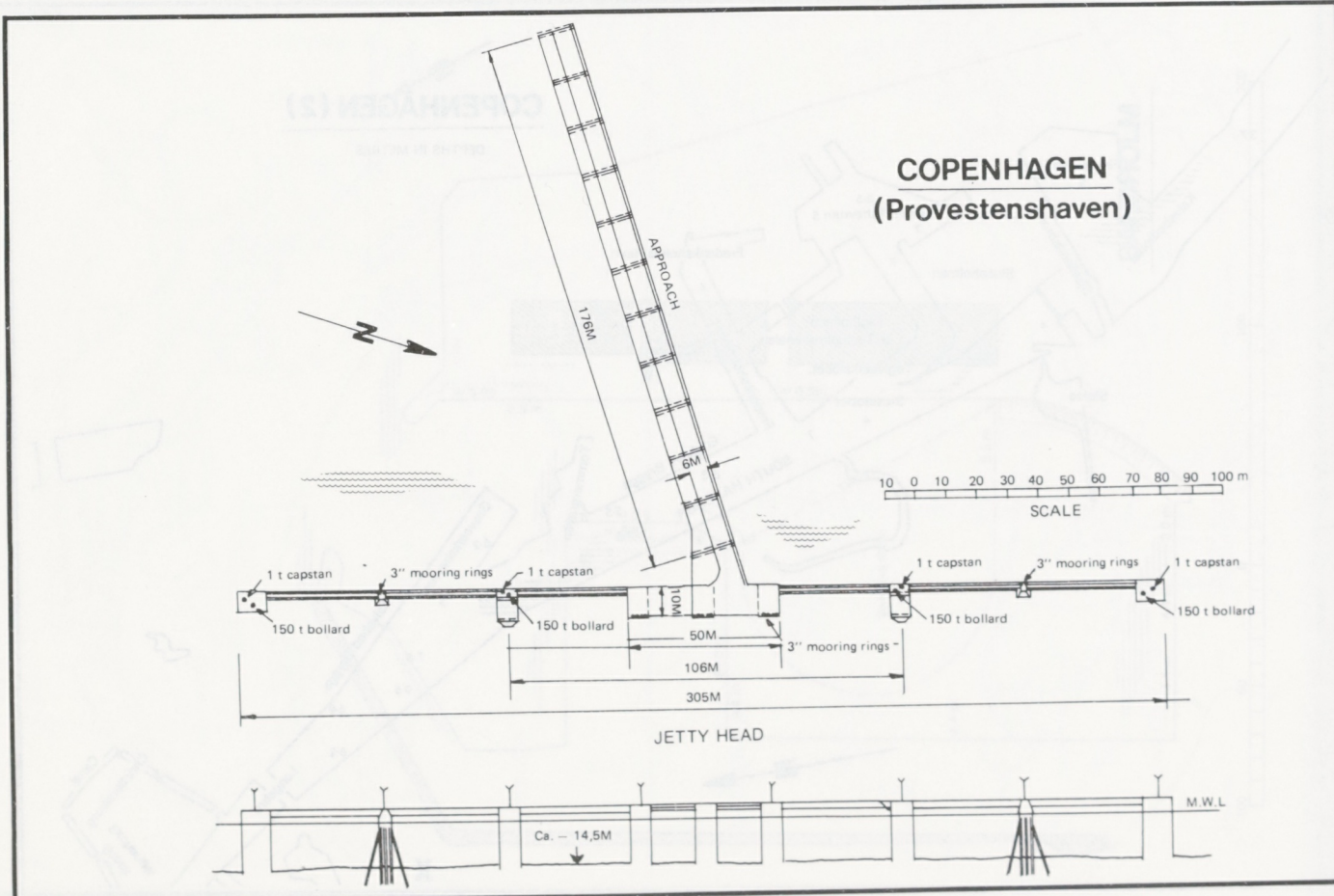
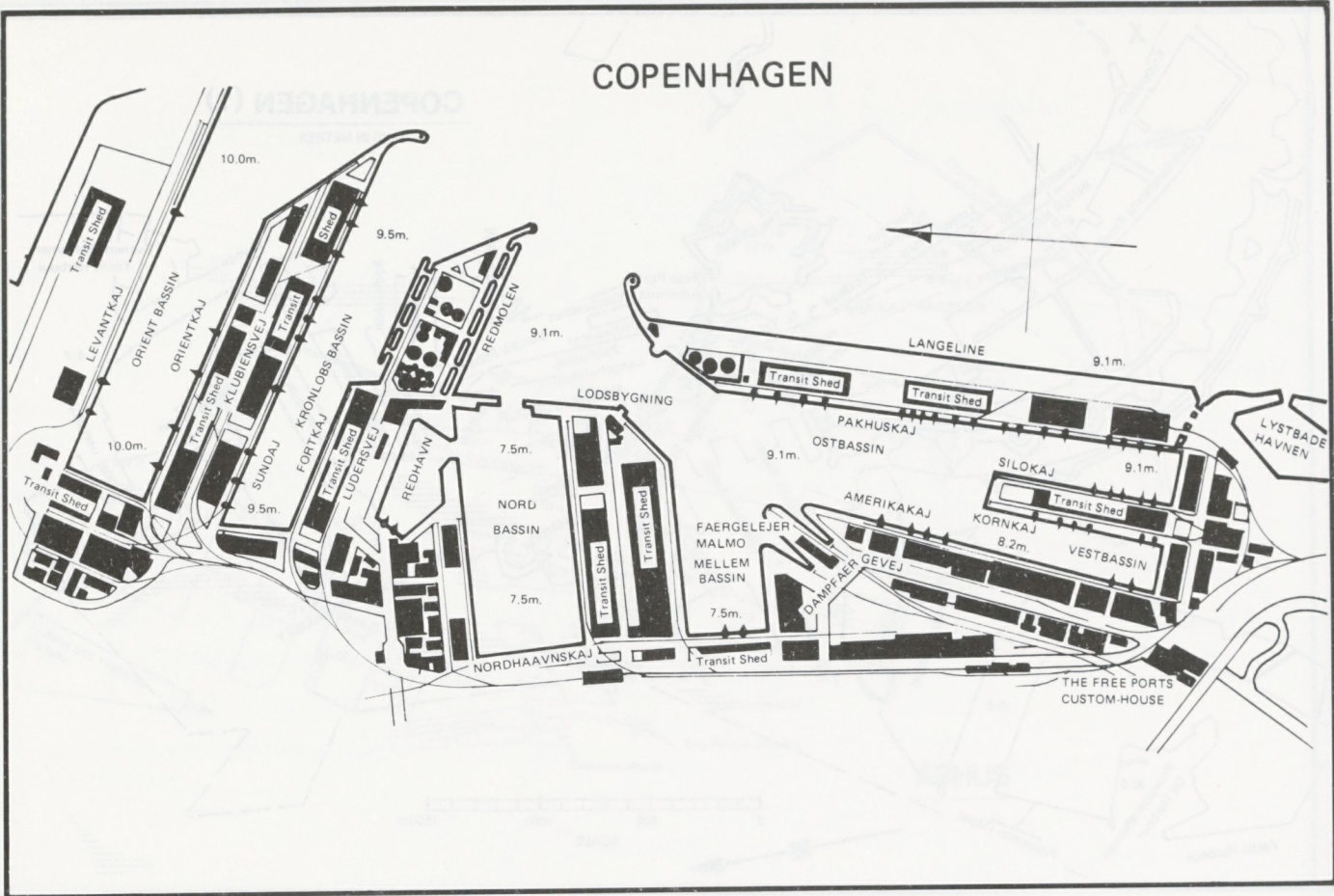
X

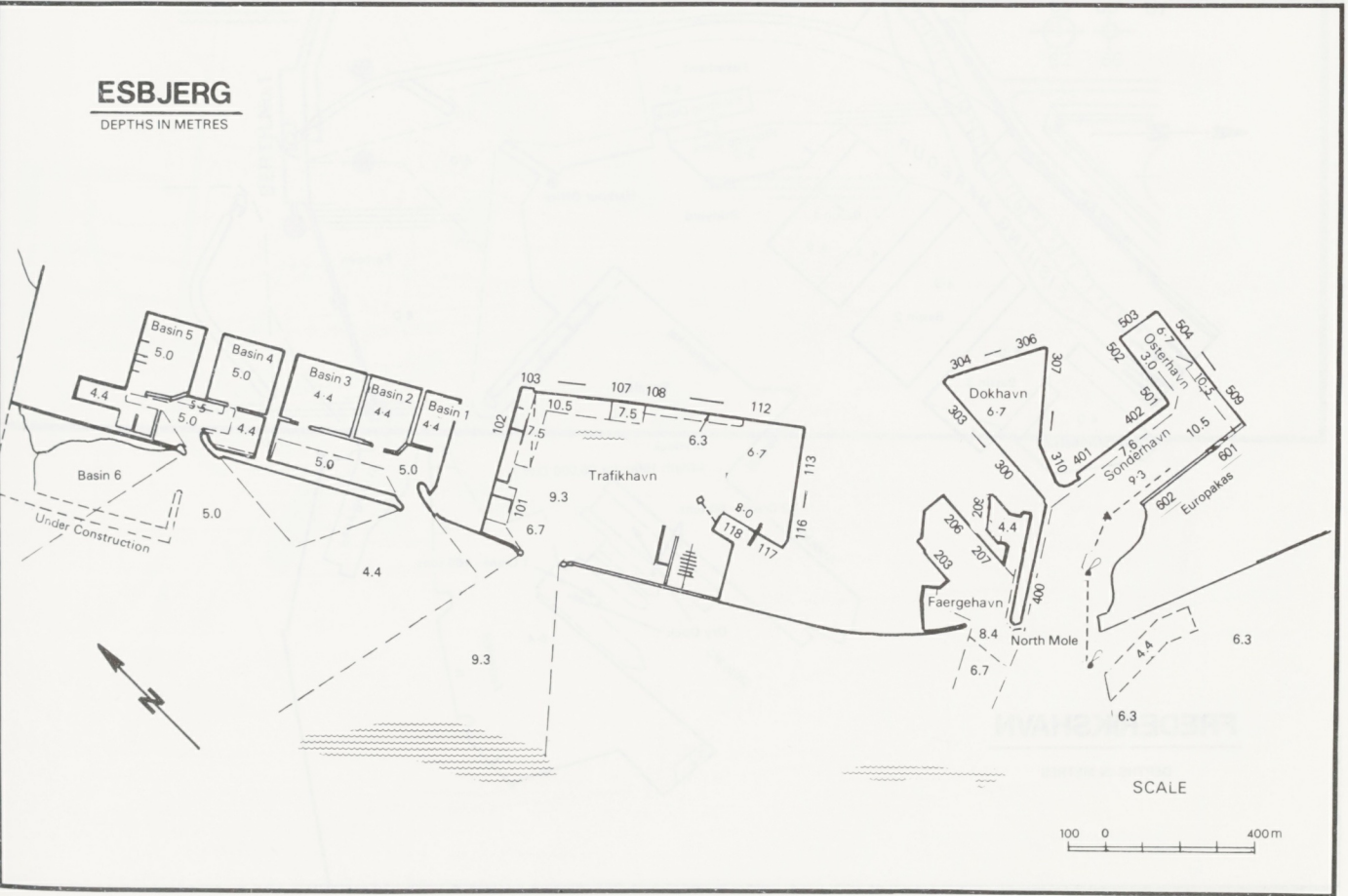
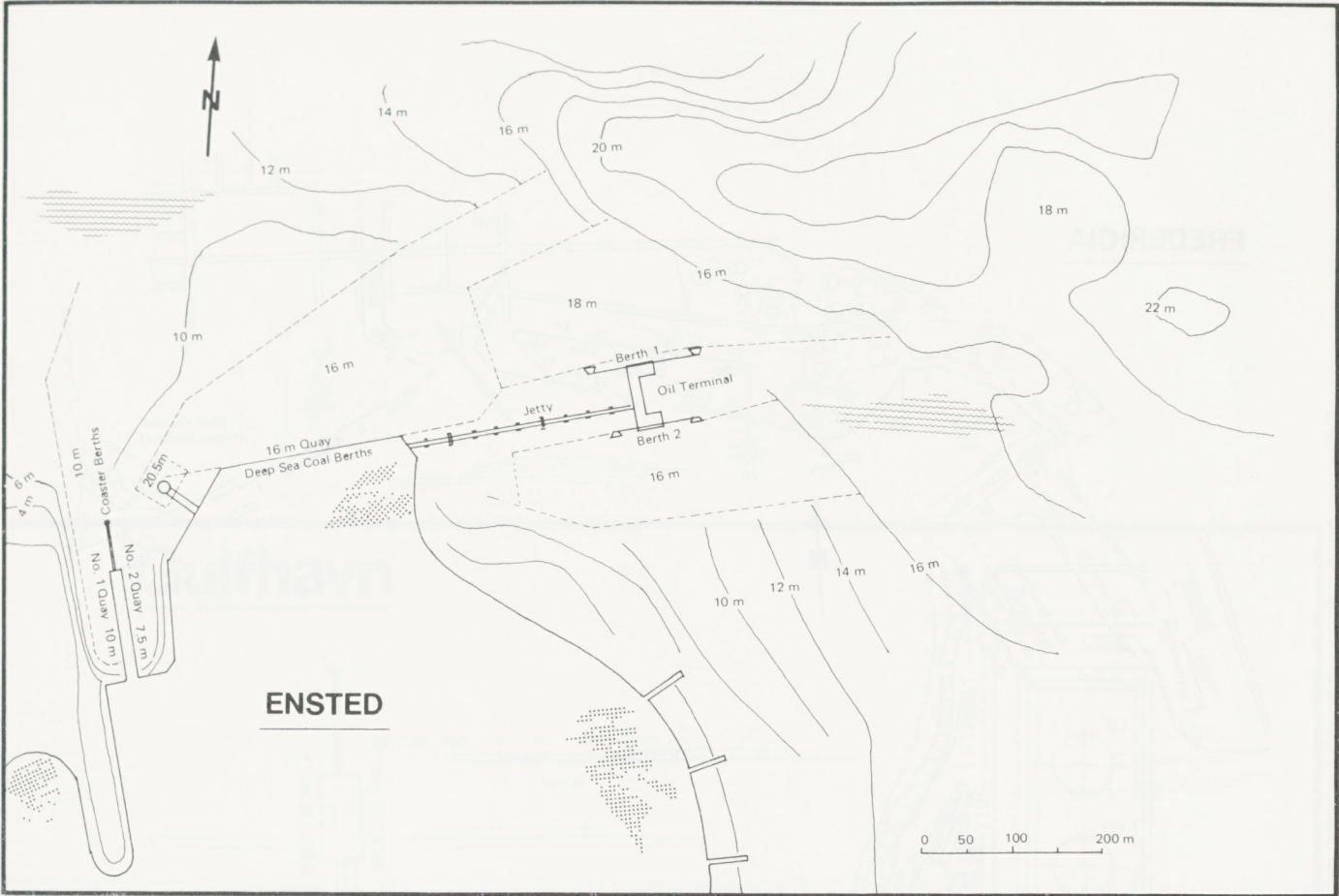


AABENRAA



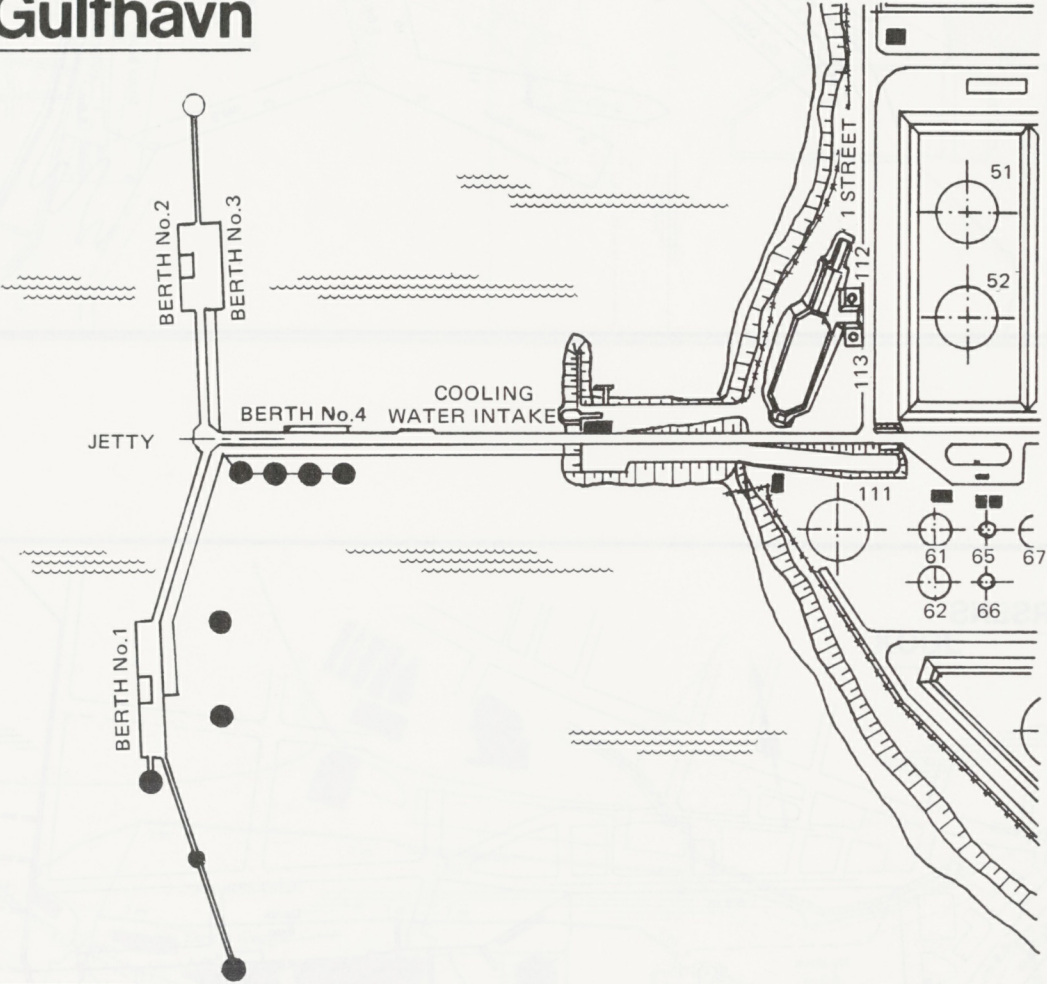


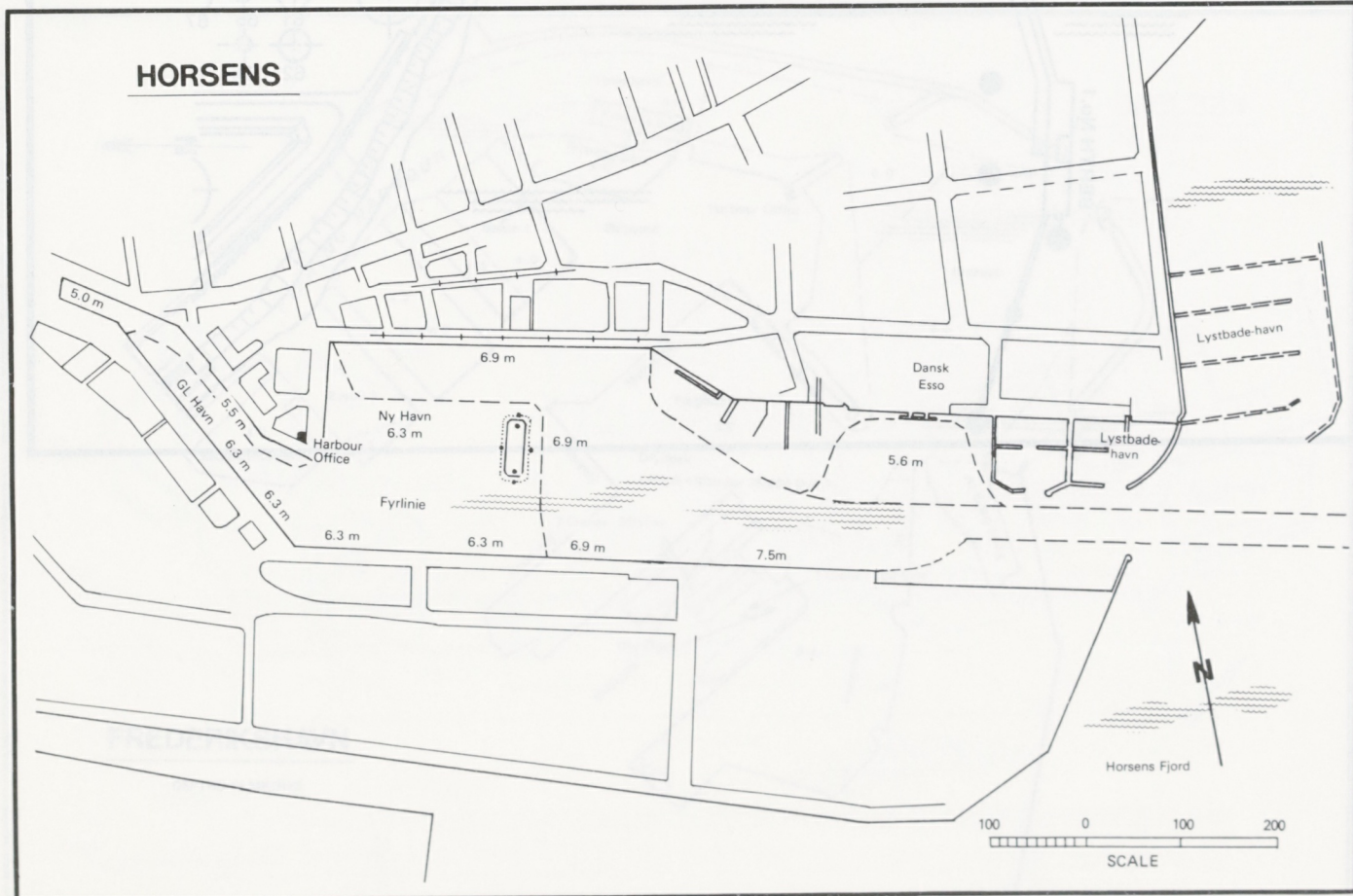
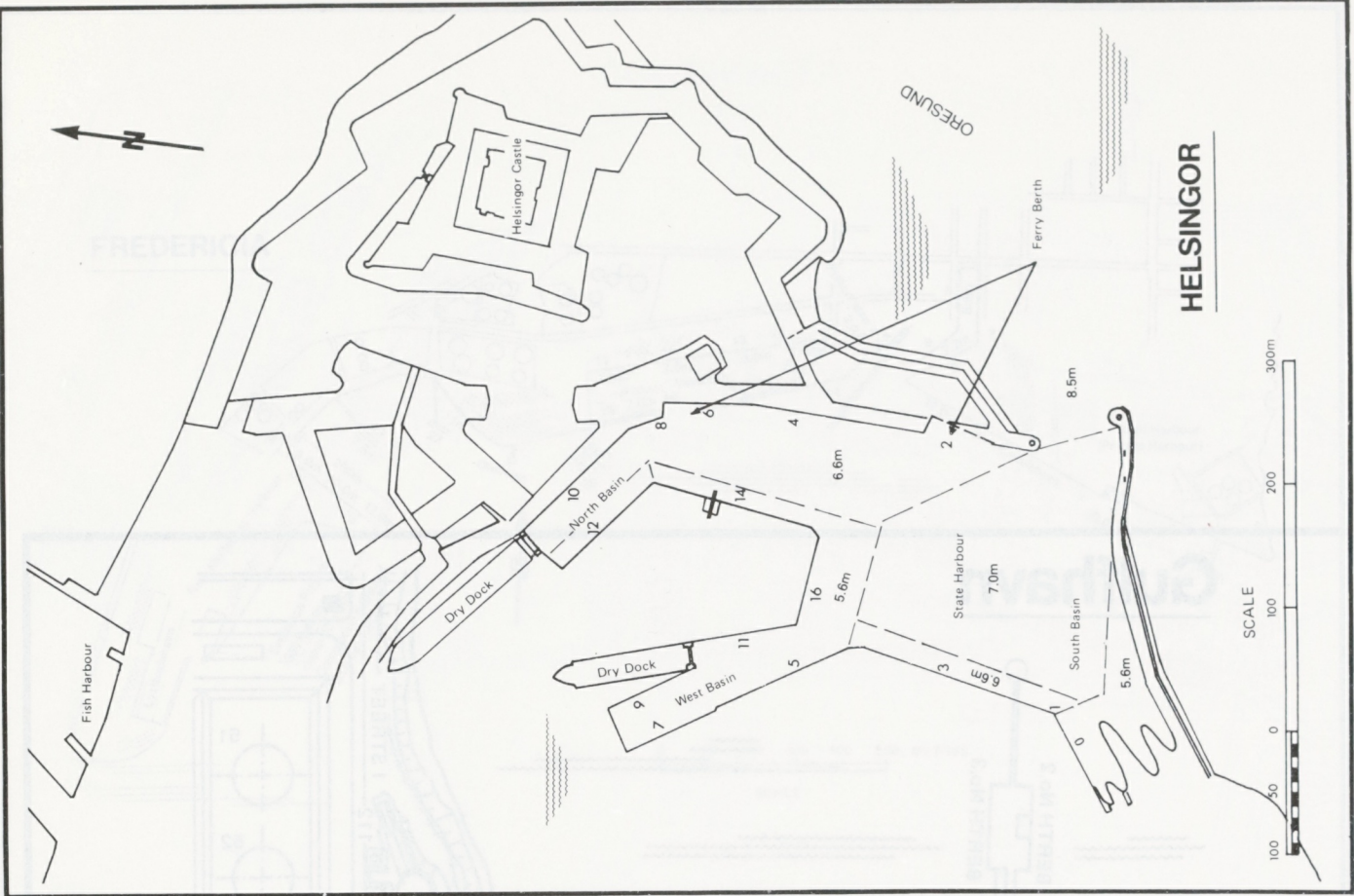






Gulfhavn





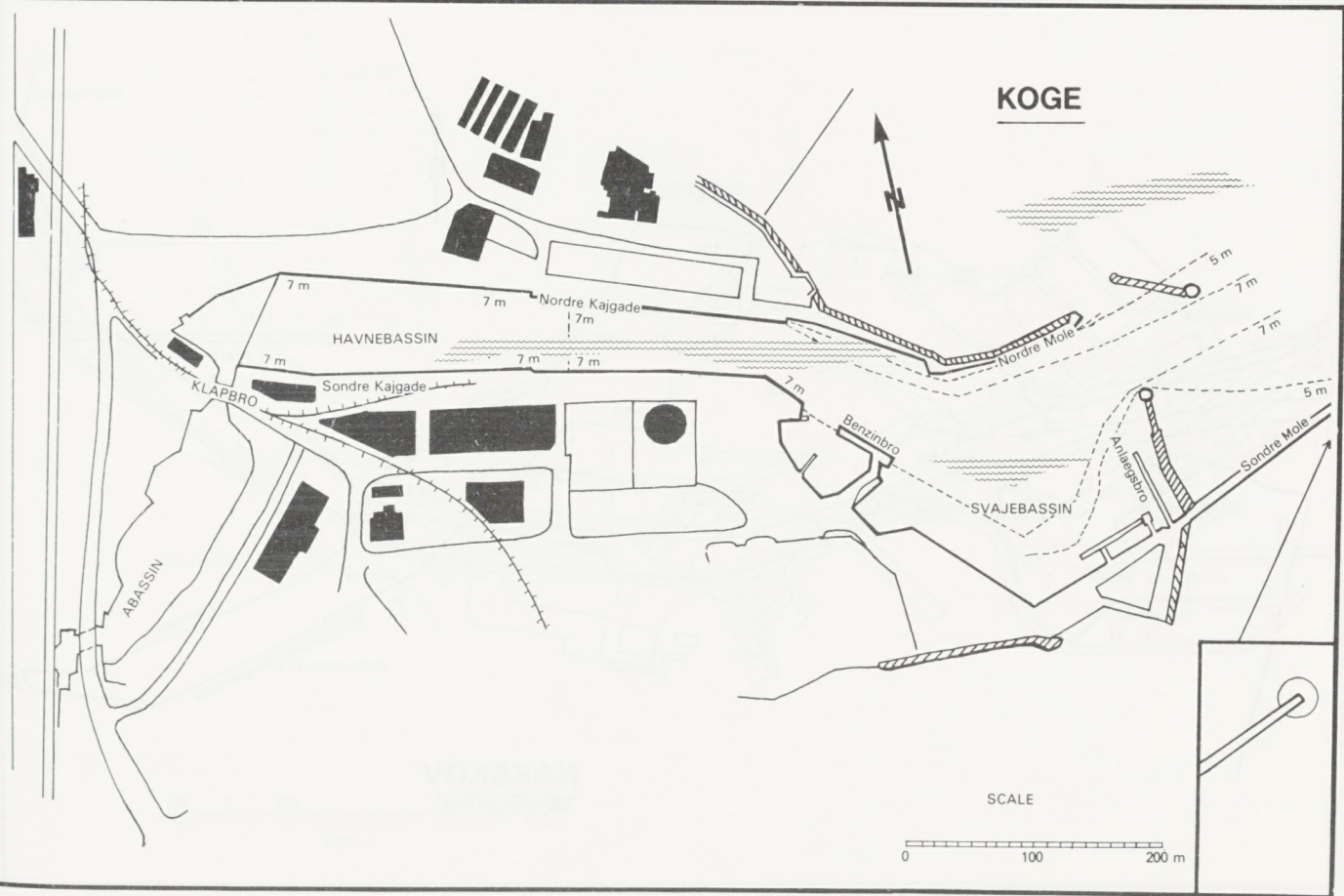


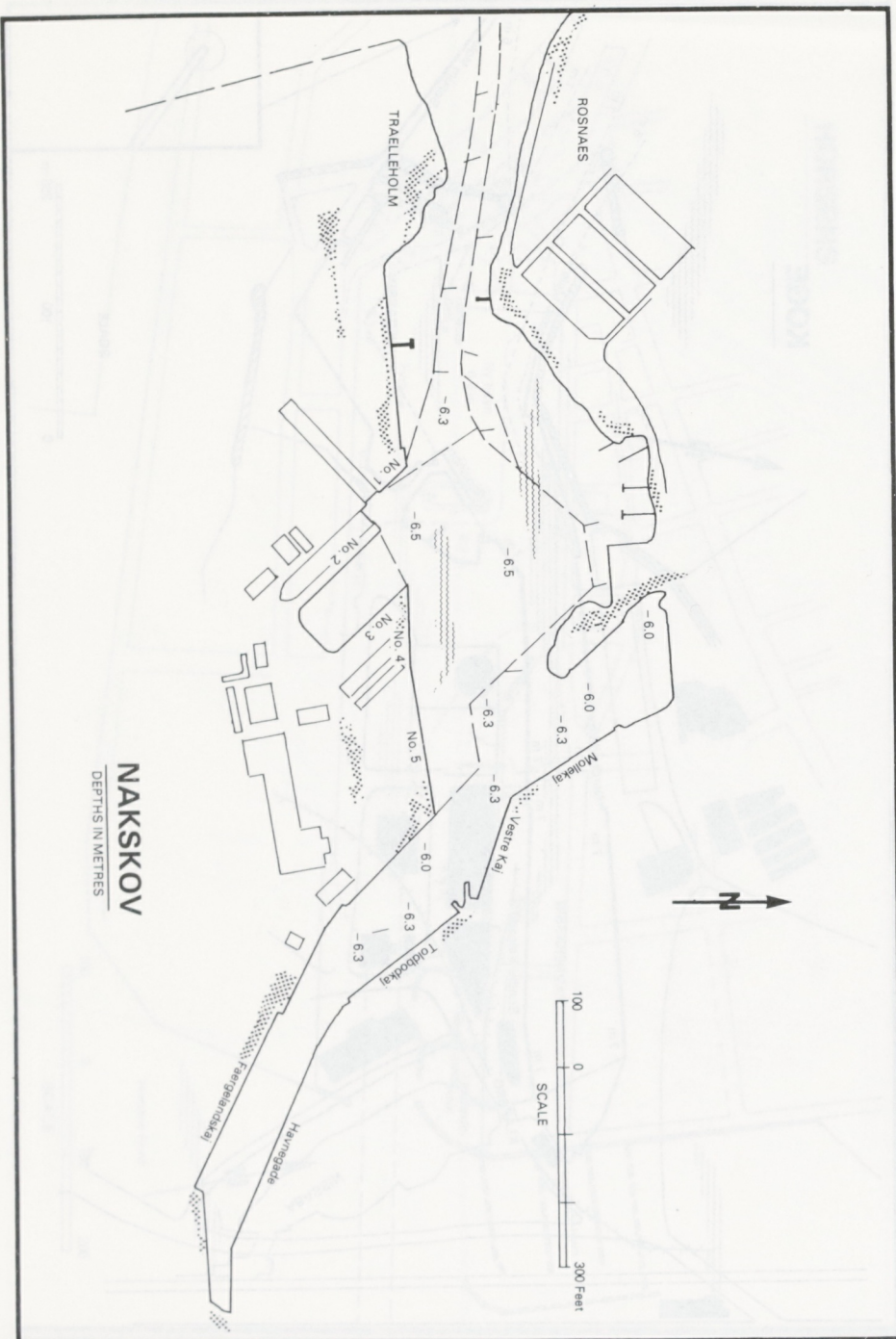
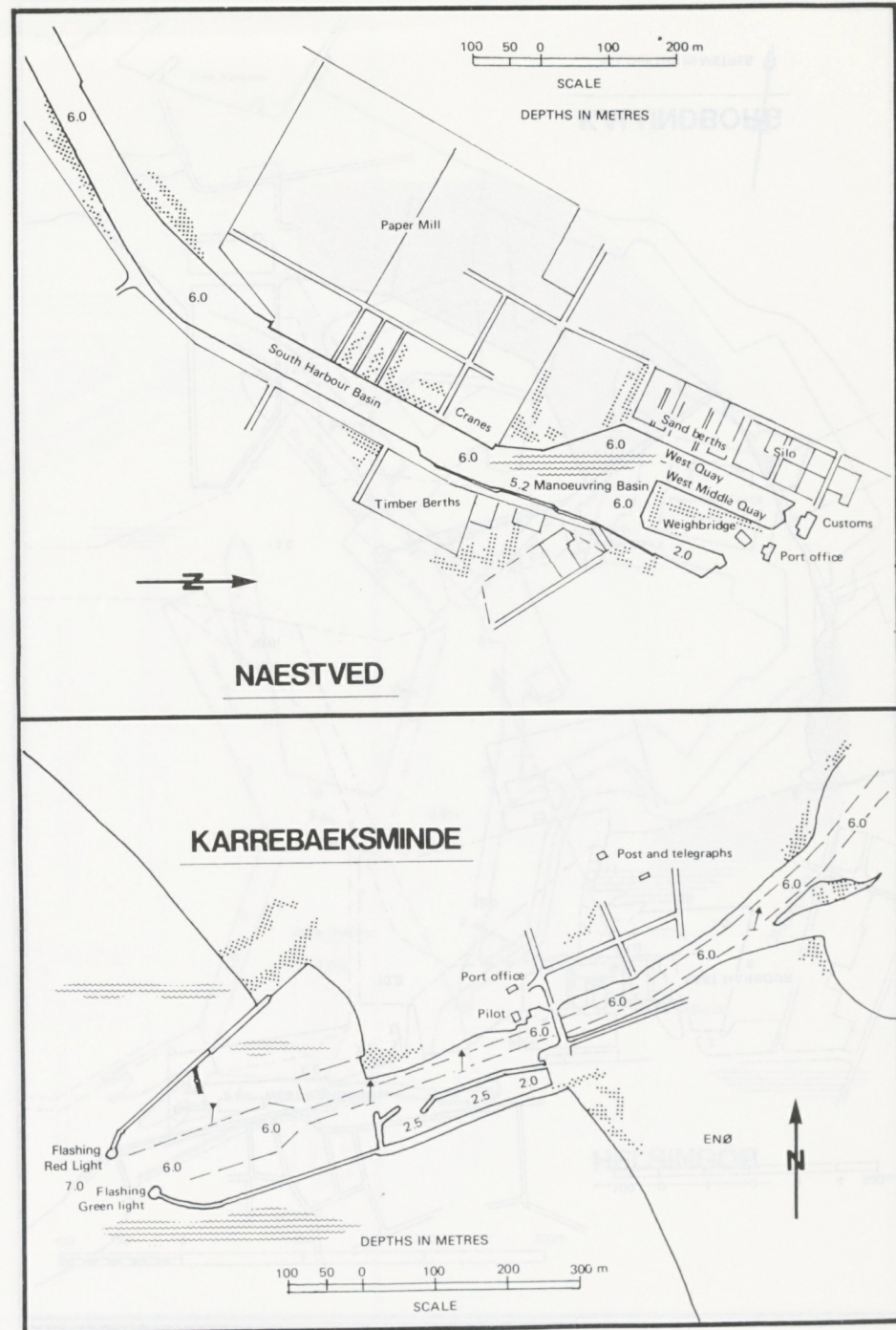
KALUNDBORG

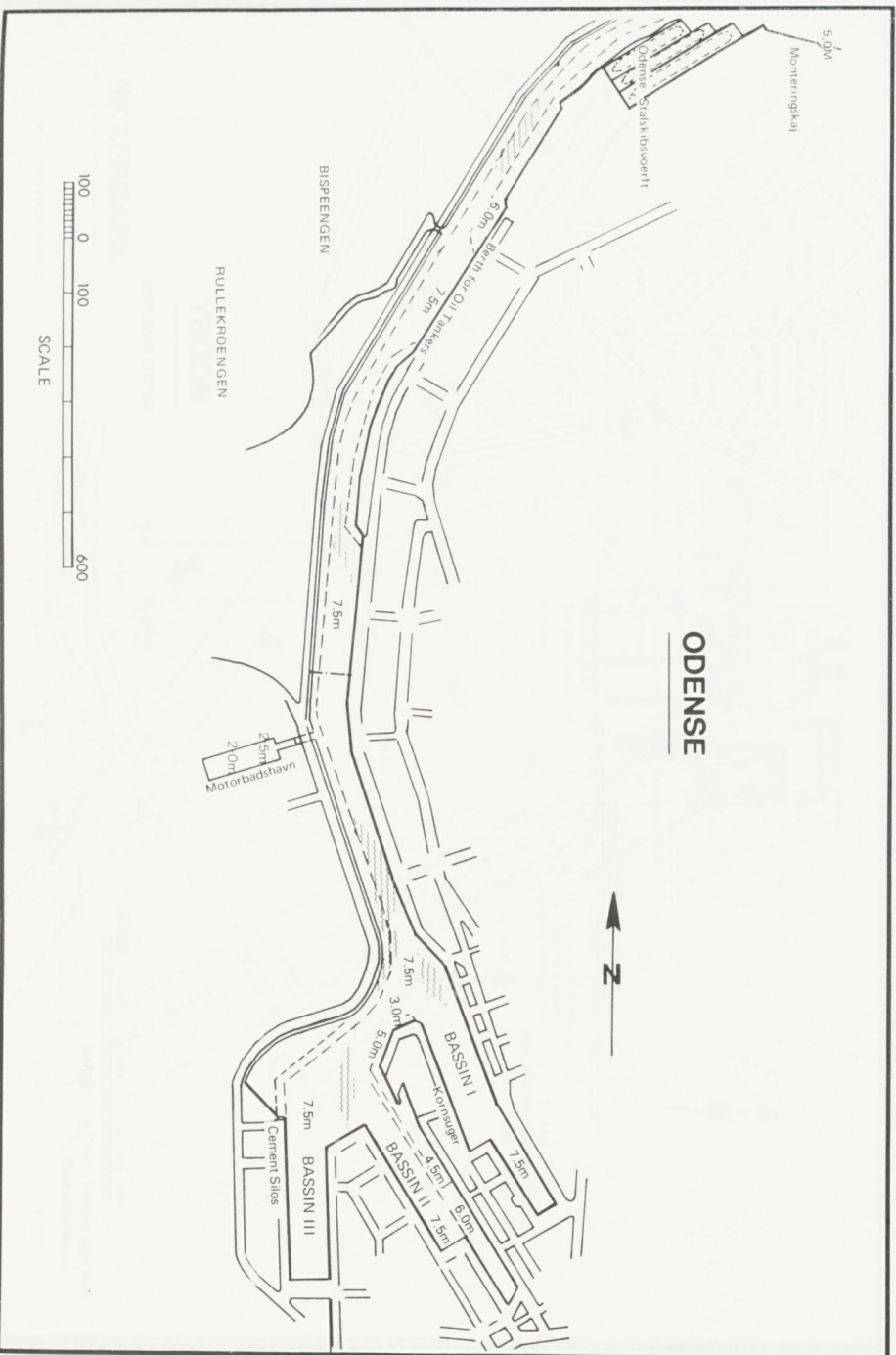
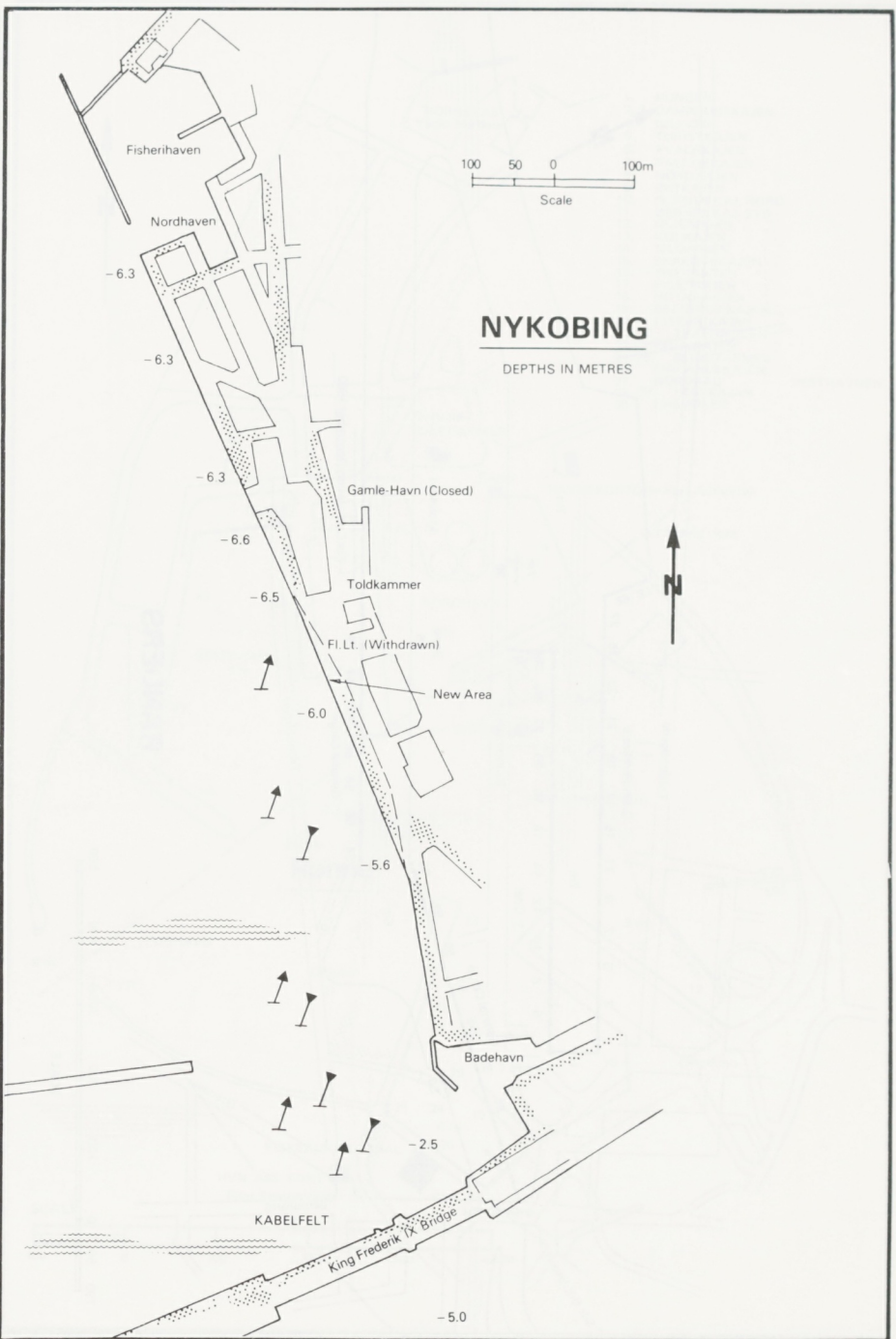
ALL DEPTHS IN METRES

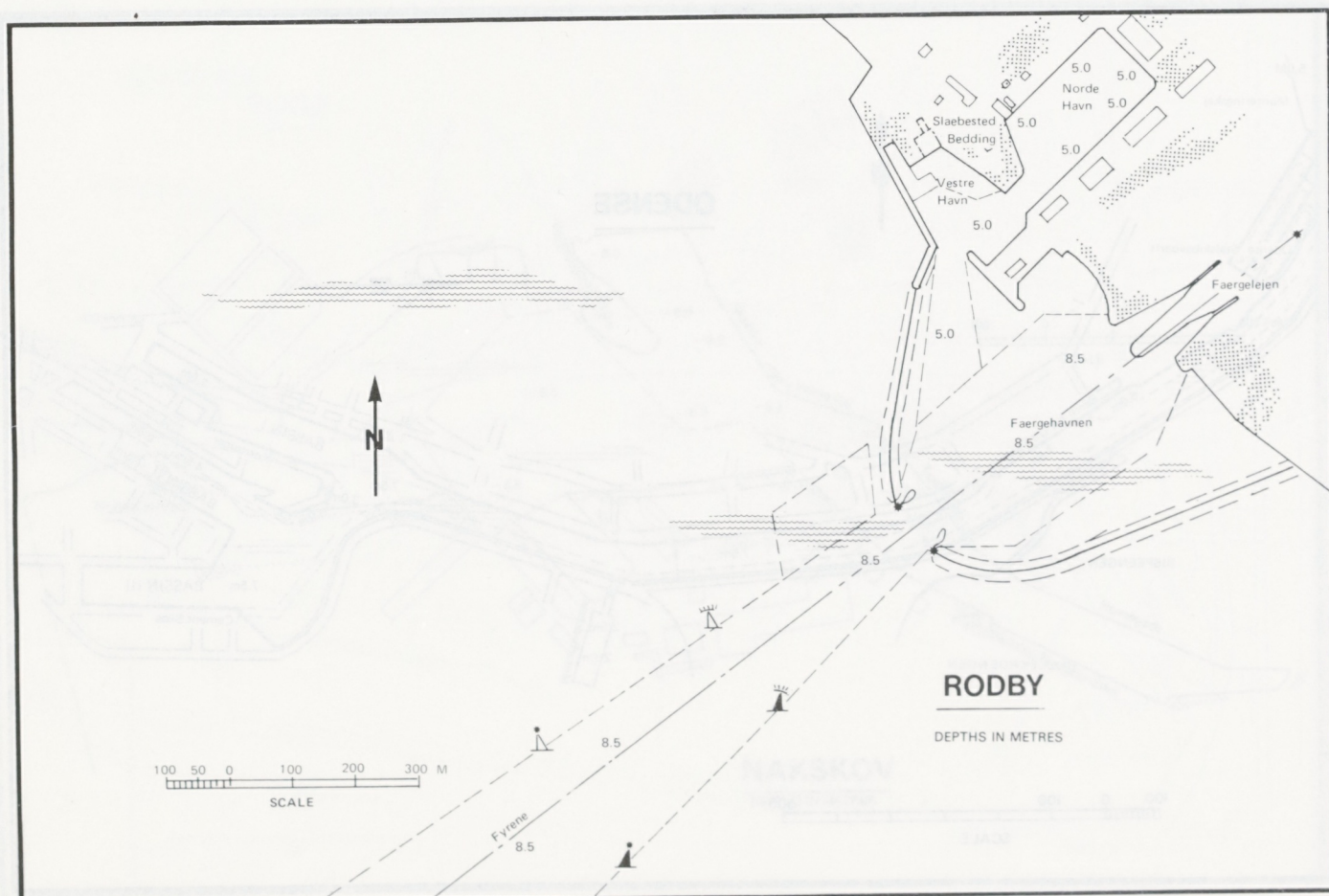


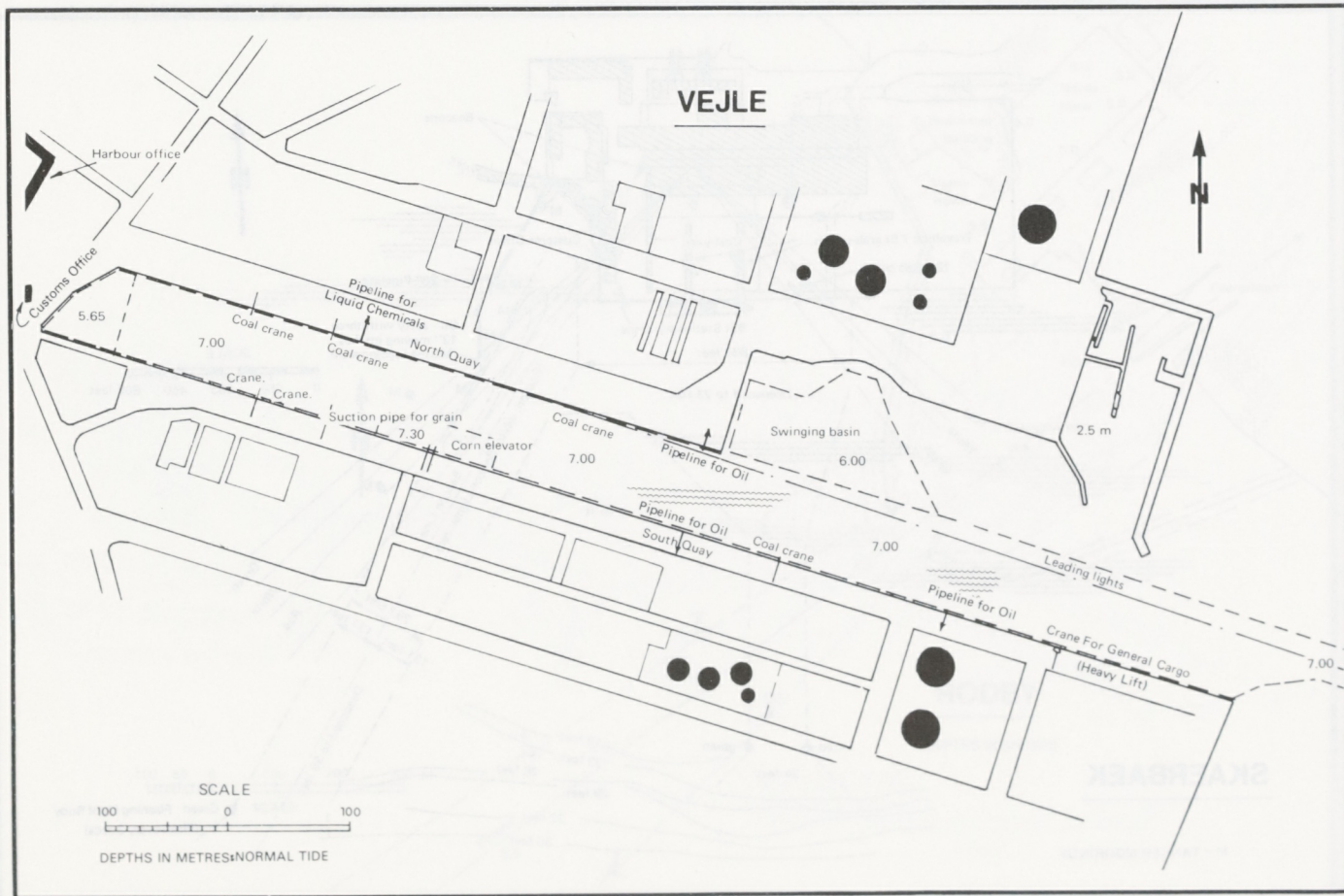
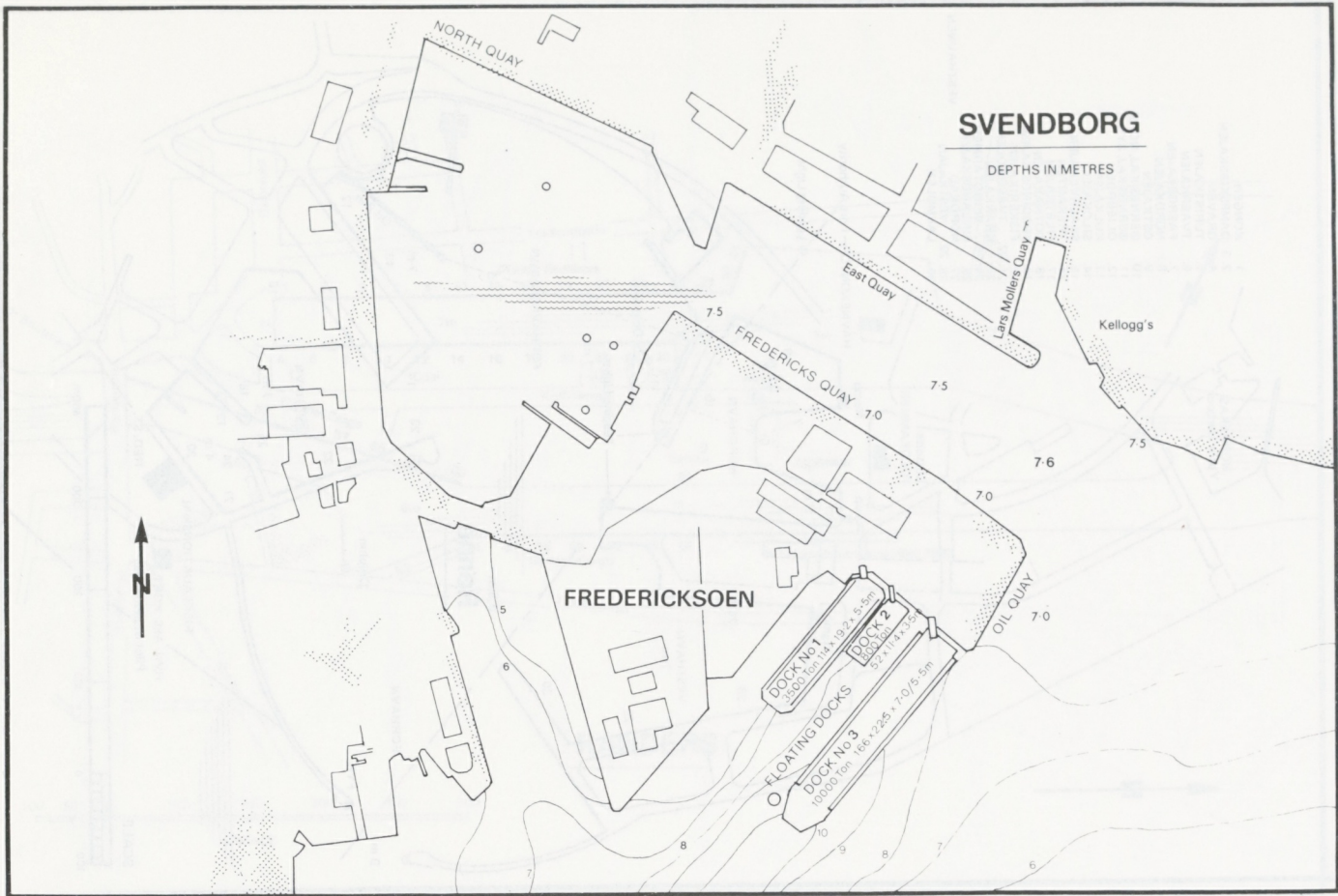
KOGE





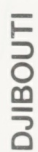
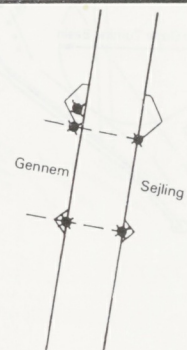
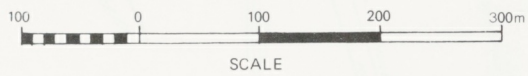




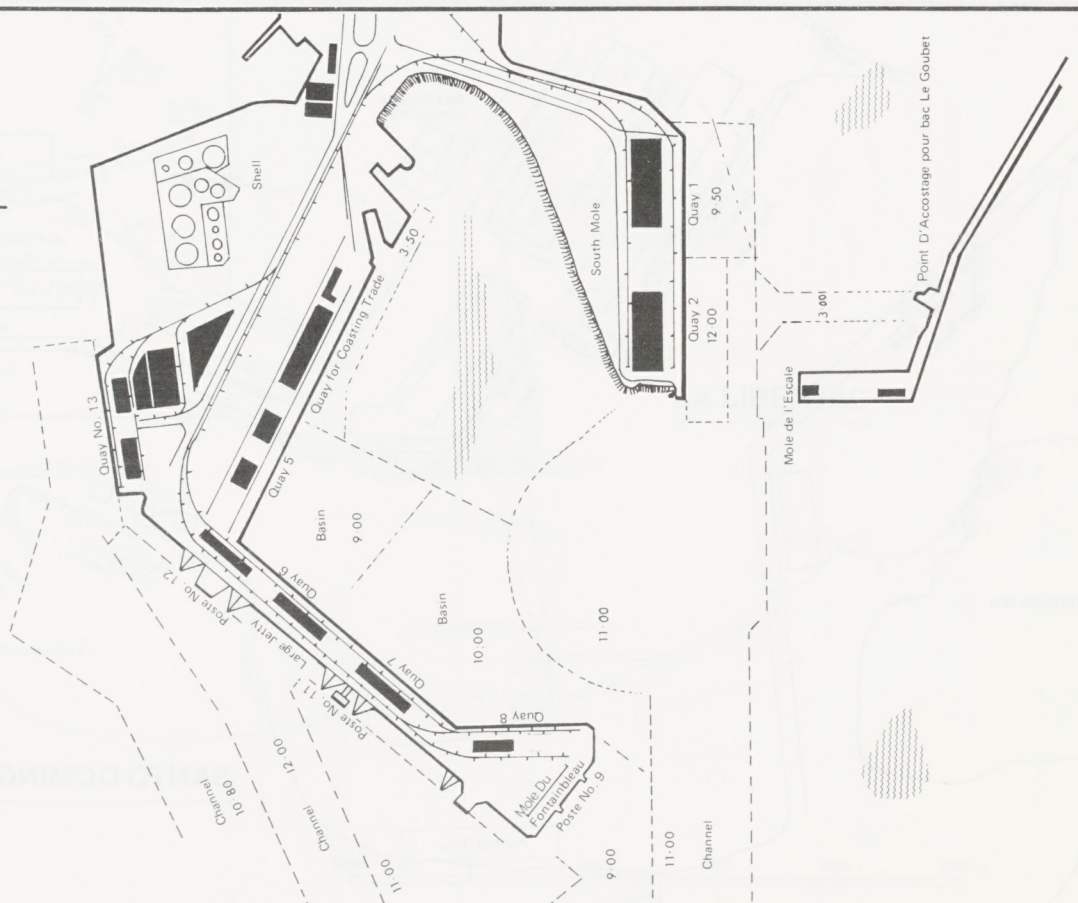




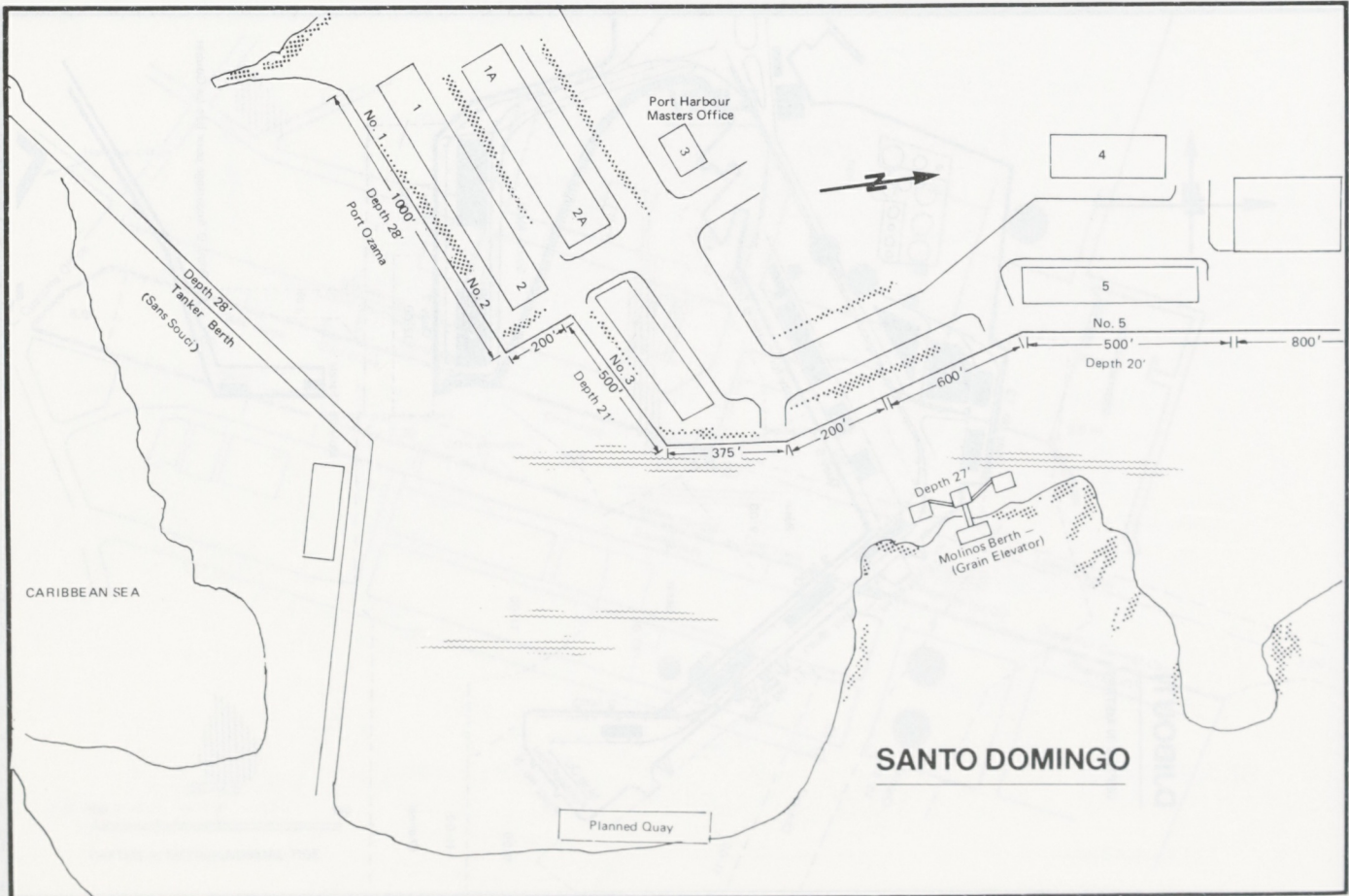
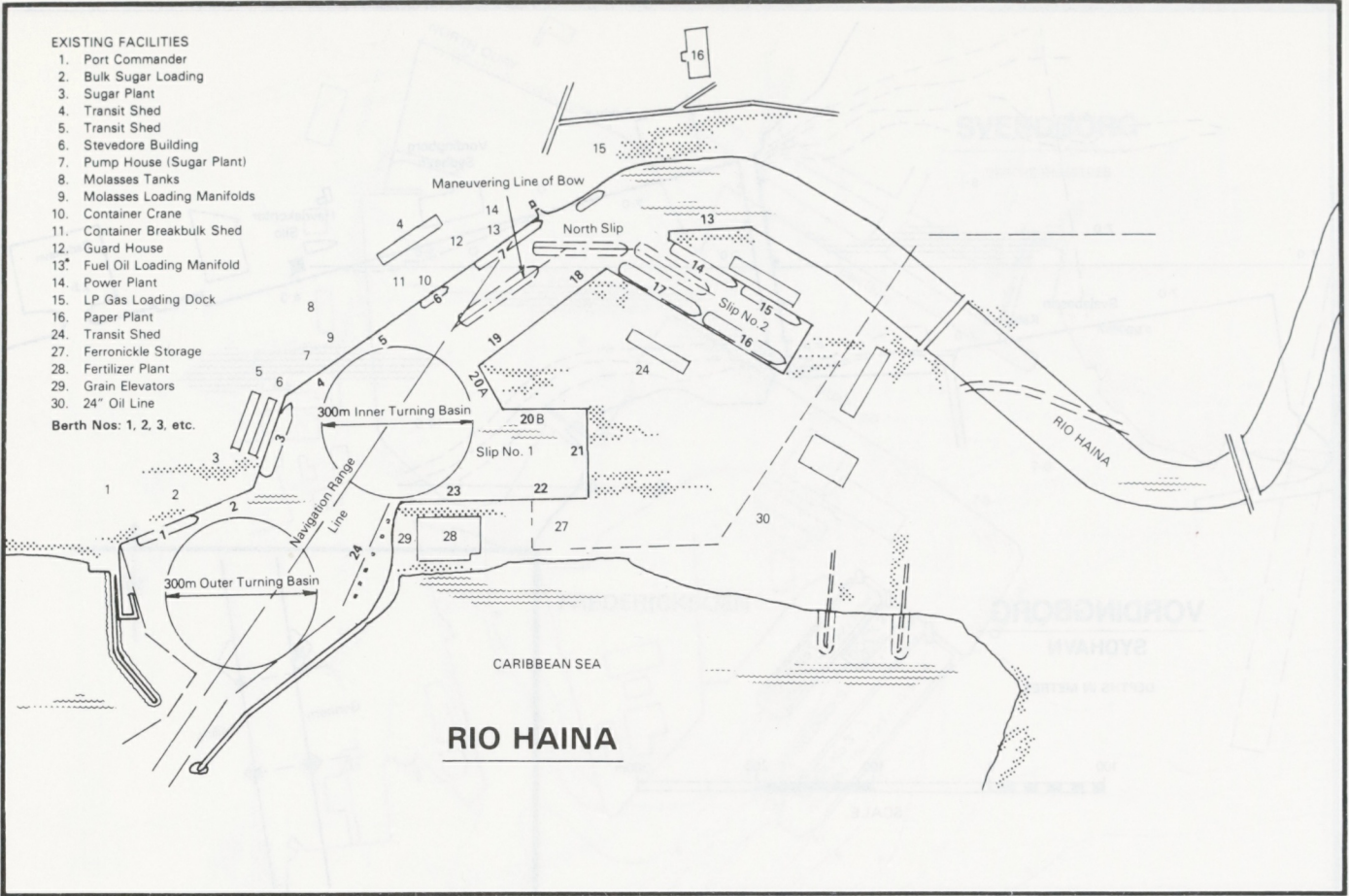
DEPTHS IN METRES

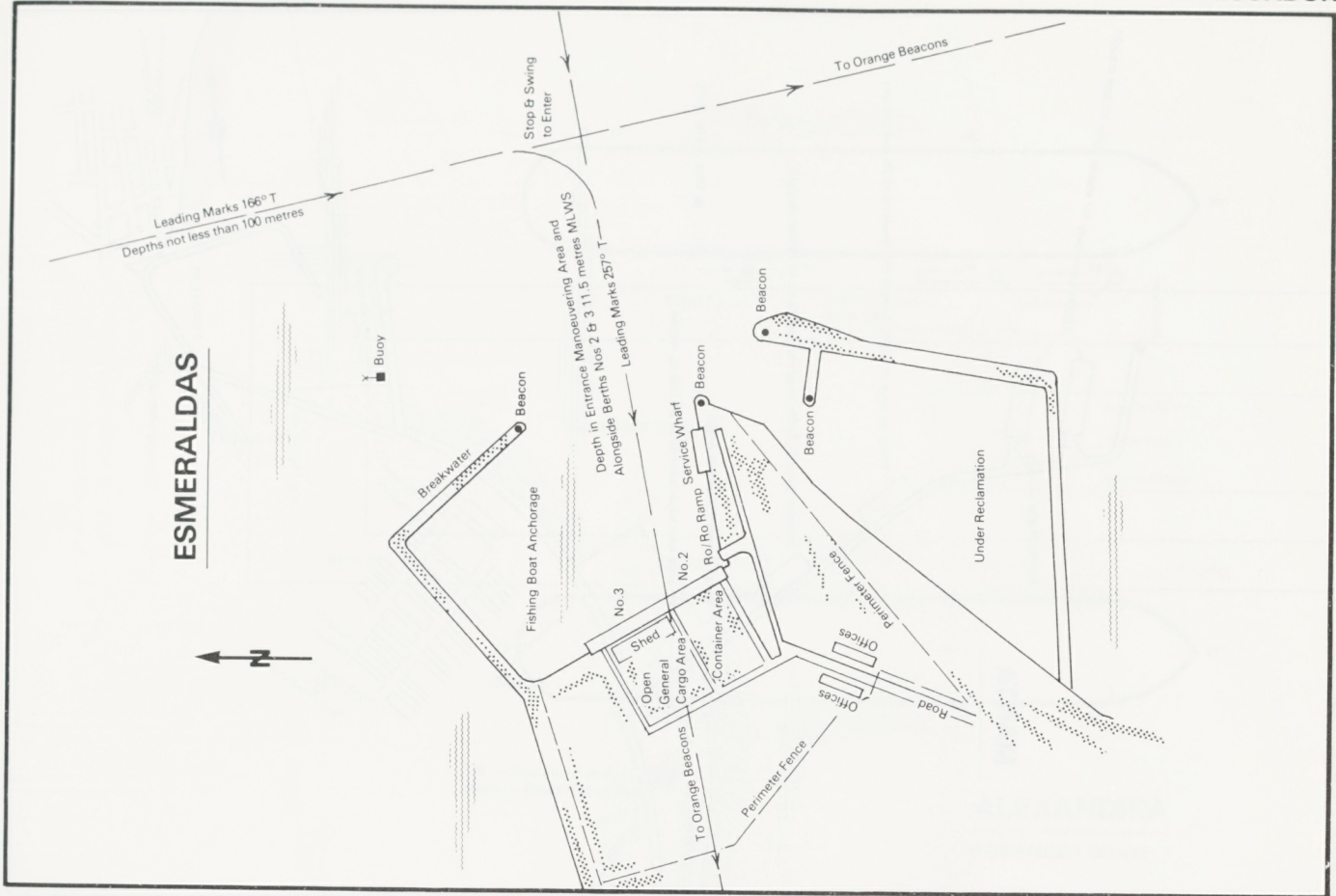


DEPTHS IN METRES

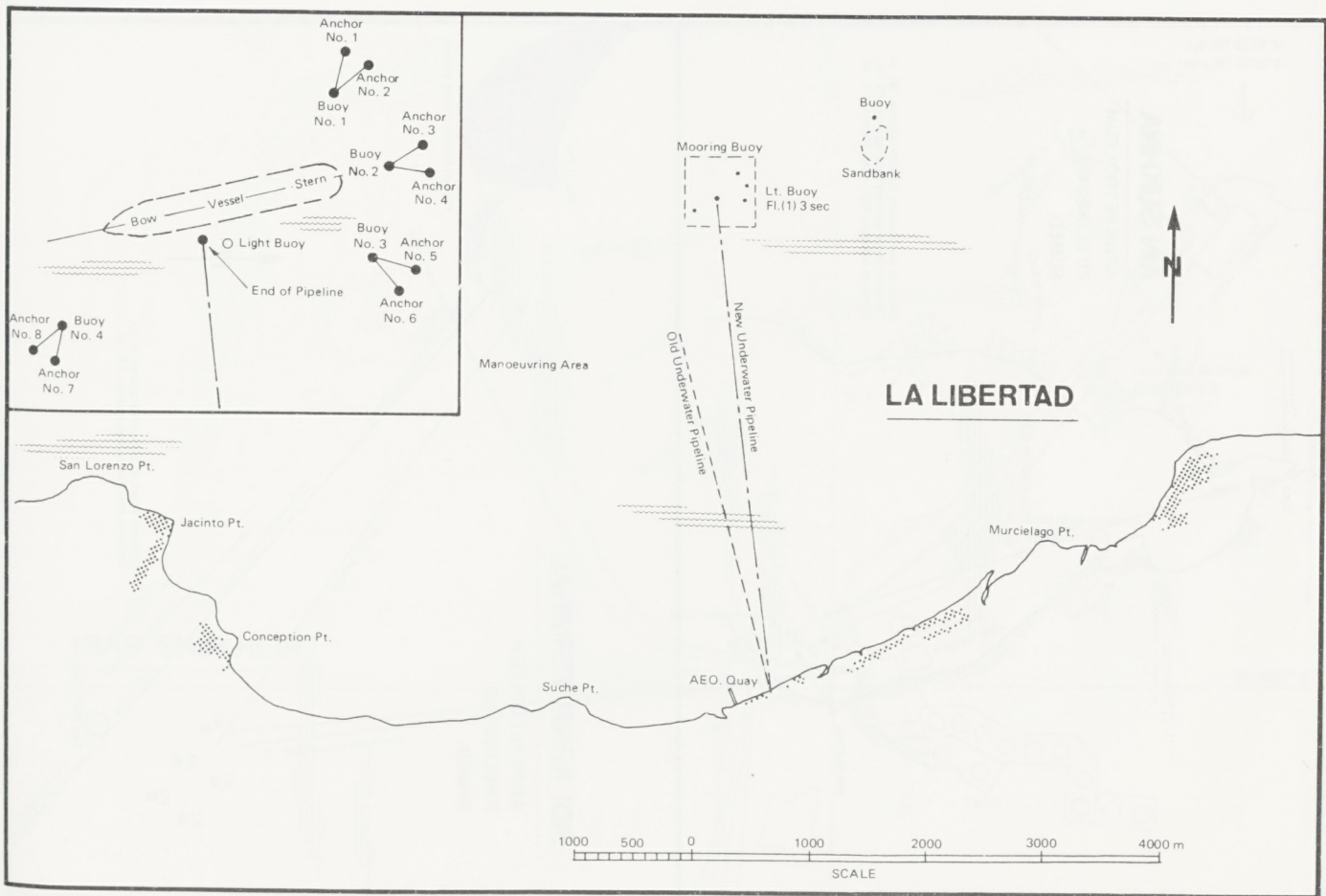


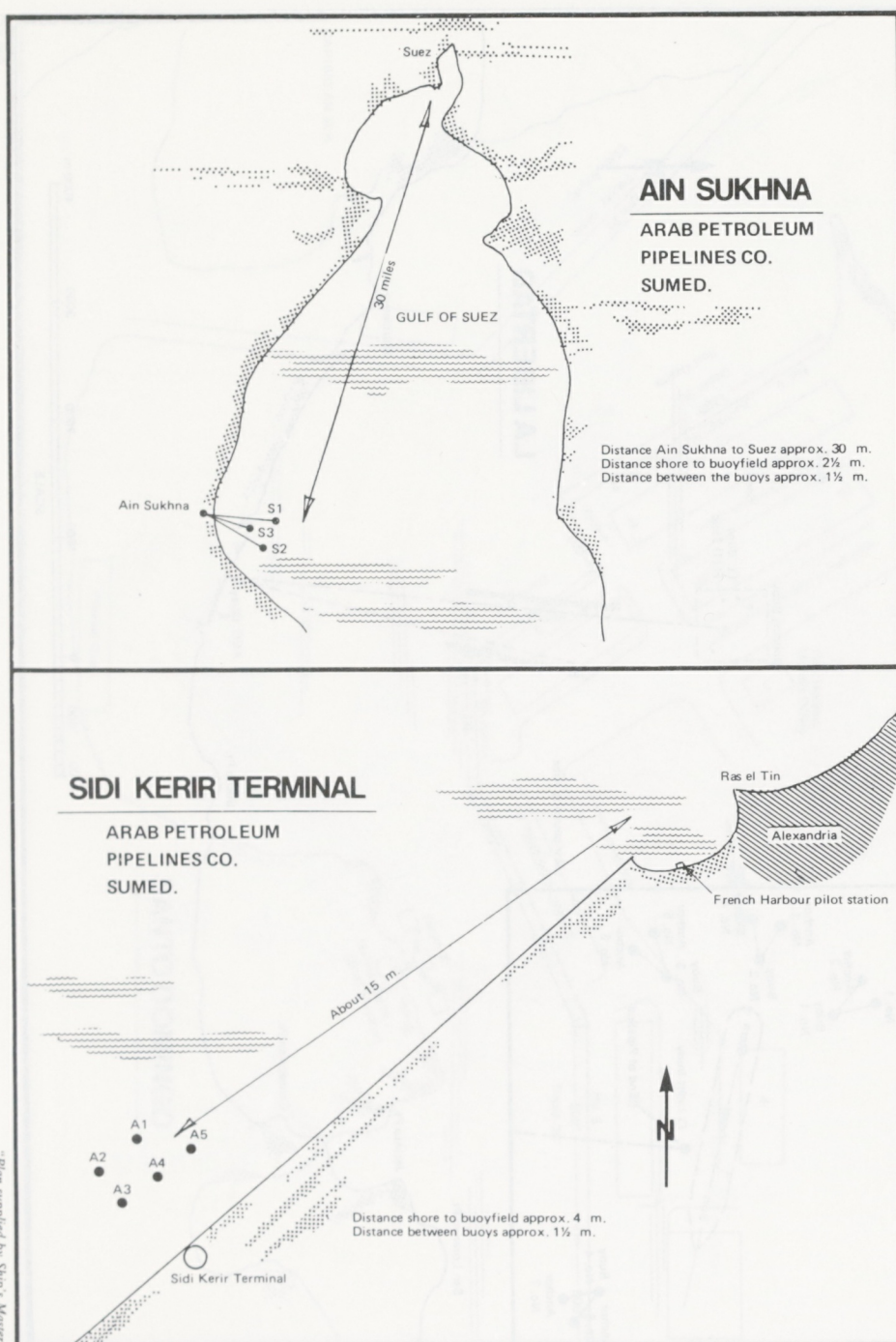
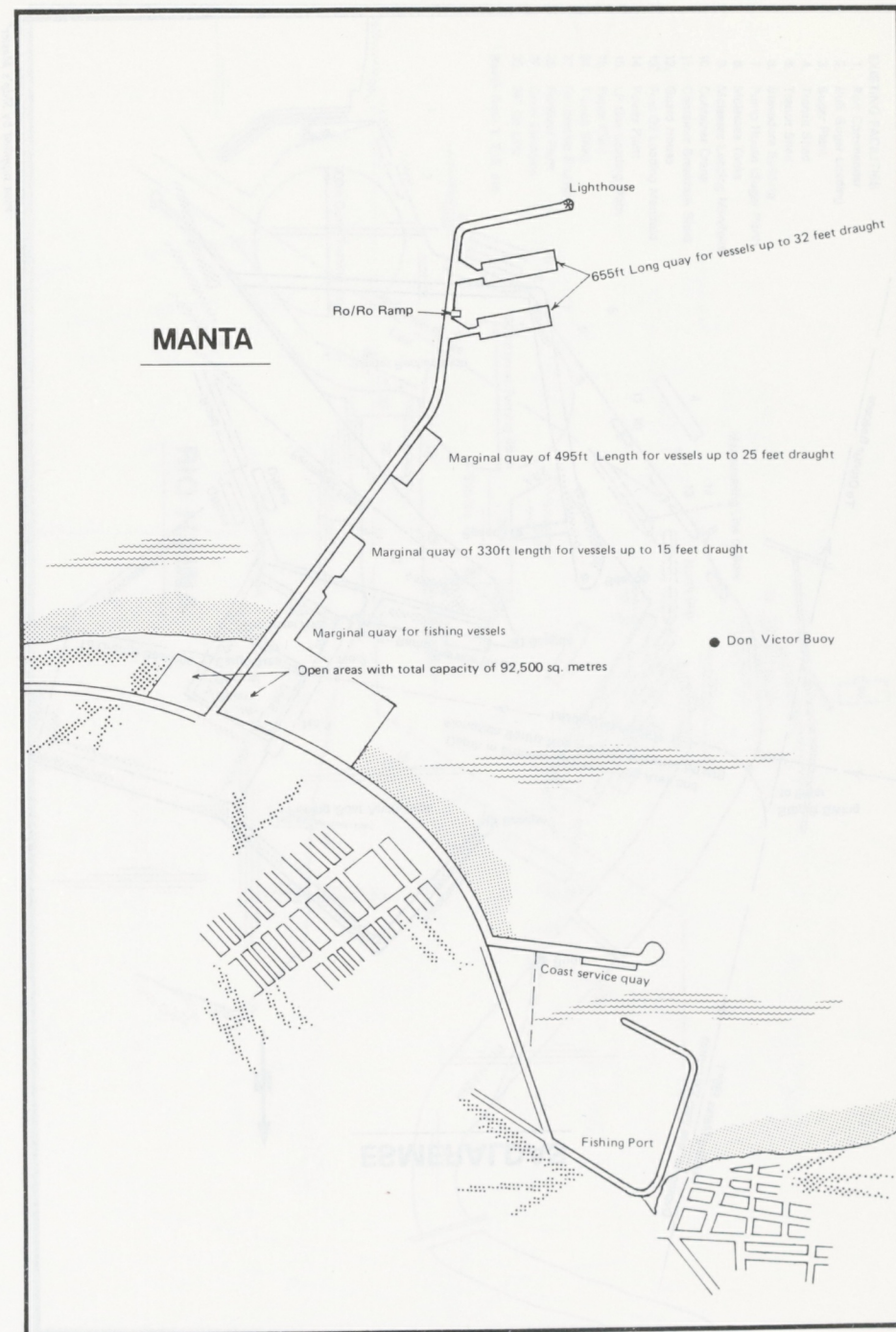
DOMINICAN REPUBLIC

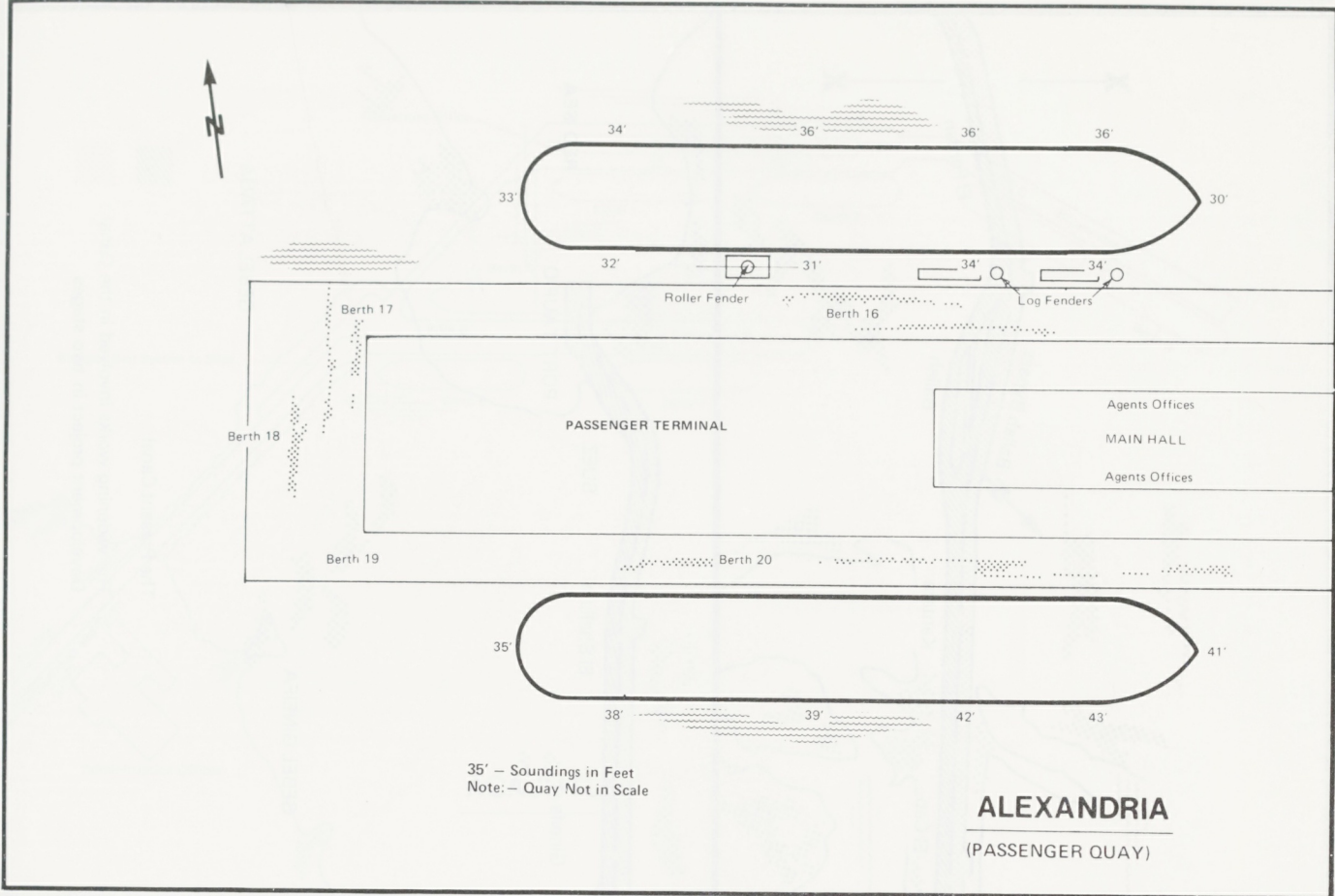




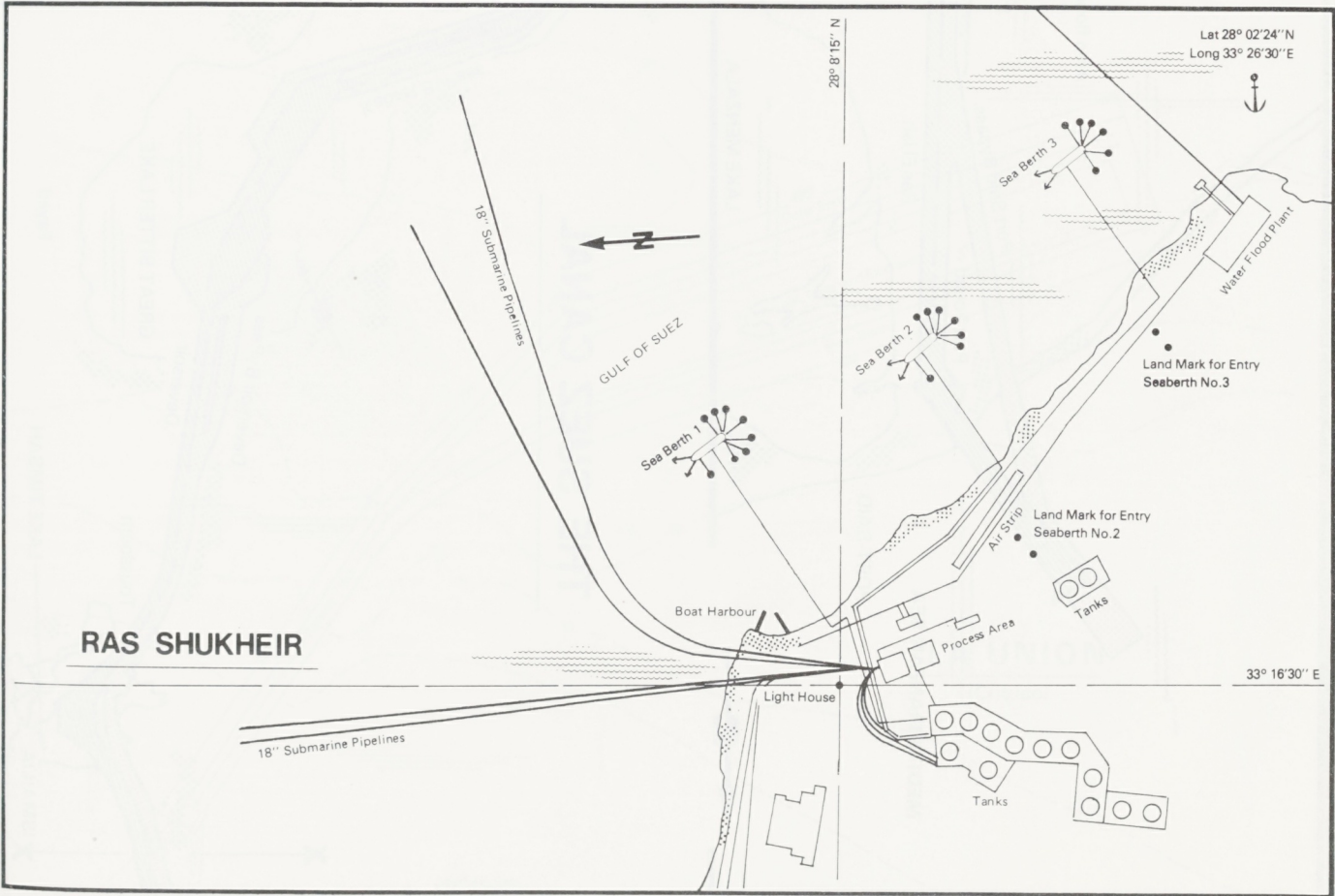
"Plan supplied by Ship's Master"

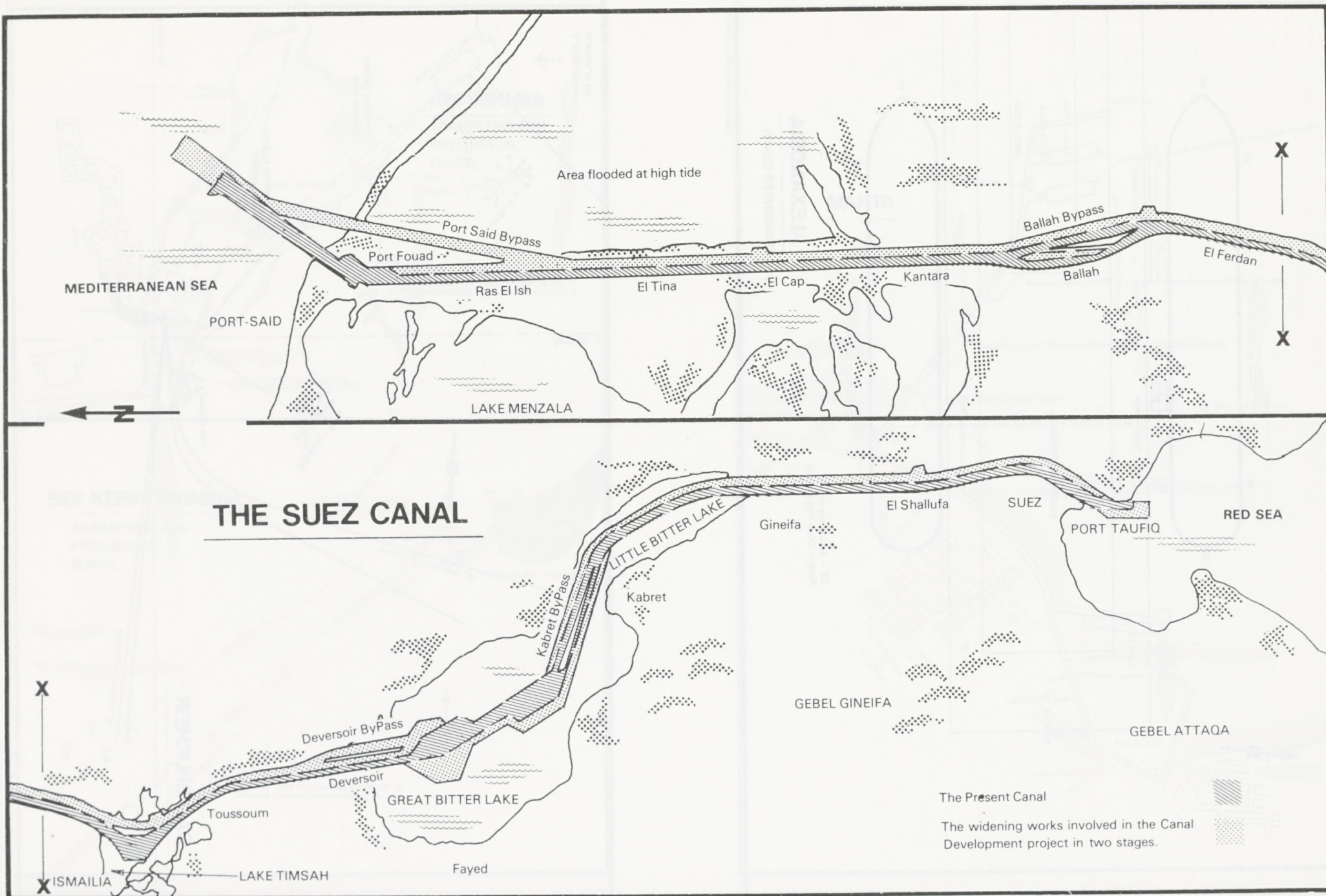


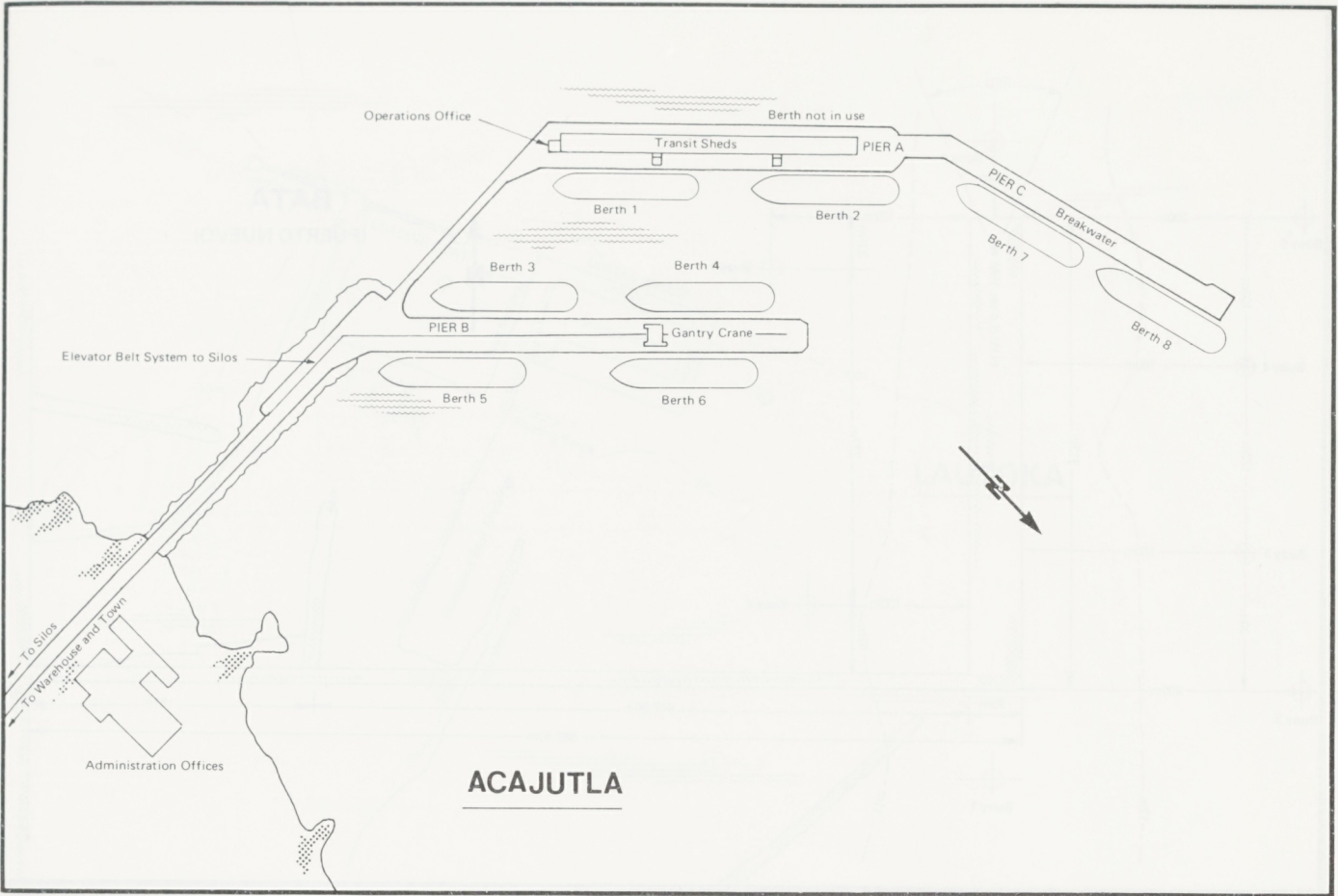


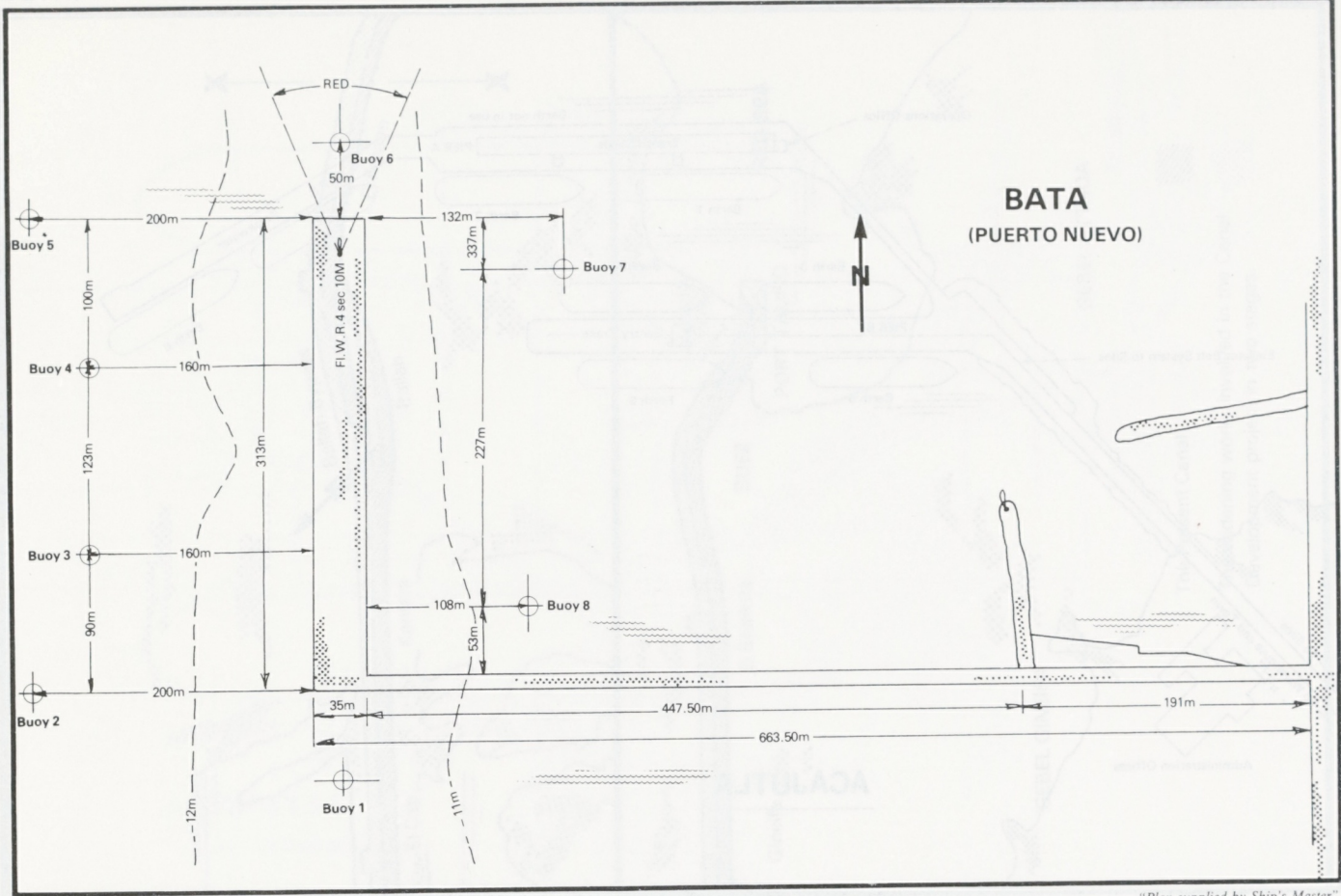


"Plan supplied by Ship's Master"

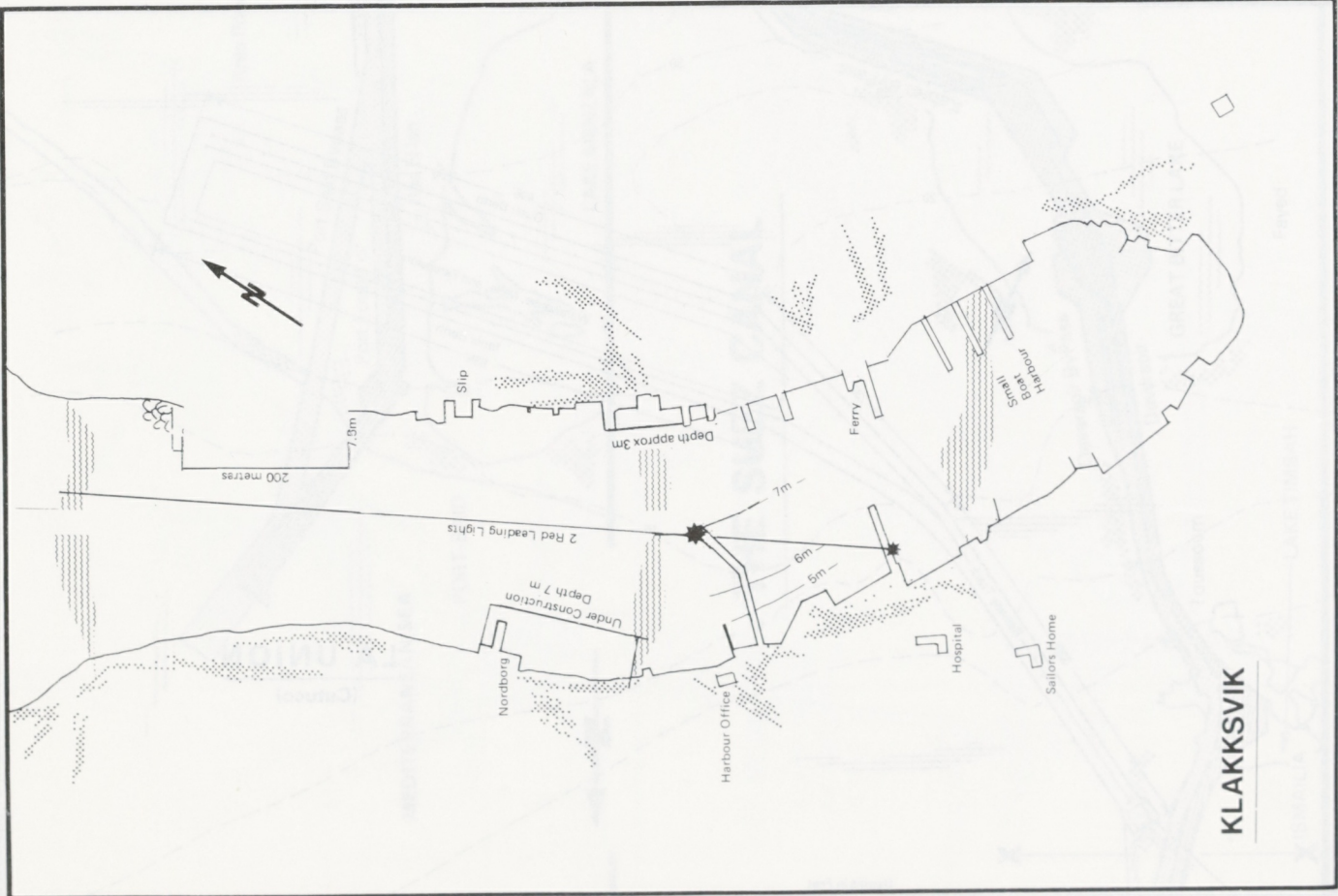


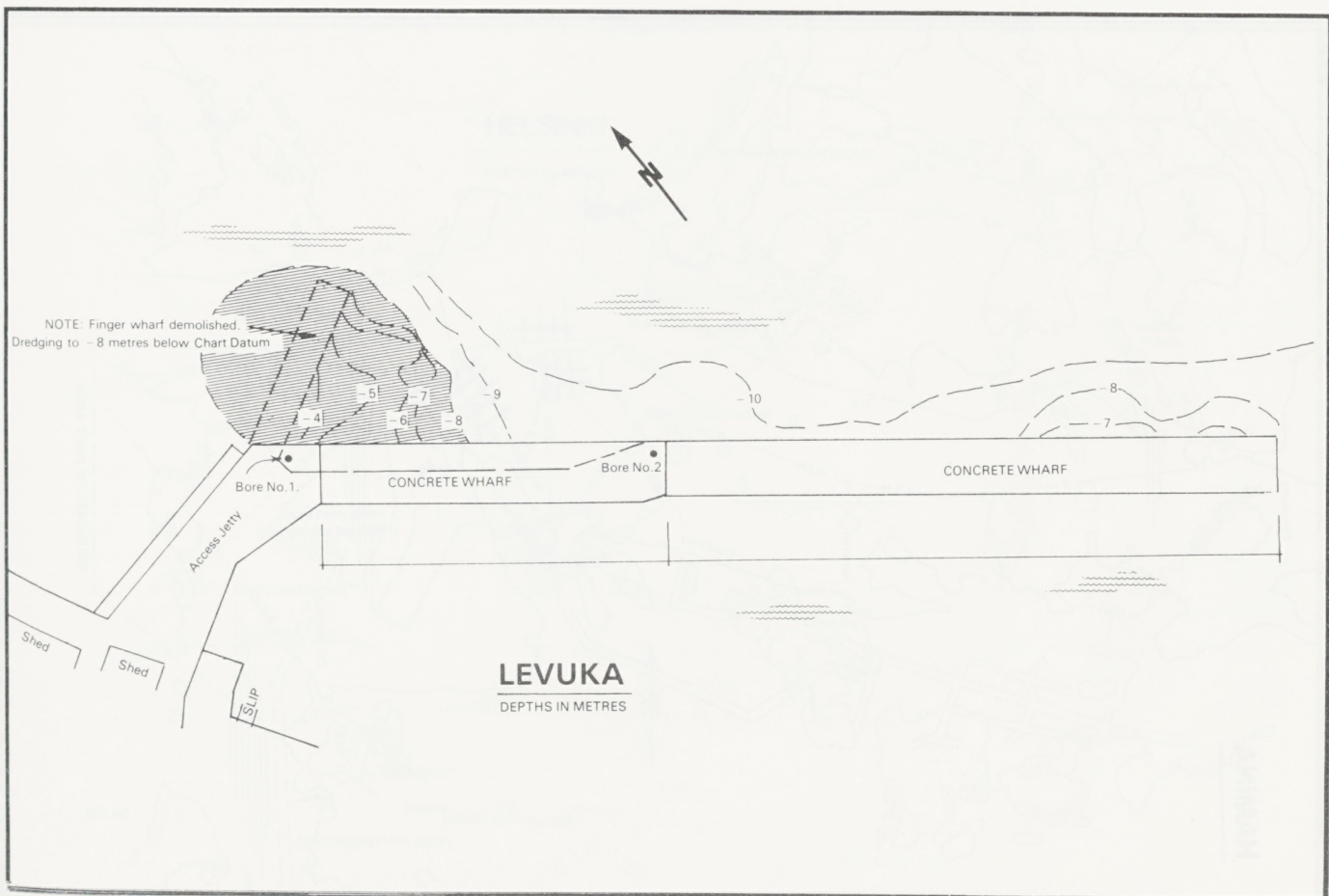
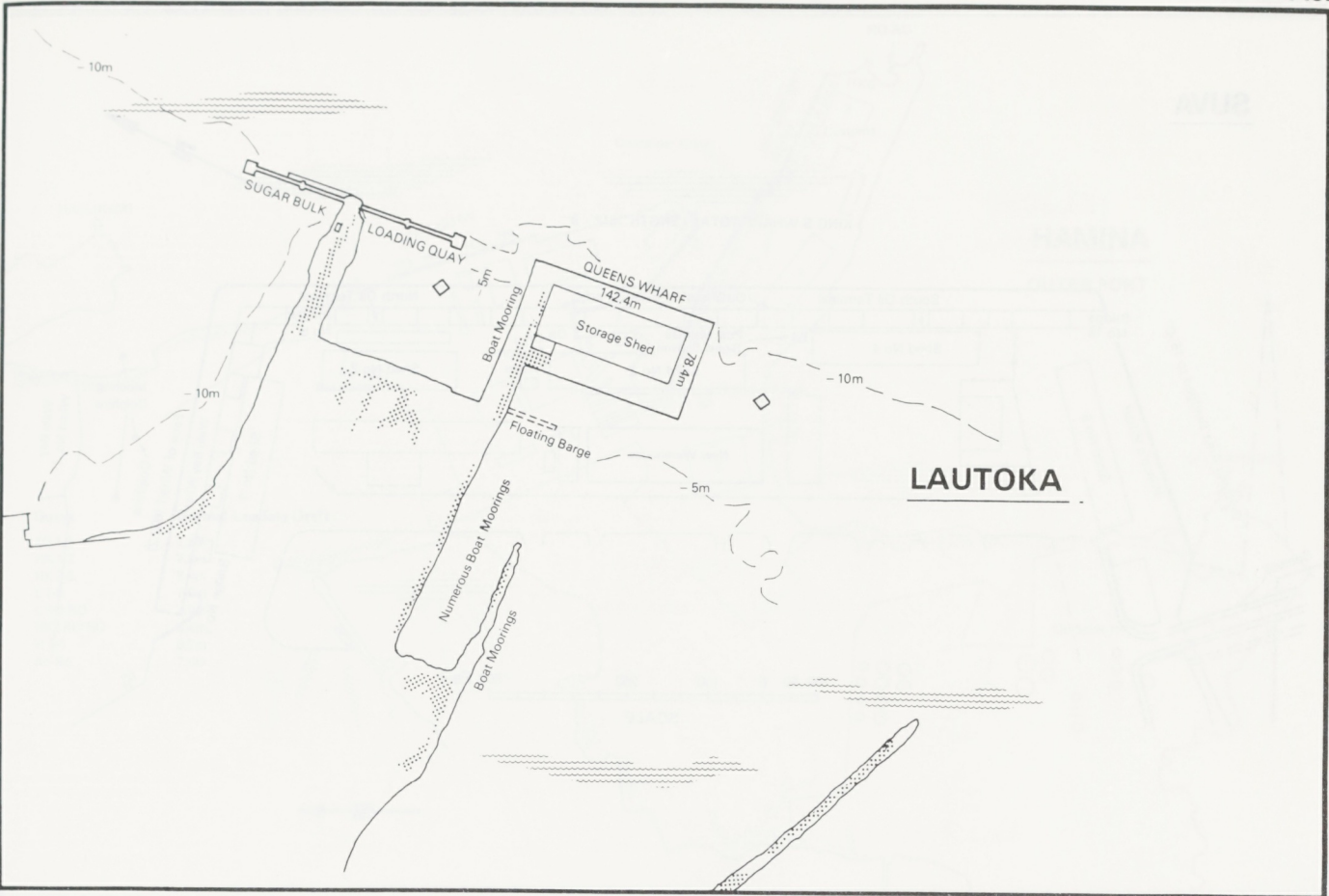




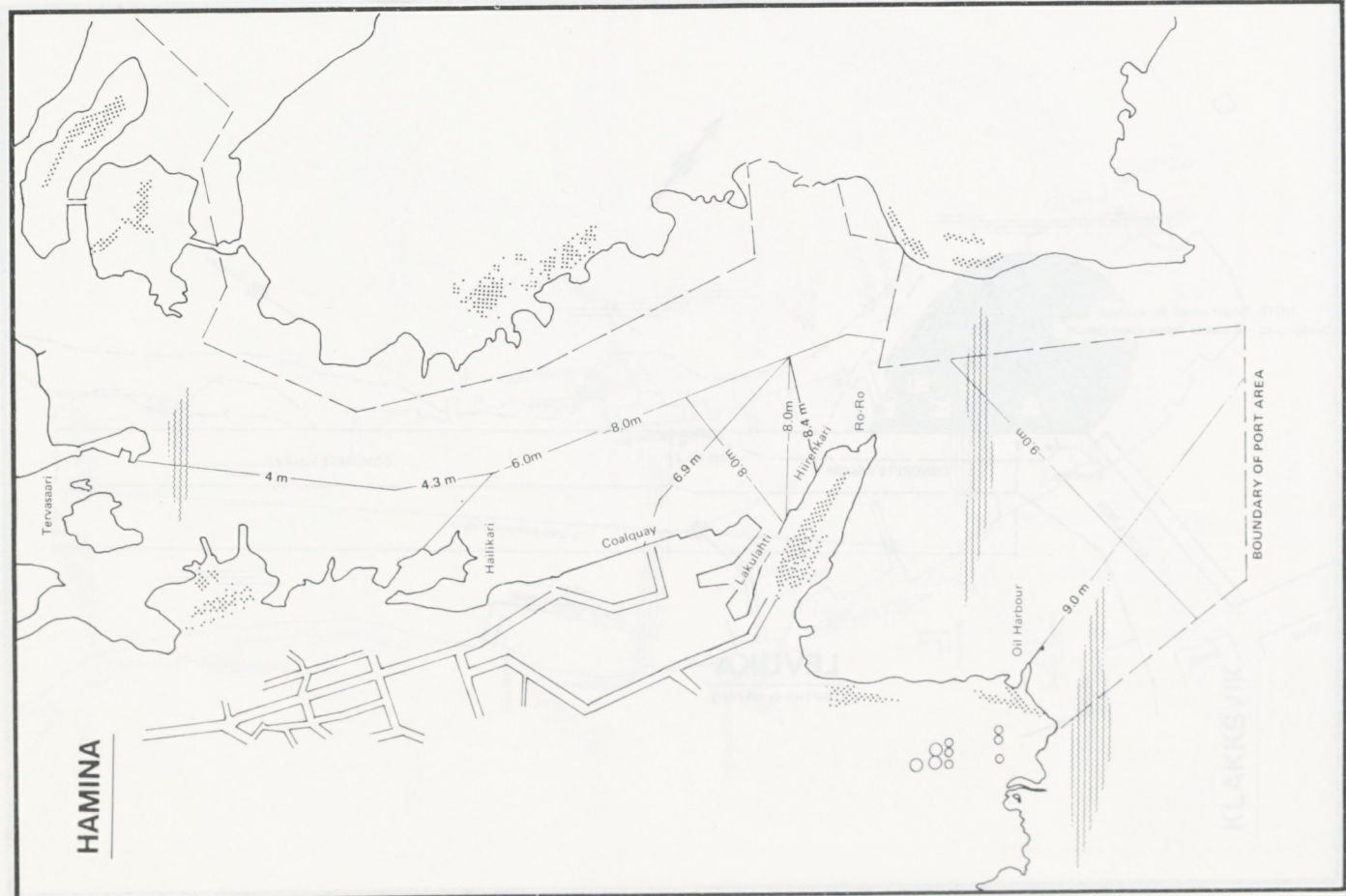
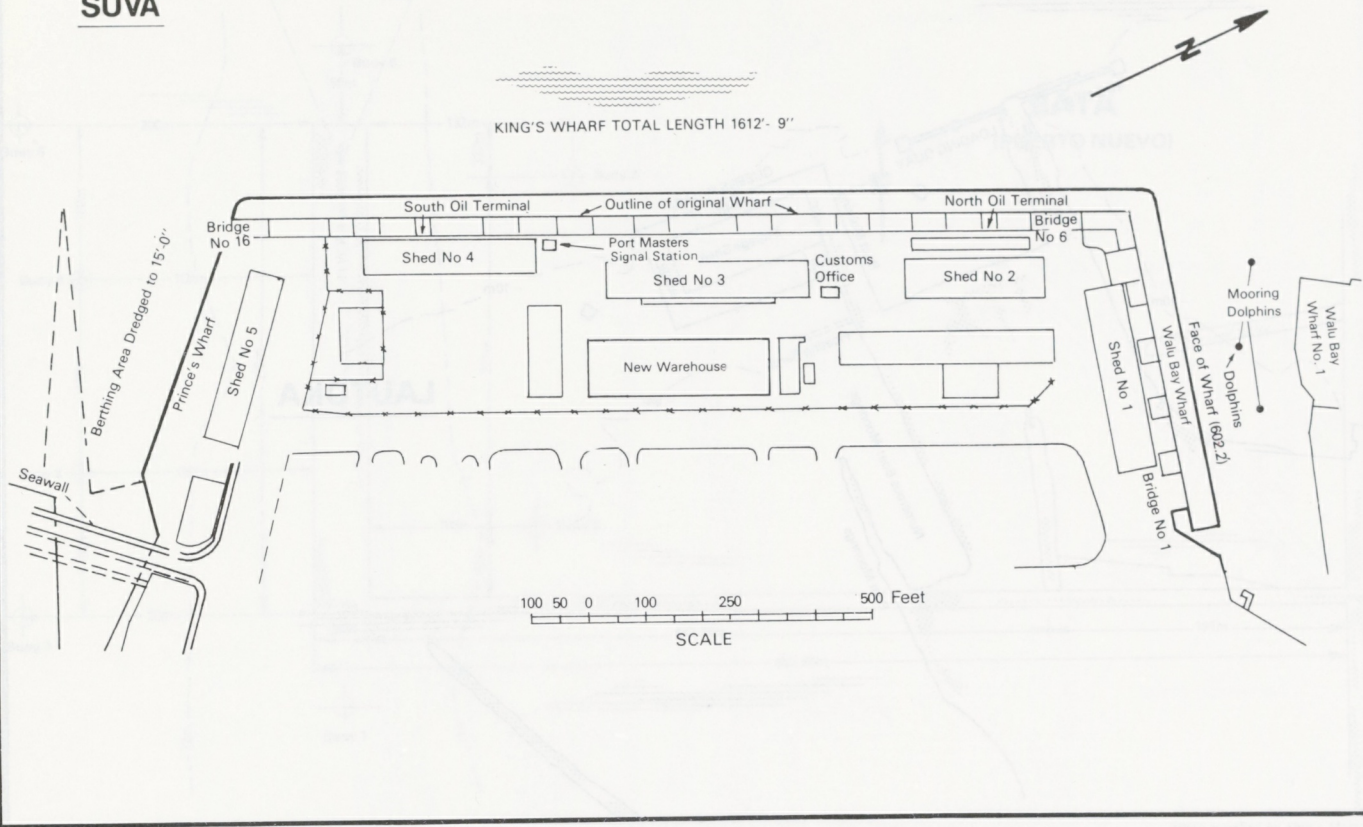


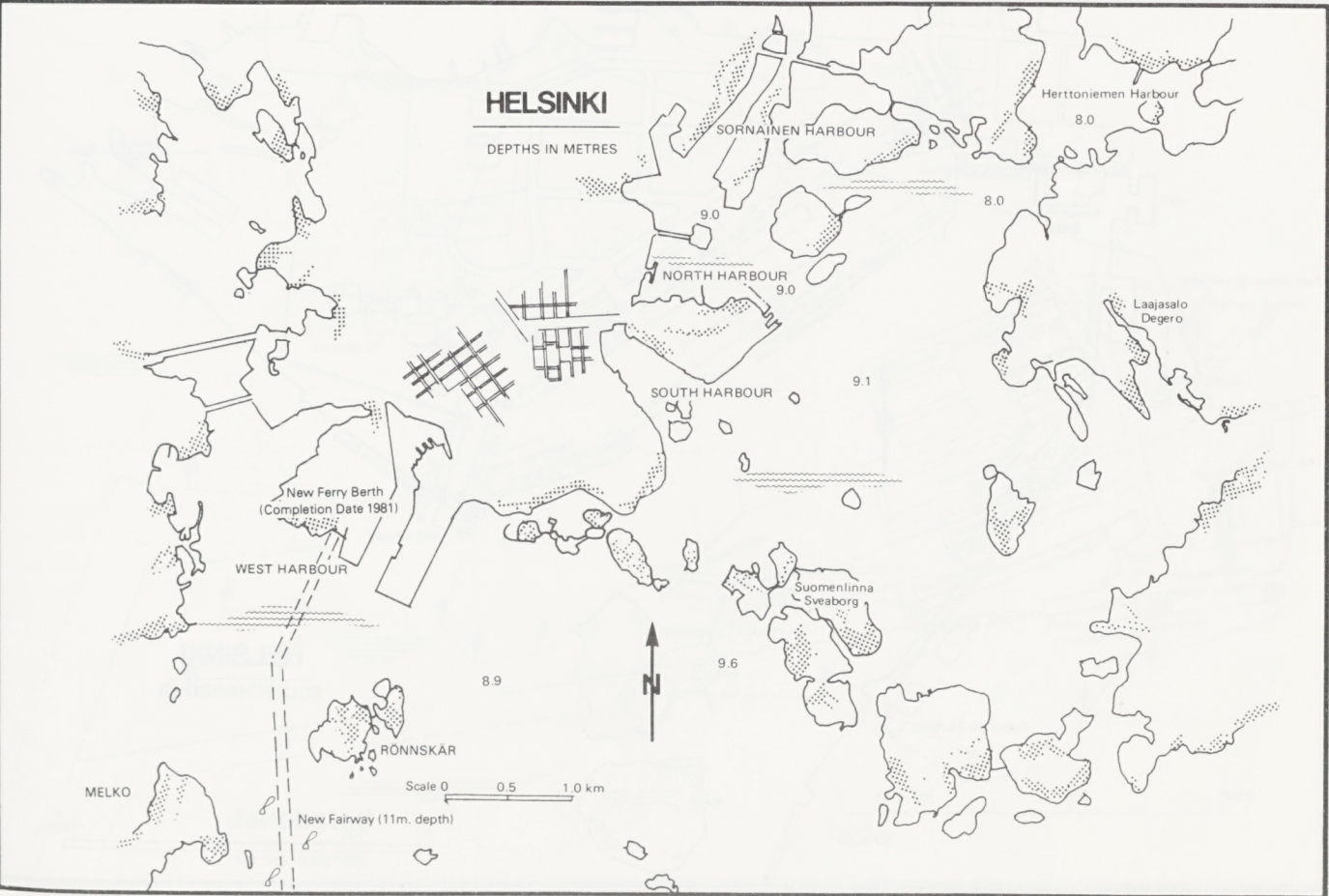
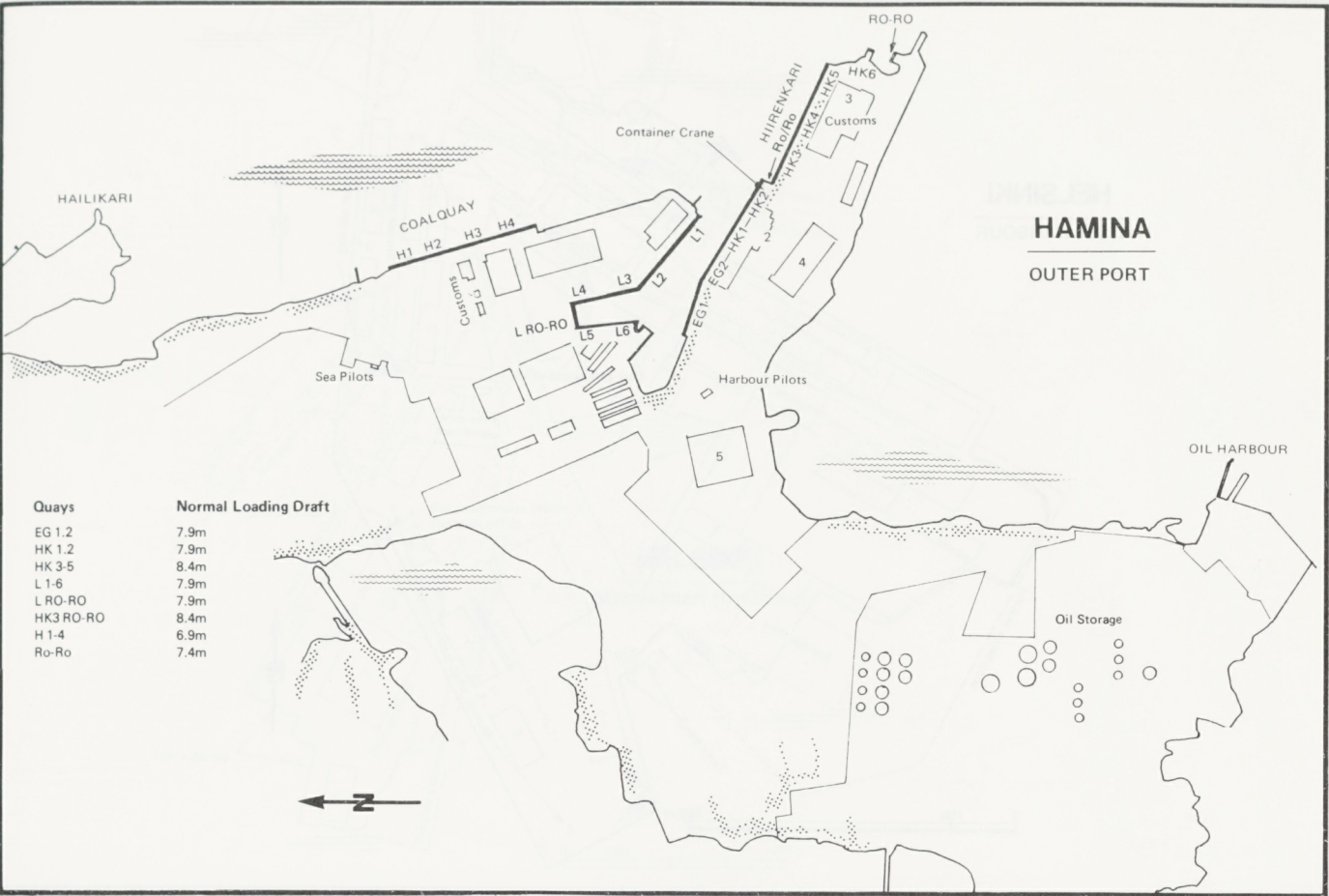
"Plan supplied by Ship's Master"





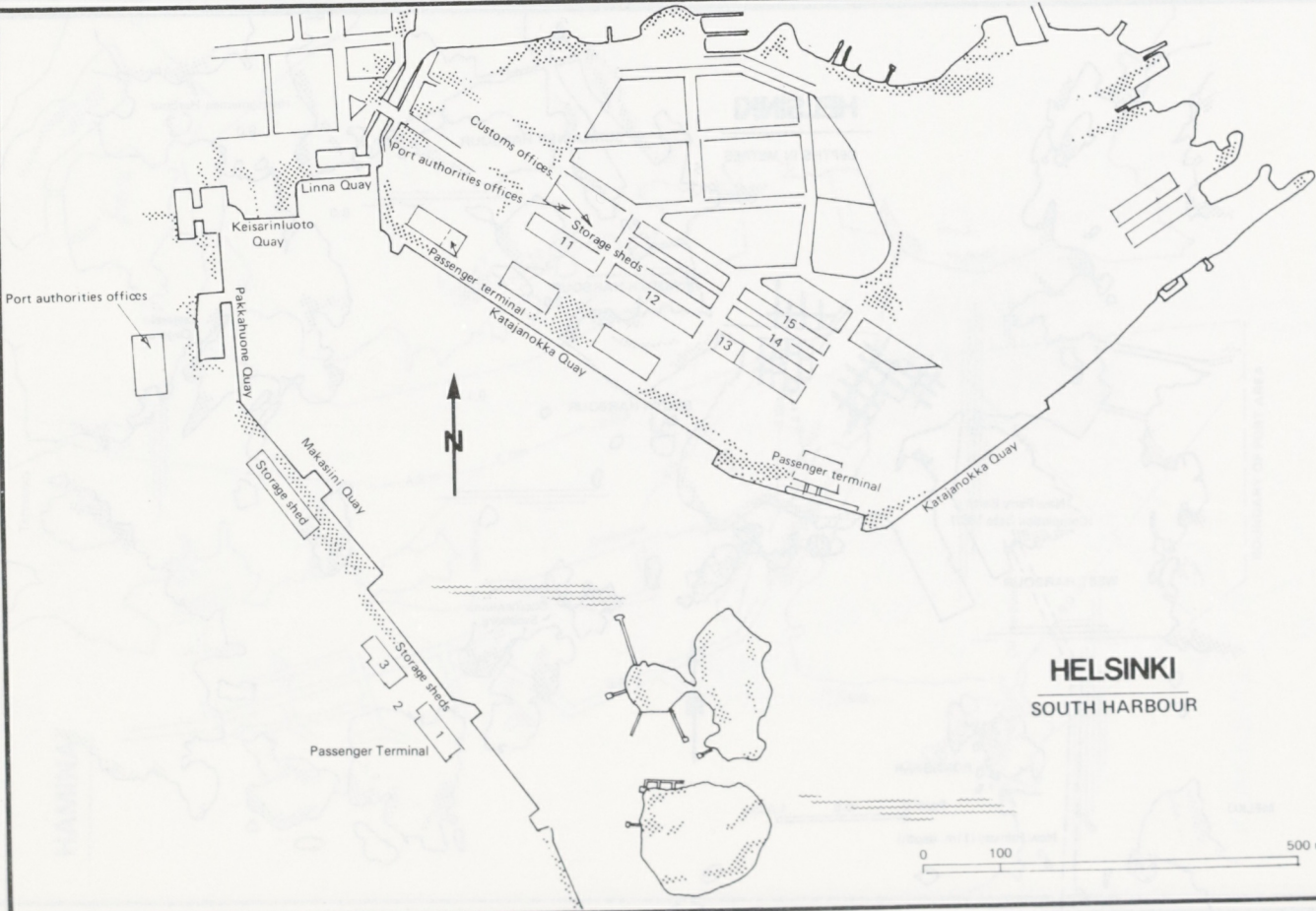
SUVA



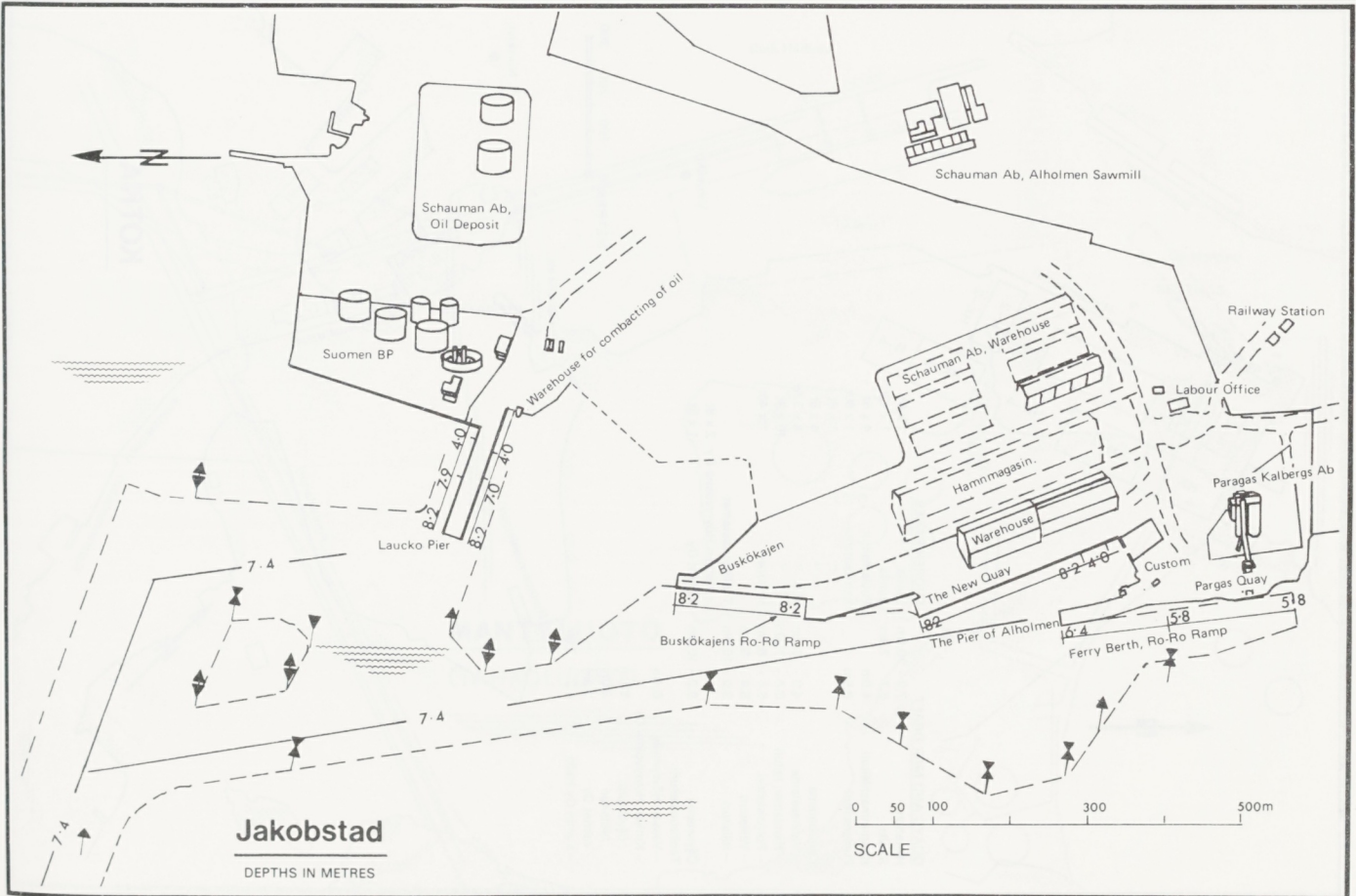


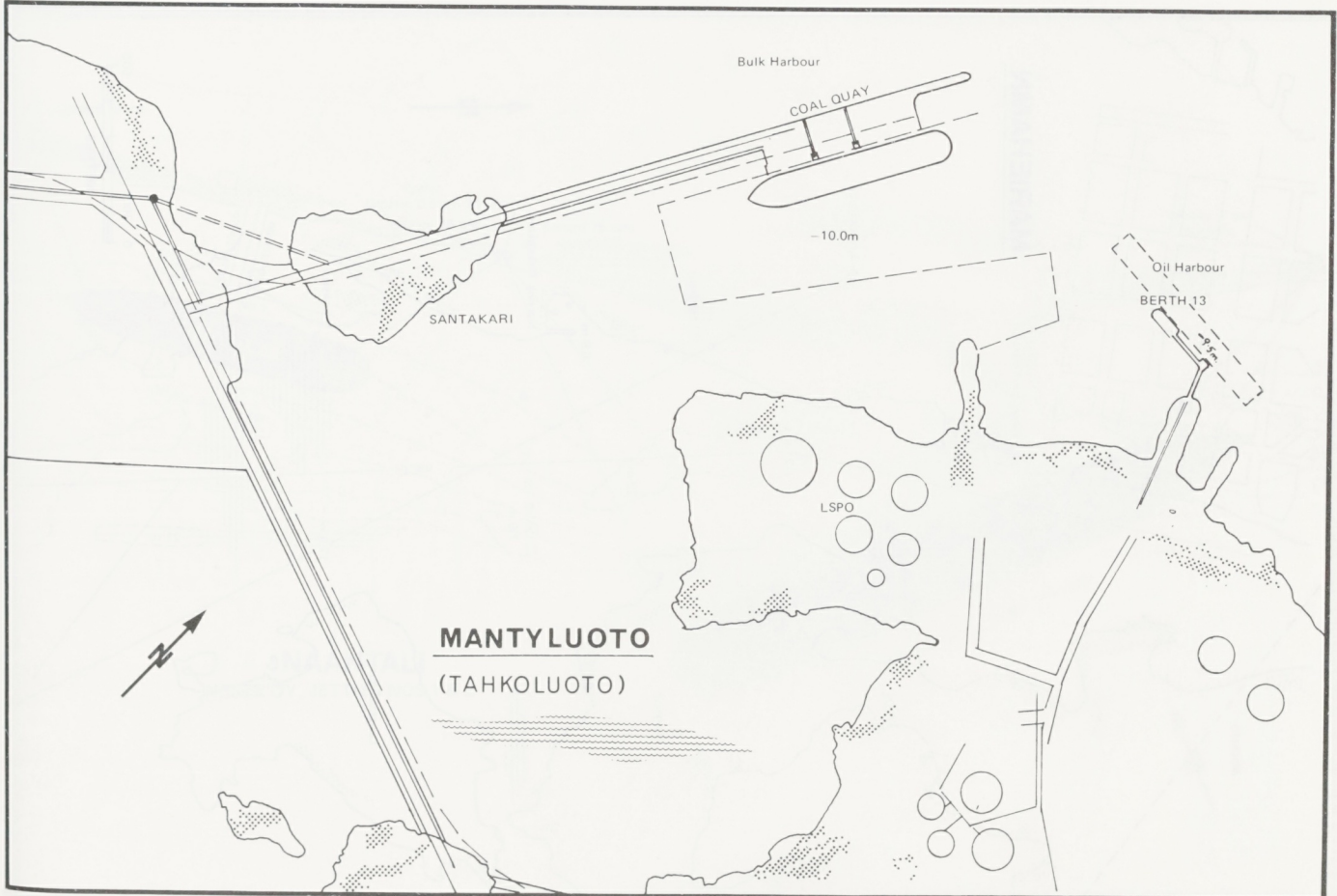
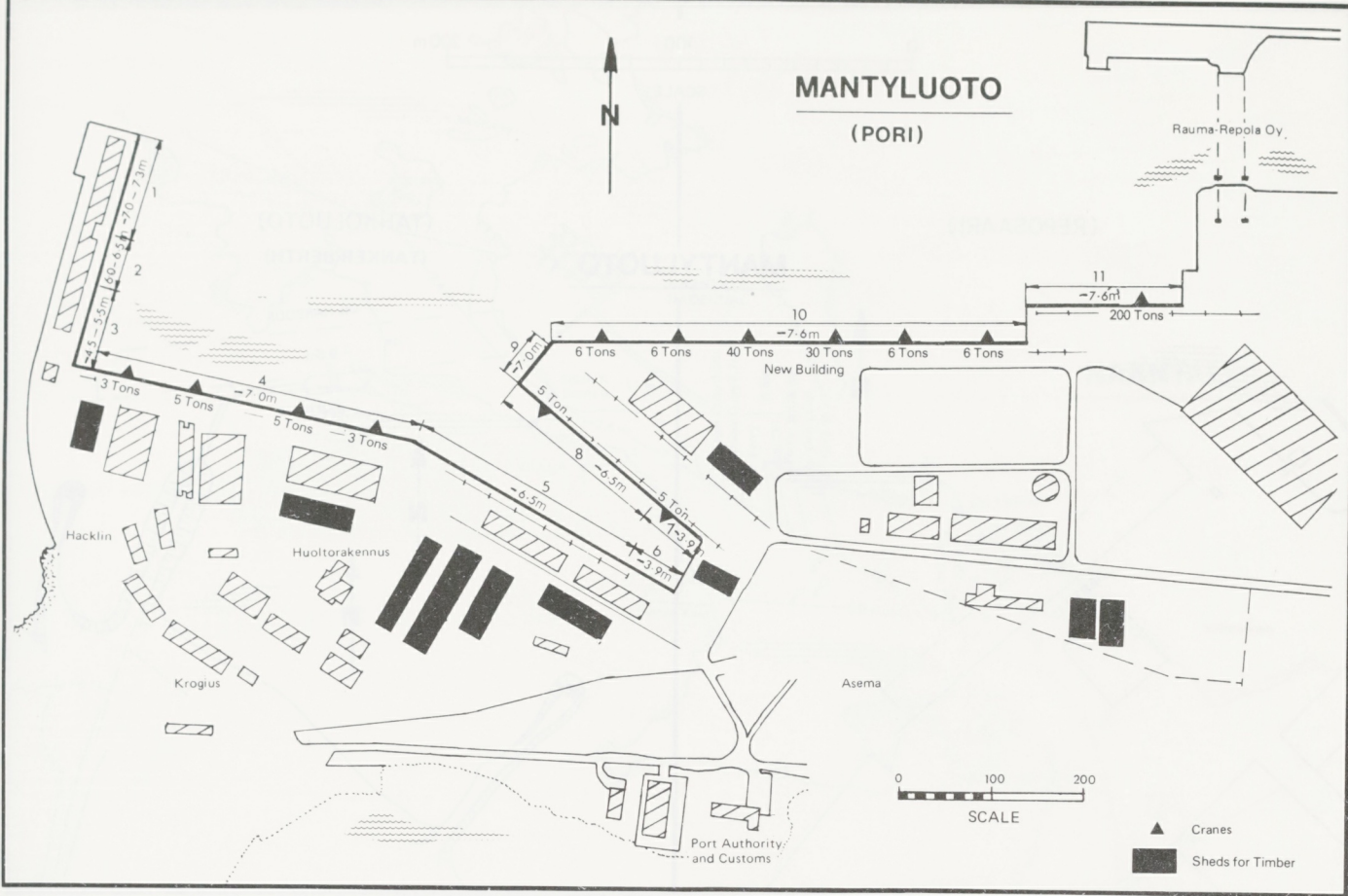
SUVA

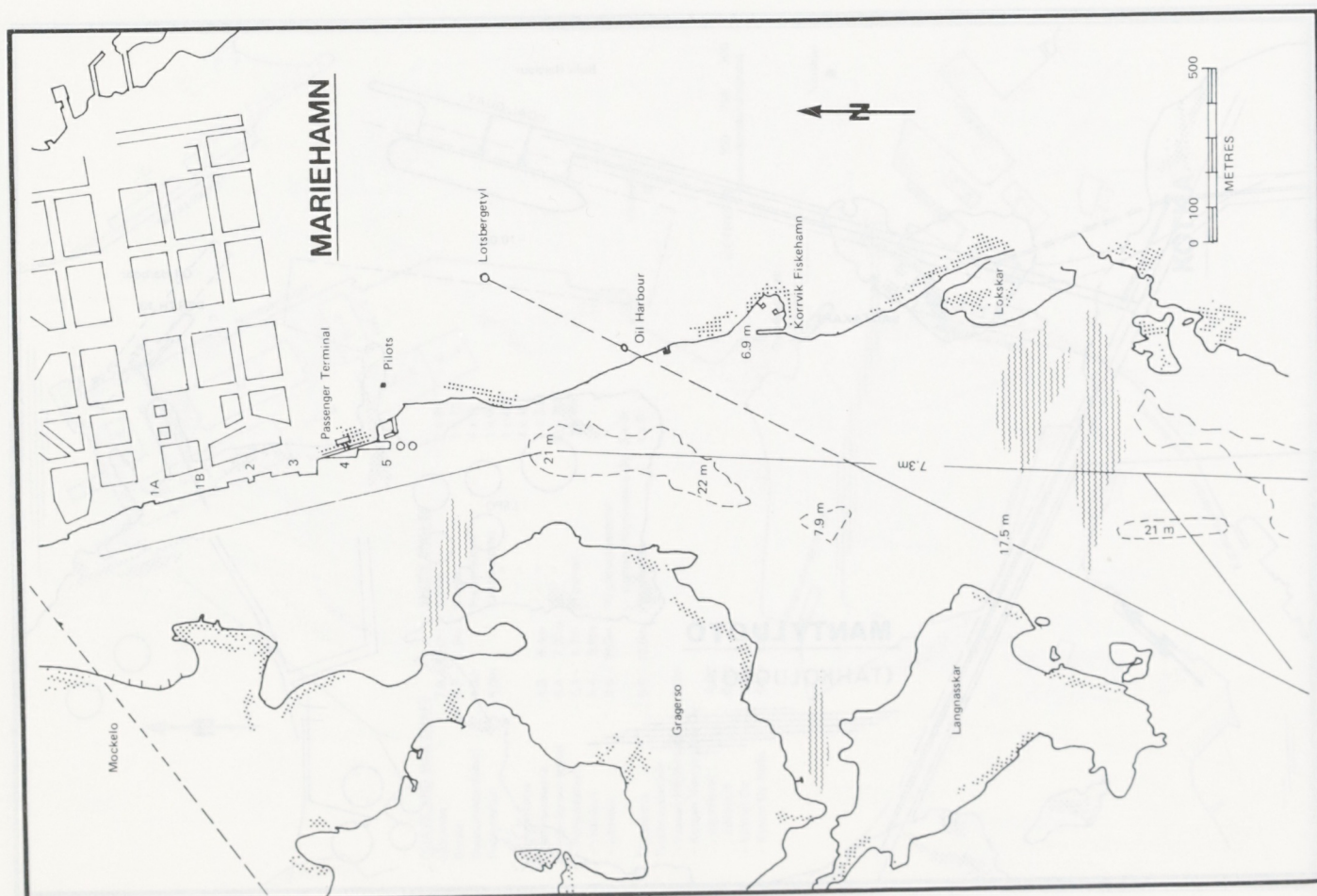
HELSINKI
WEST HARBOUR

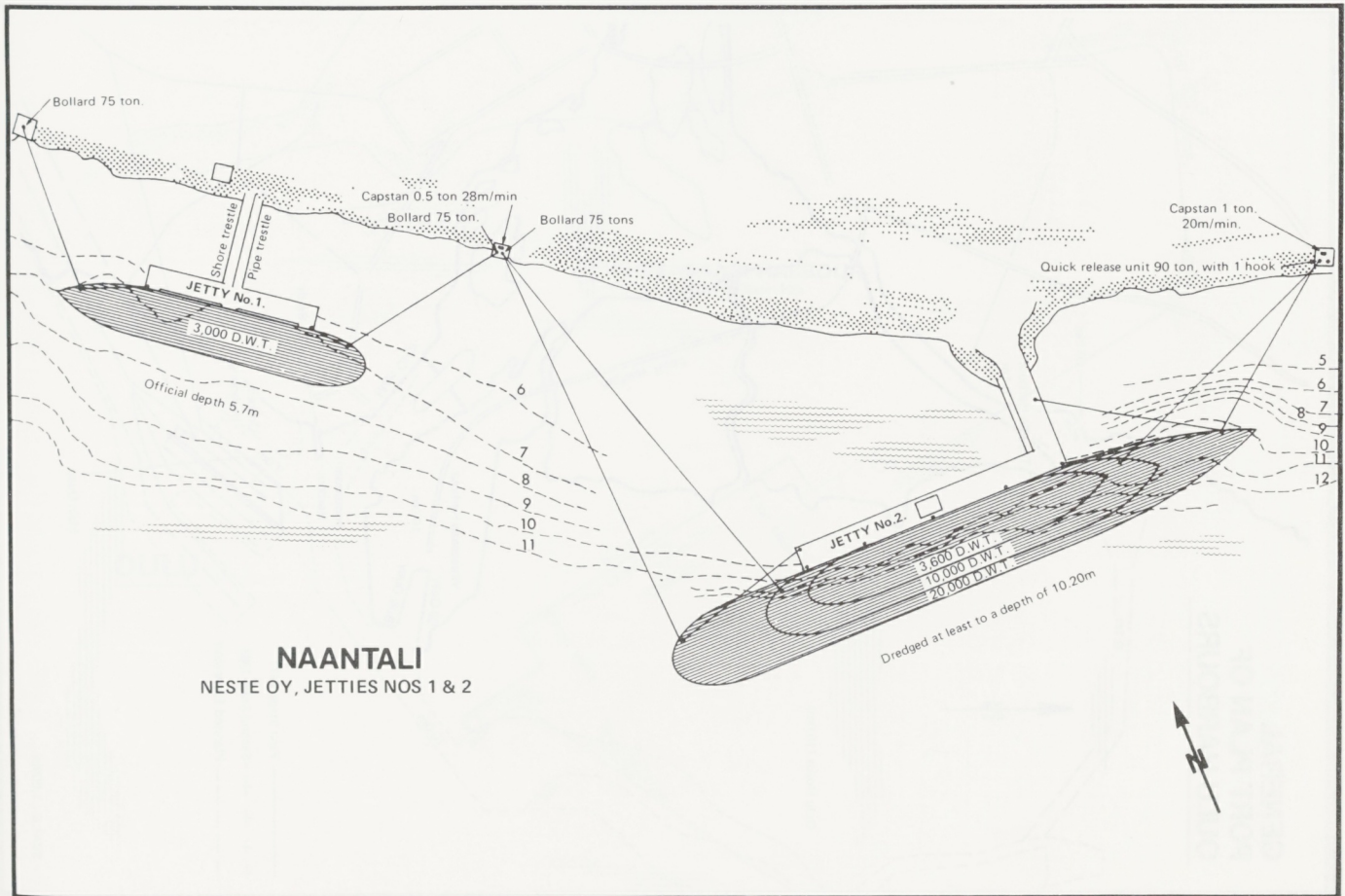
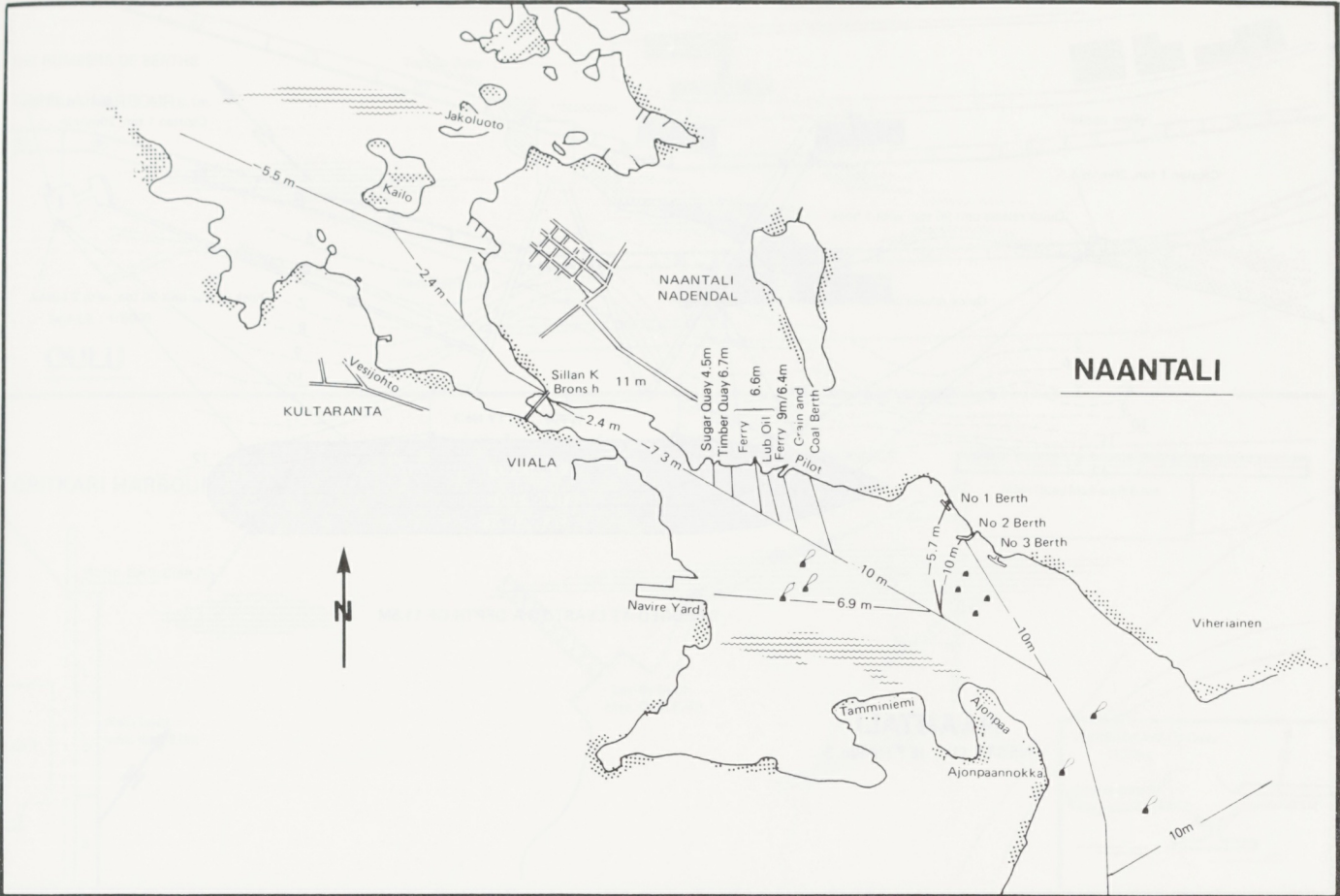


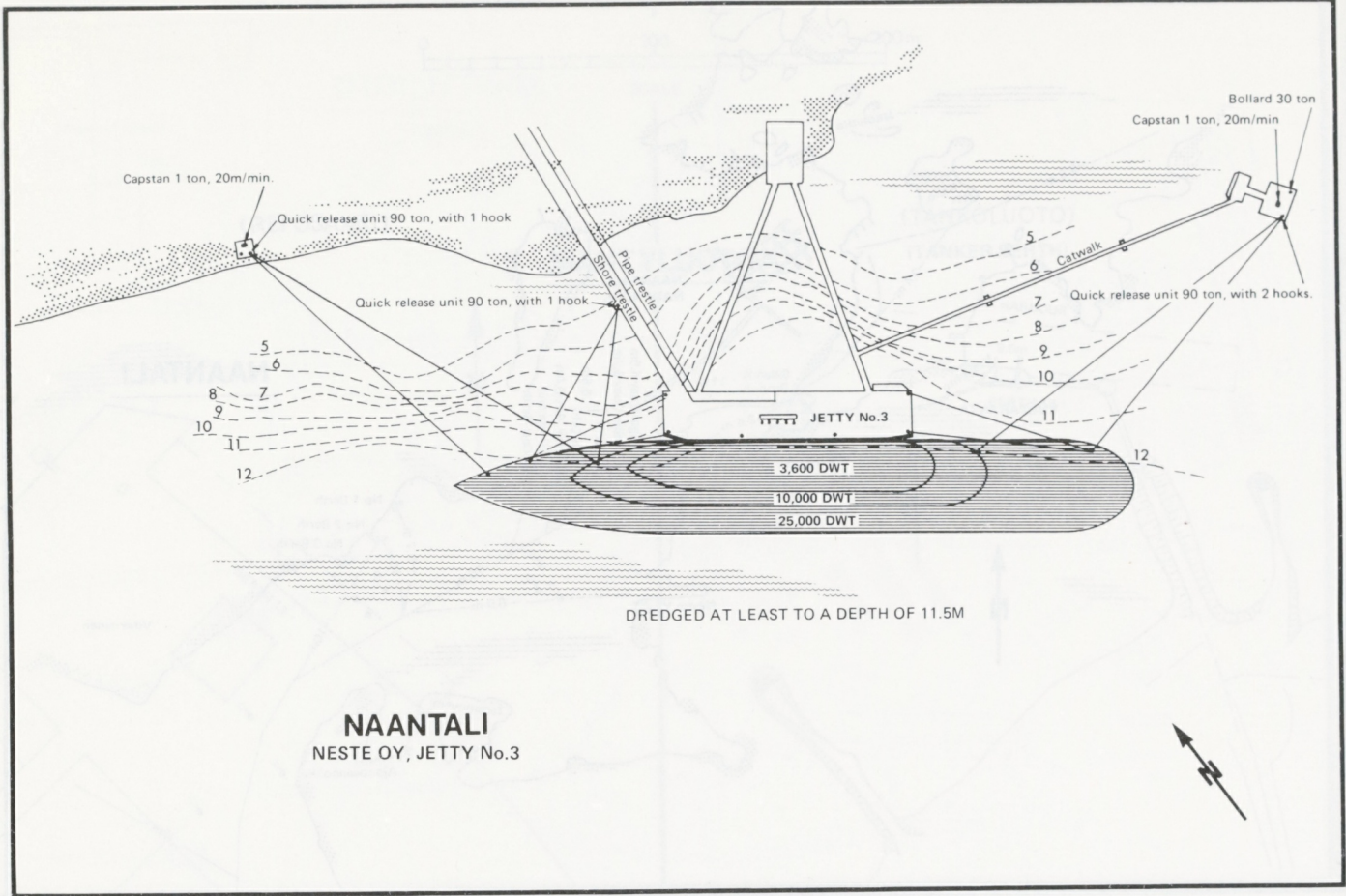
HELSINKI
SOUTH HARBOUR

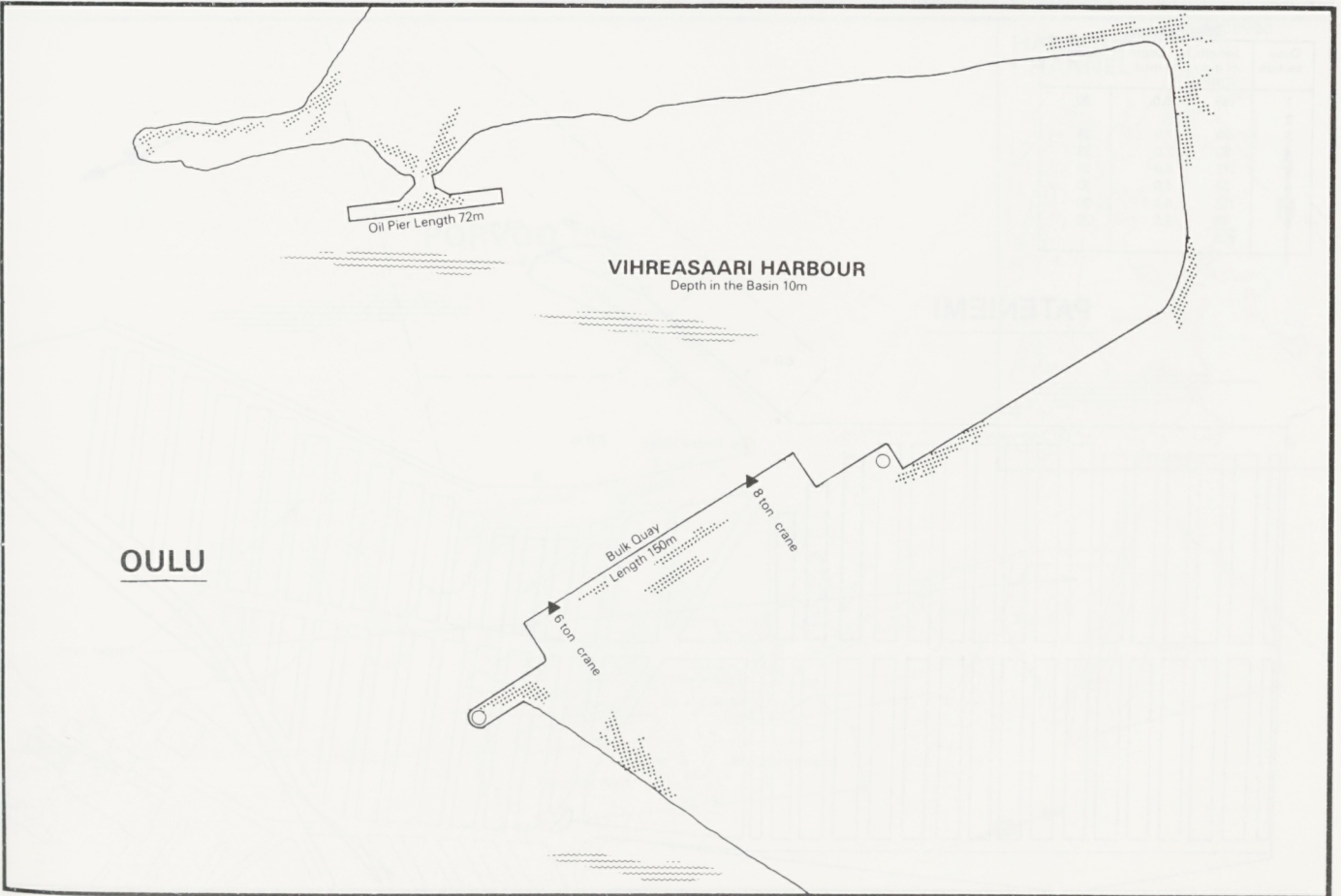
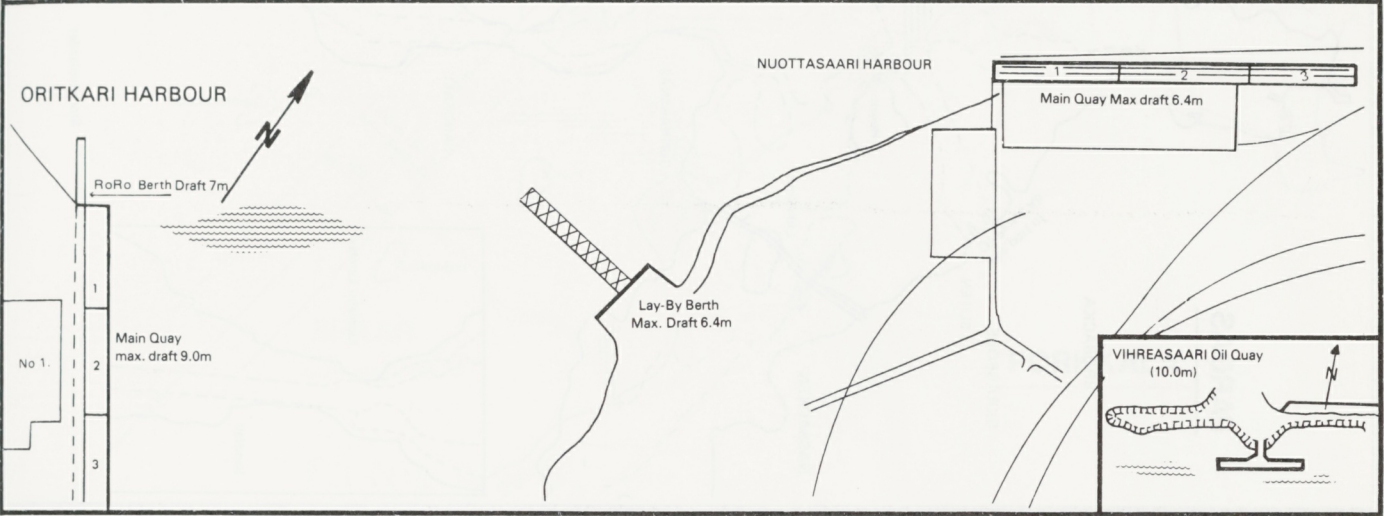
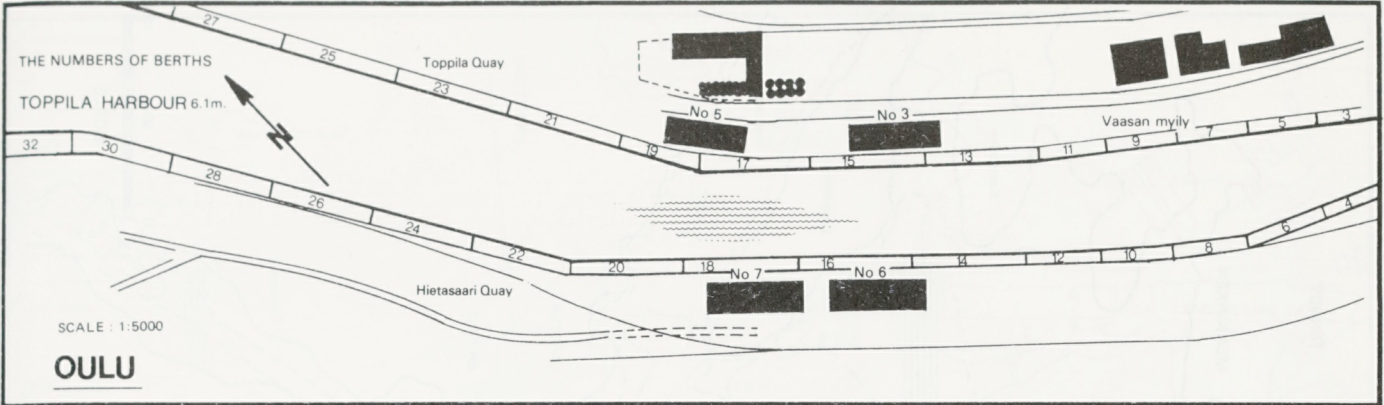


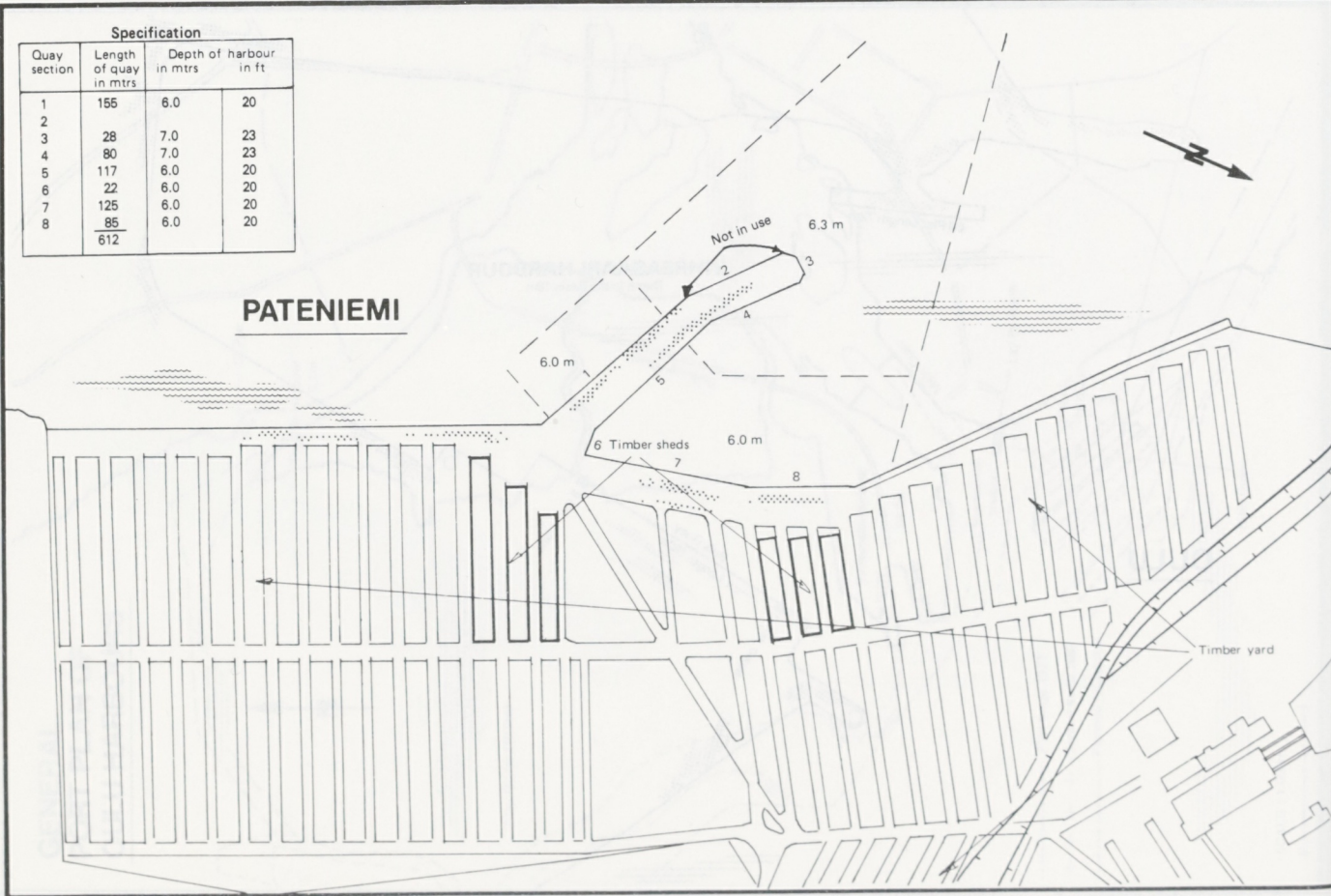
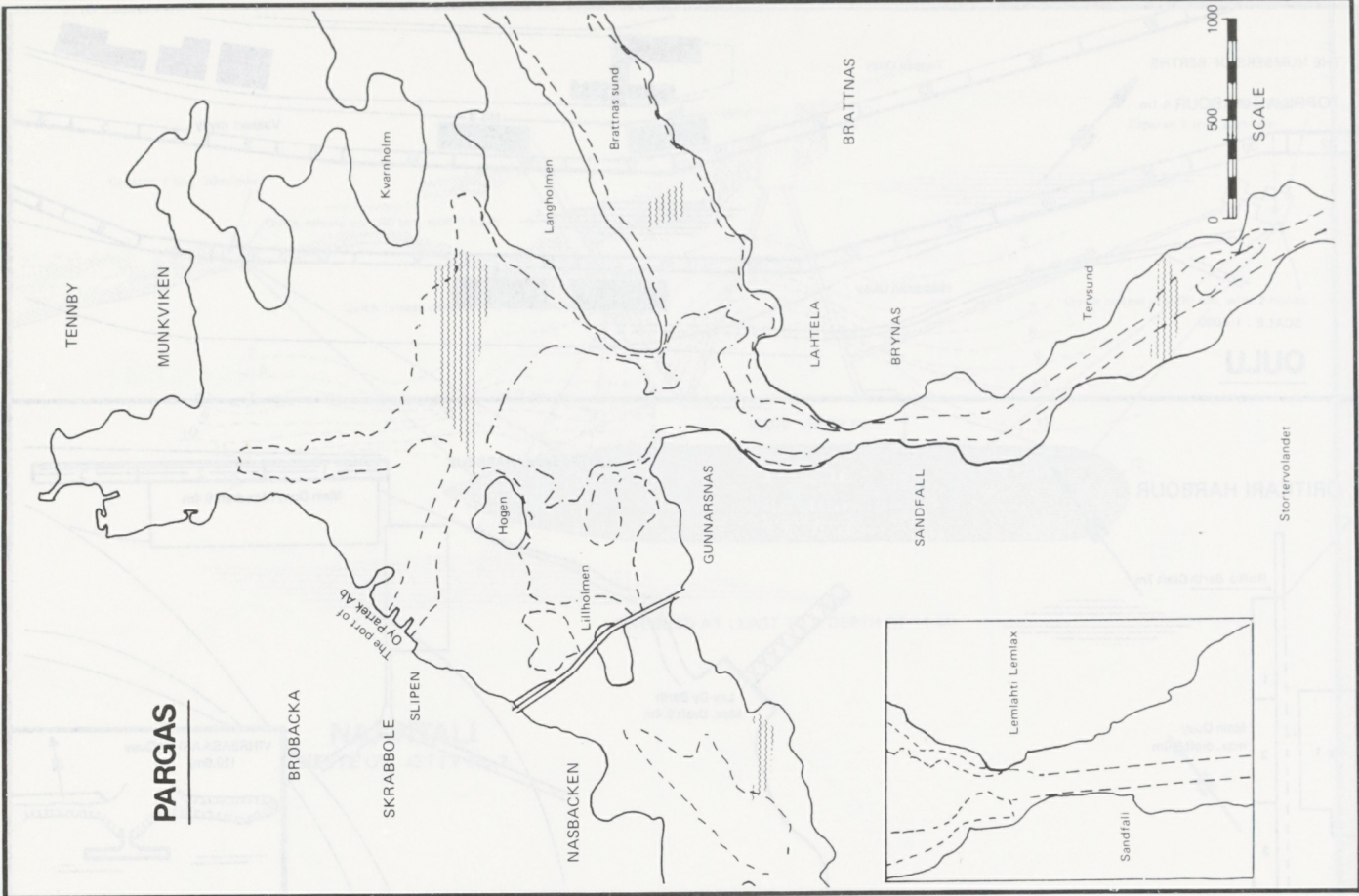


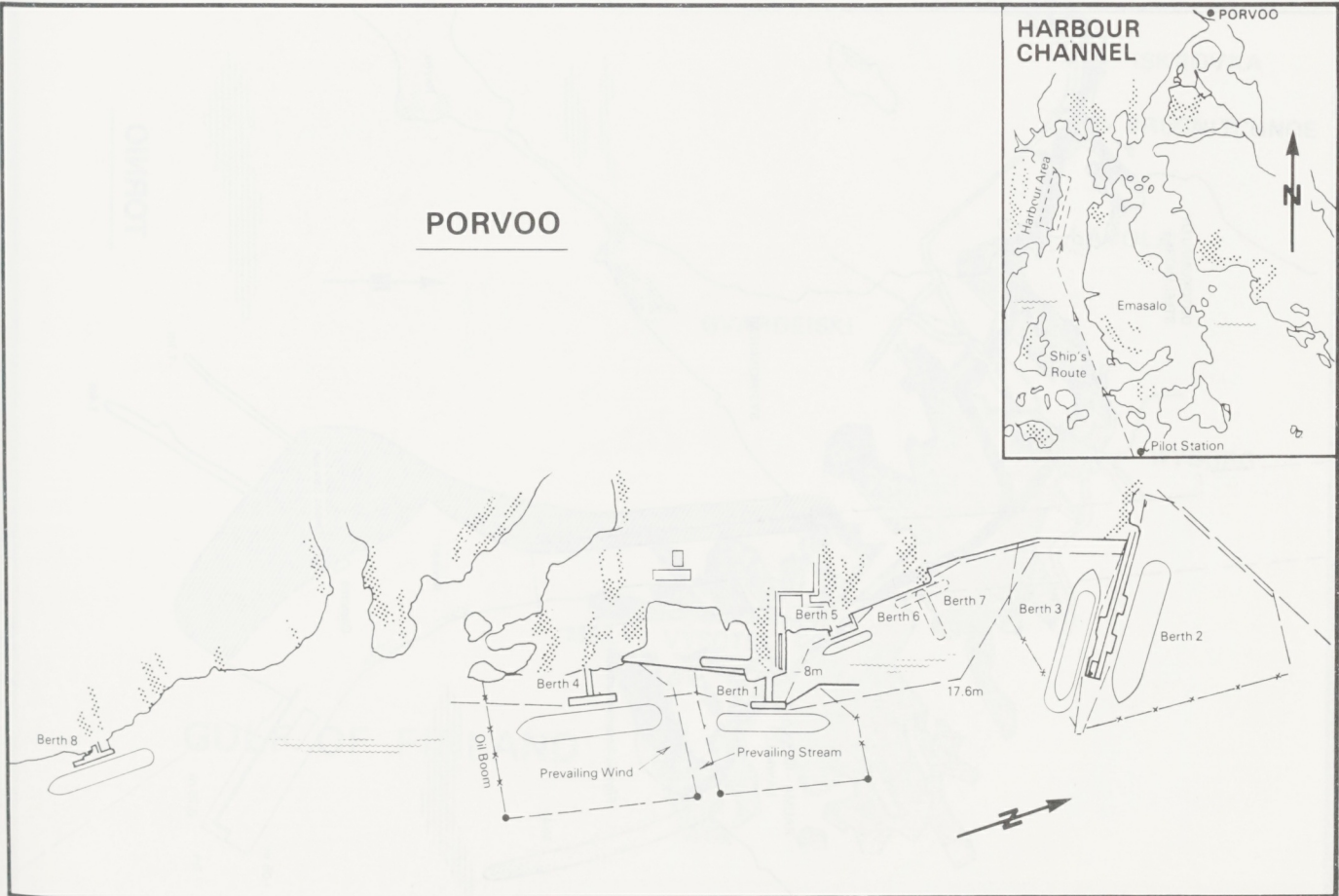
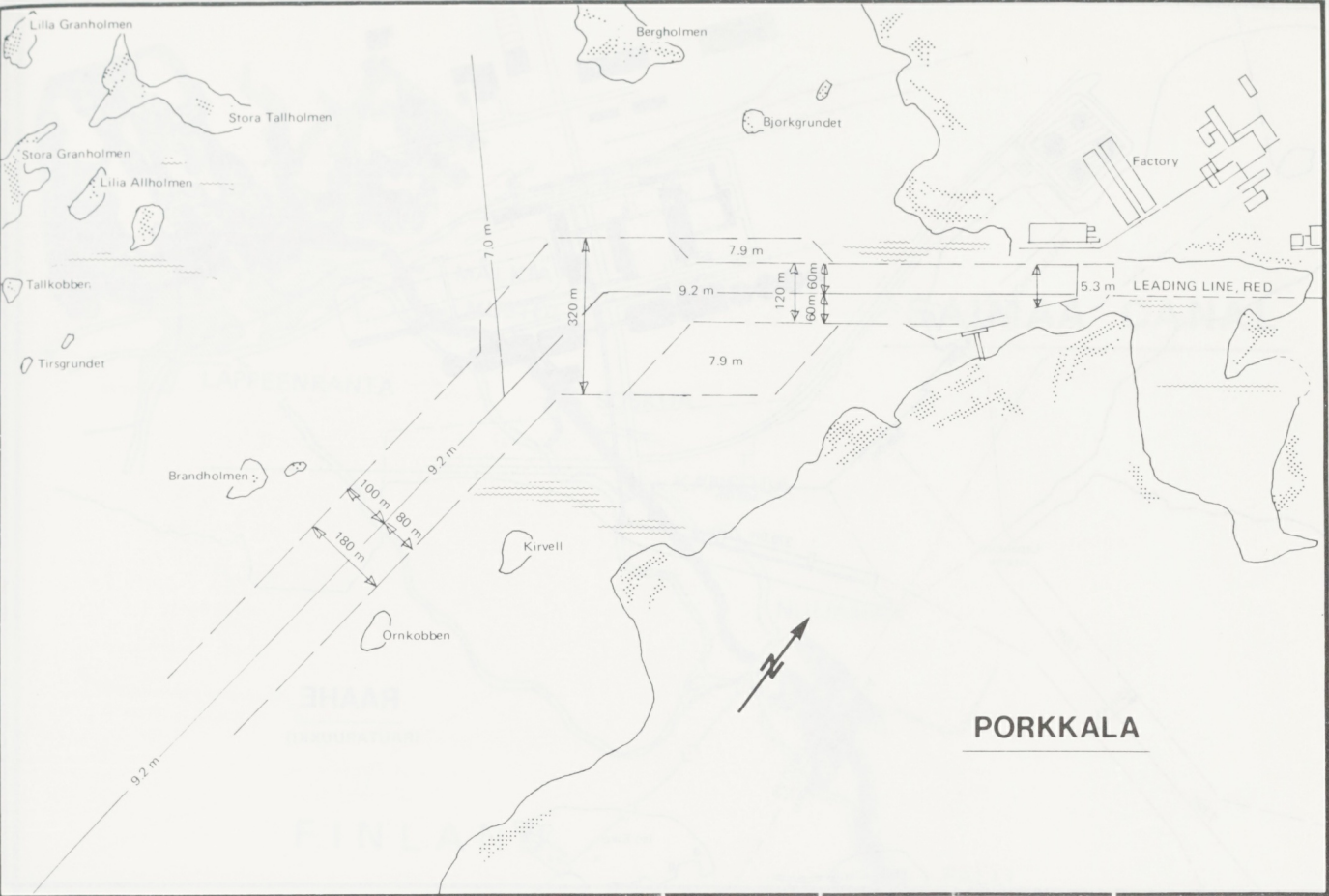


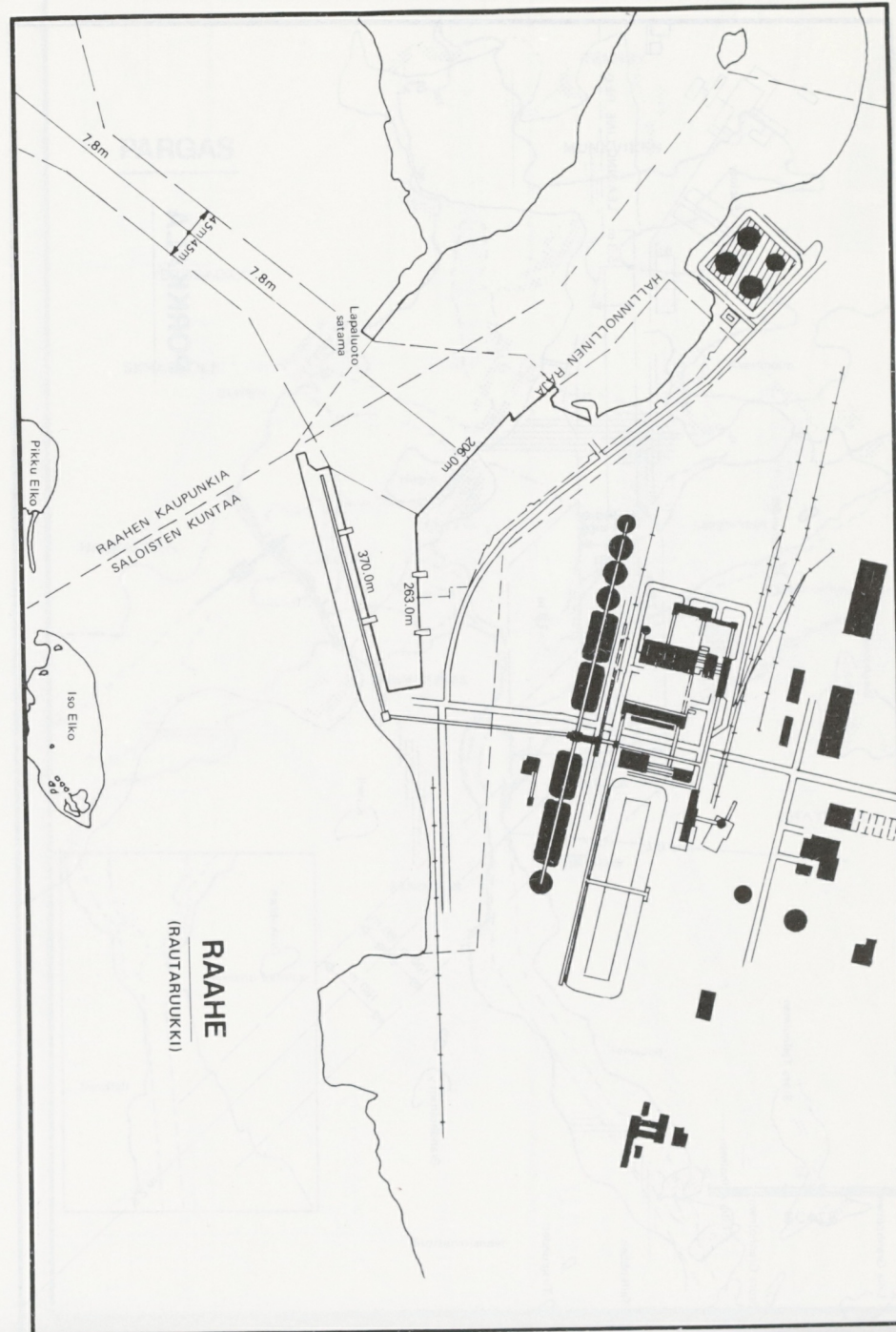




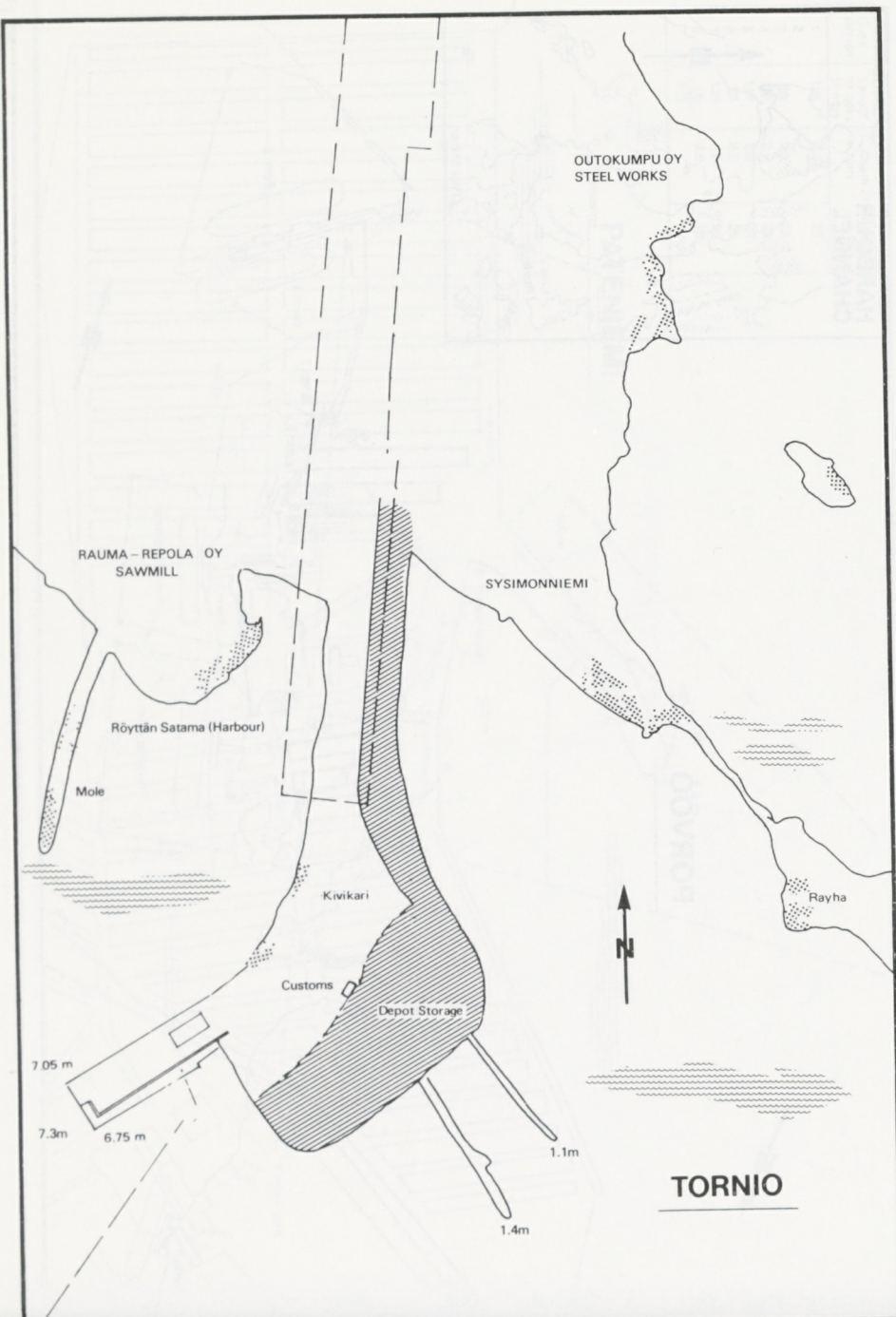






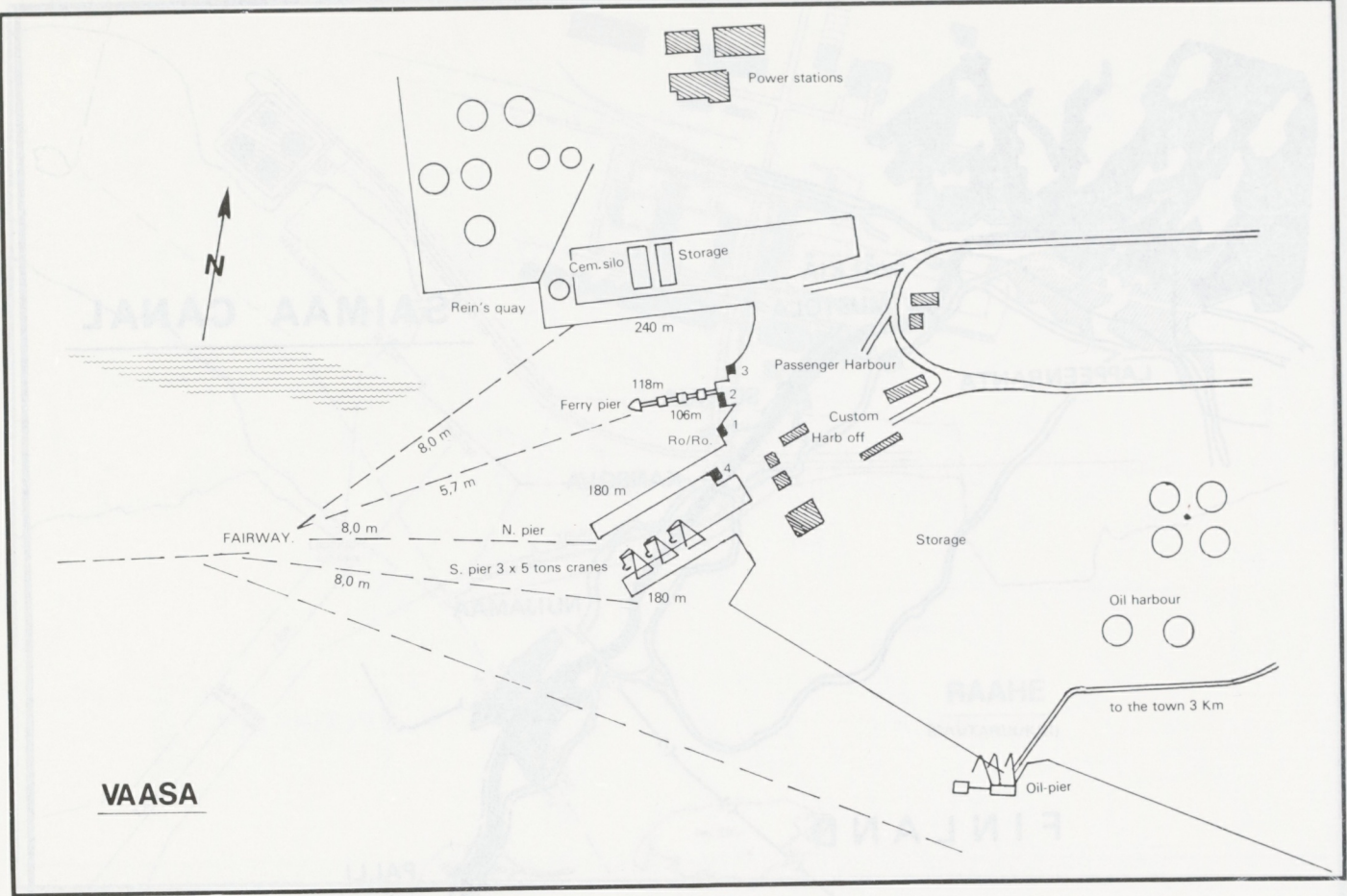


RAAHE
(RAUTARUUKKI)



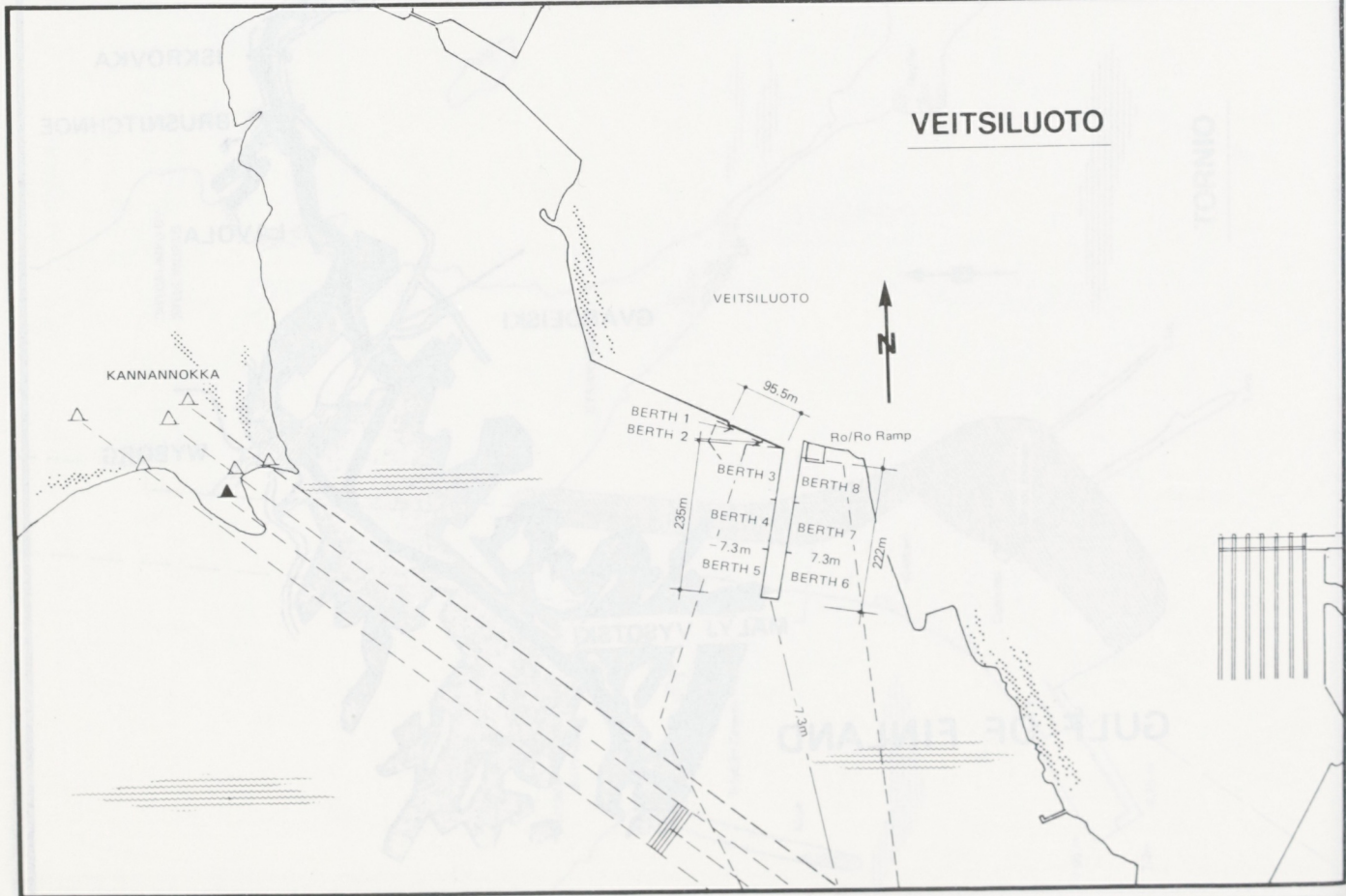
TORNIO

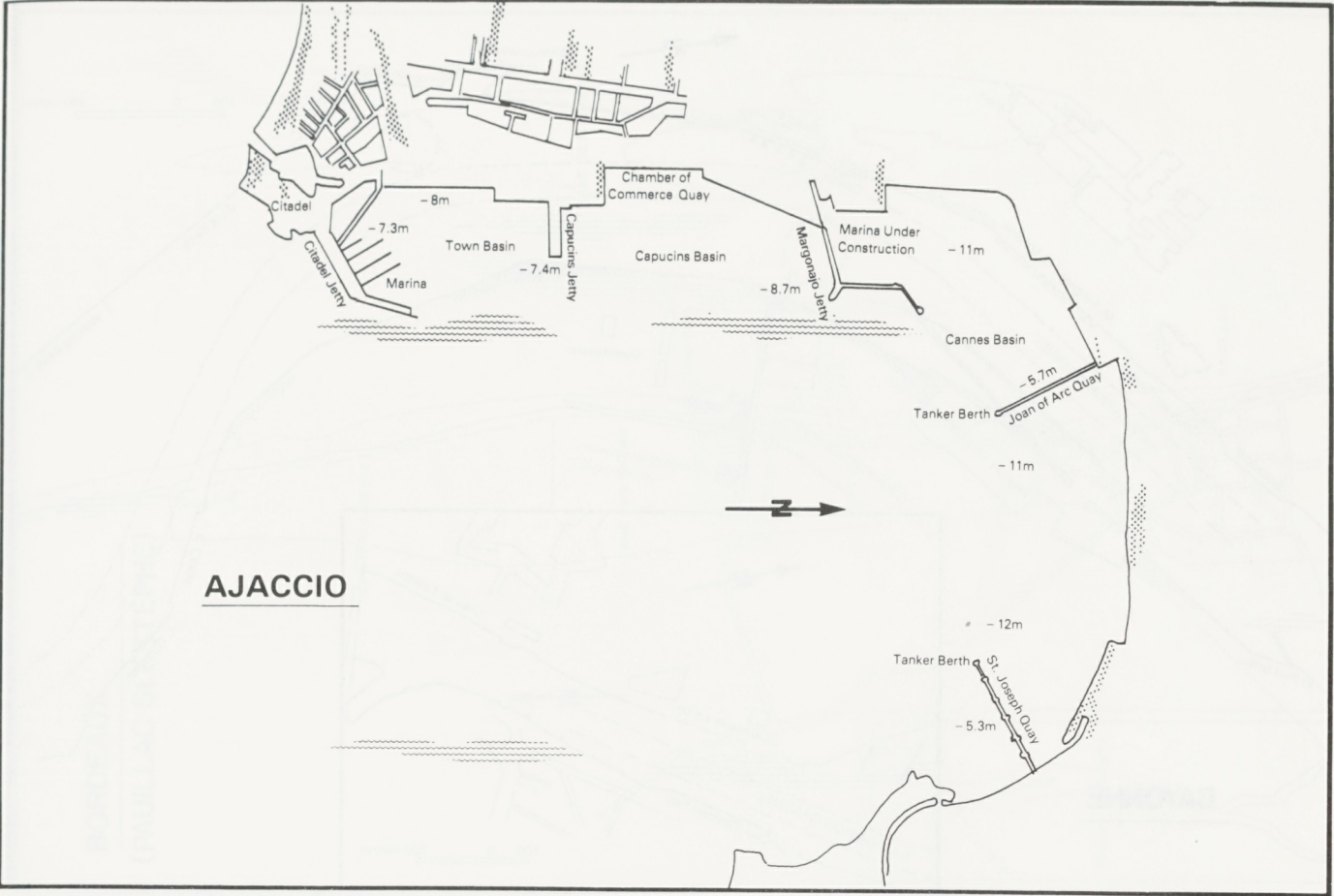


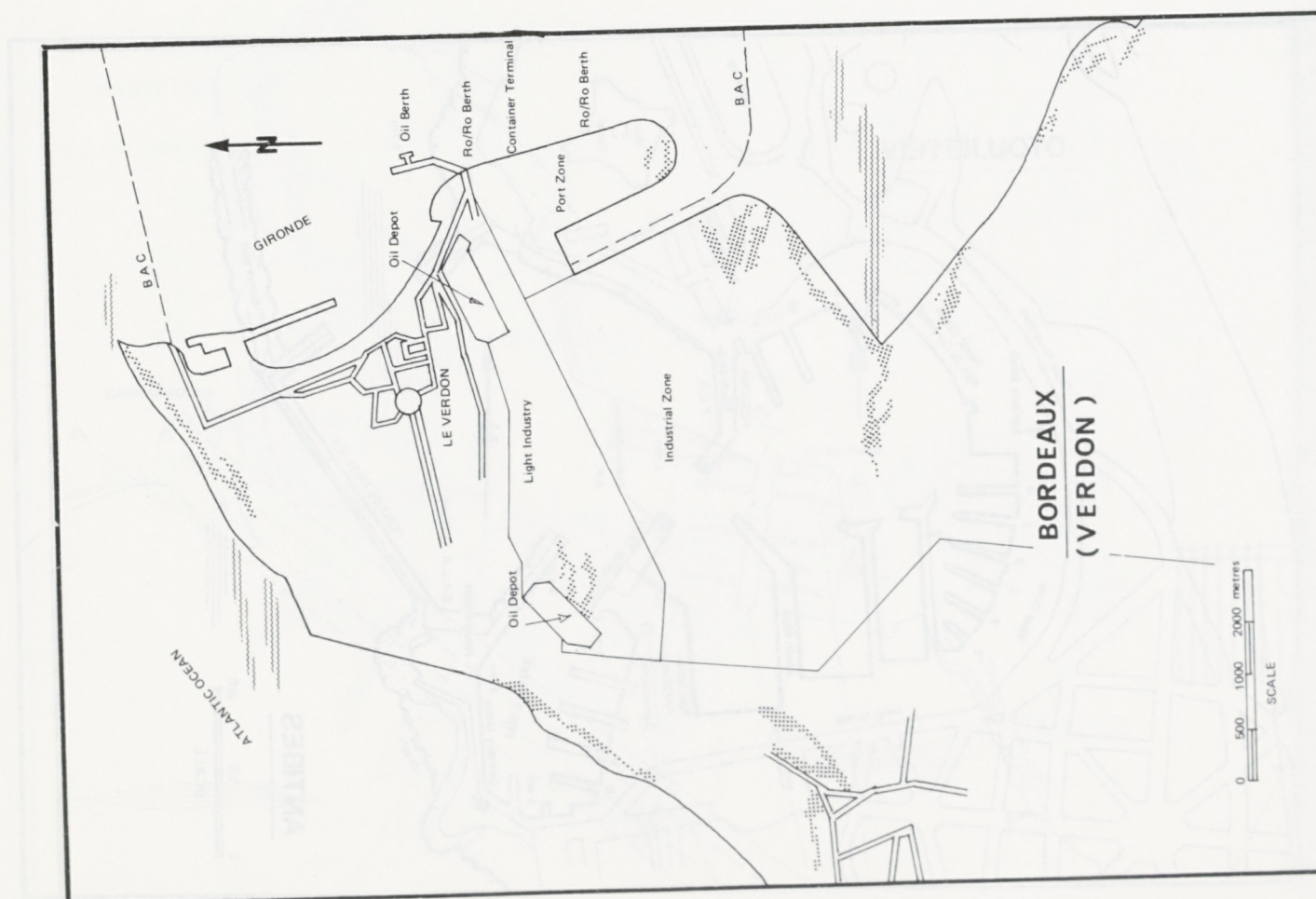
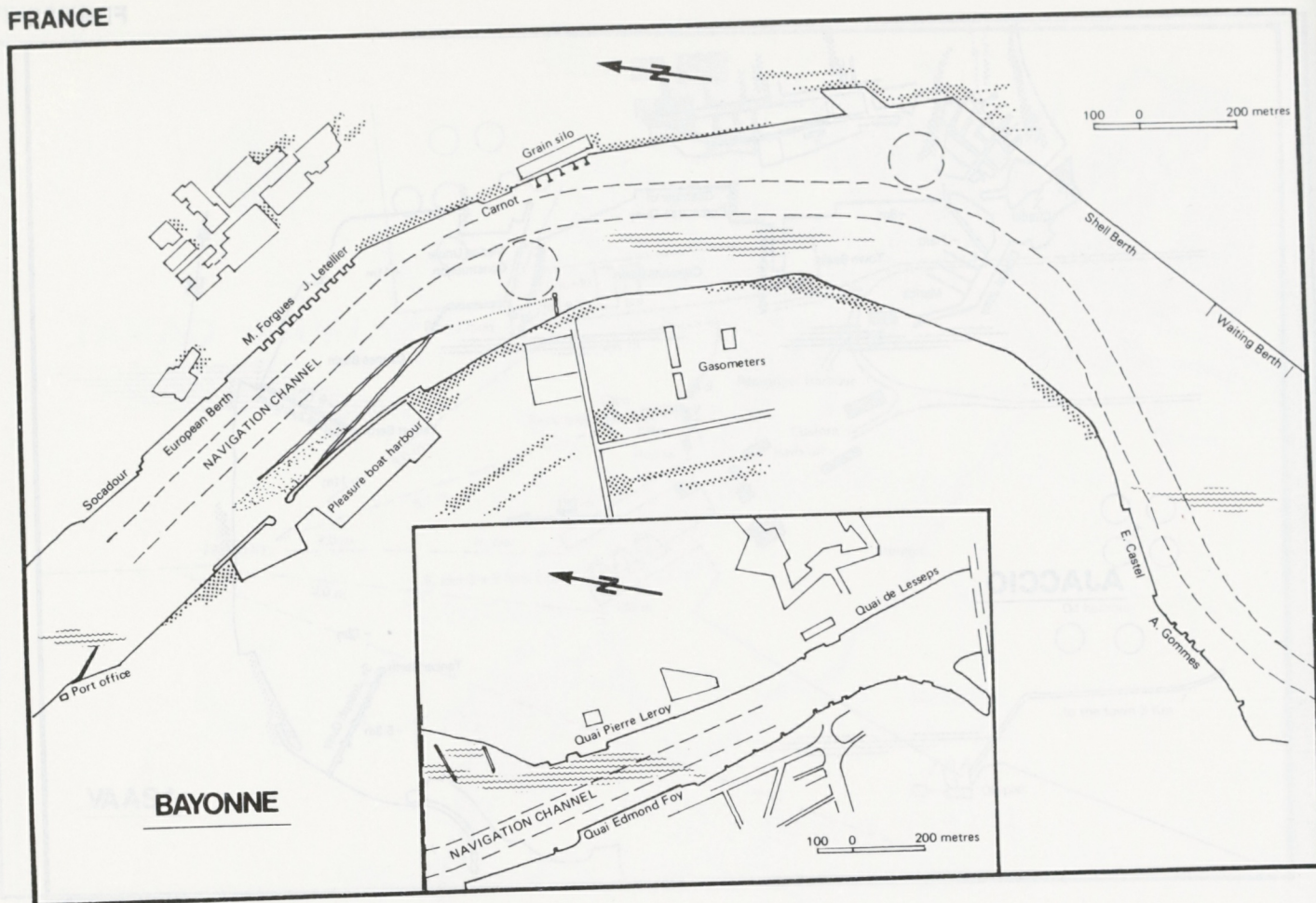


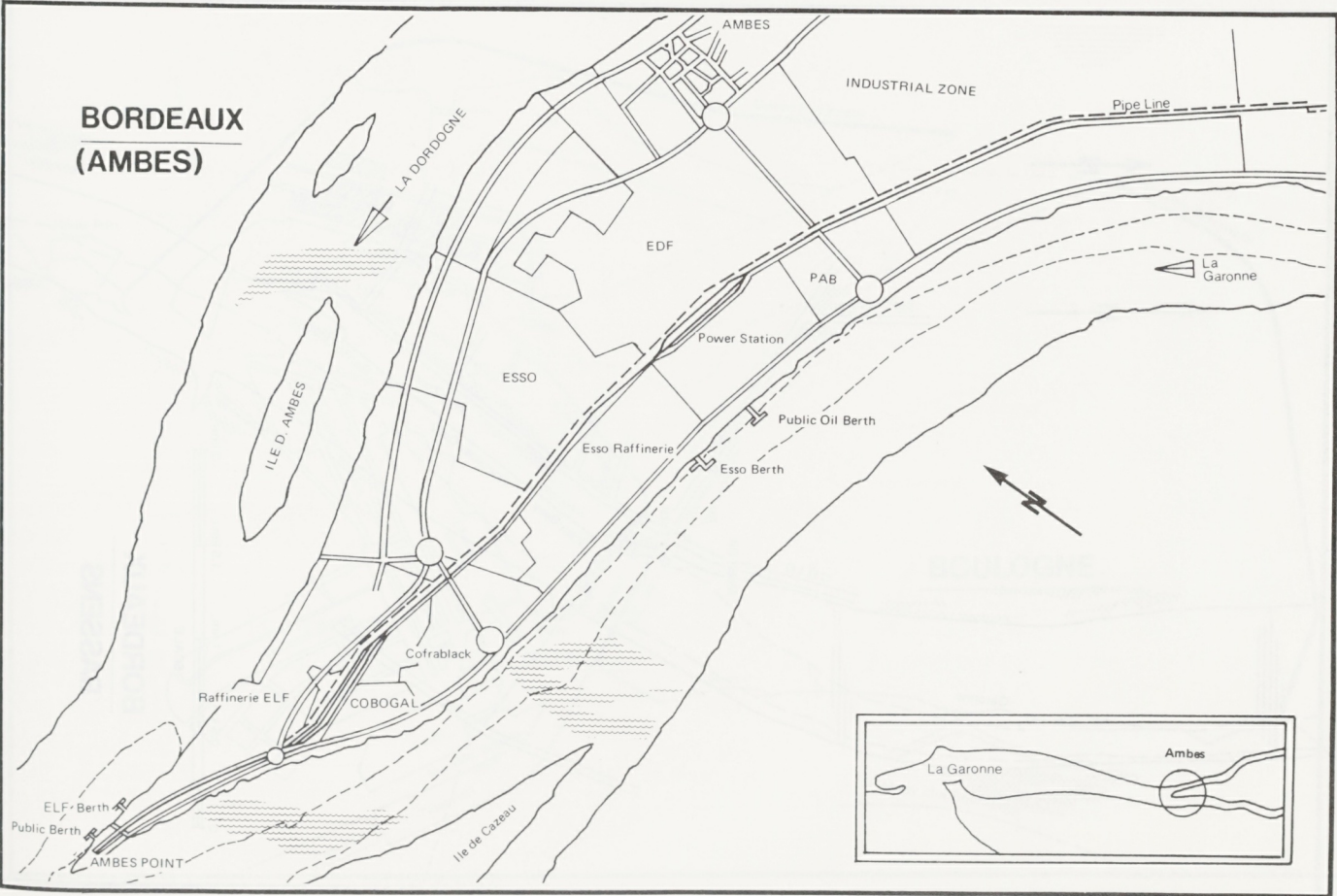
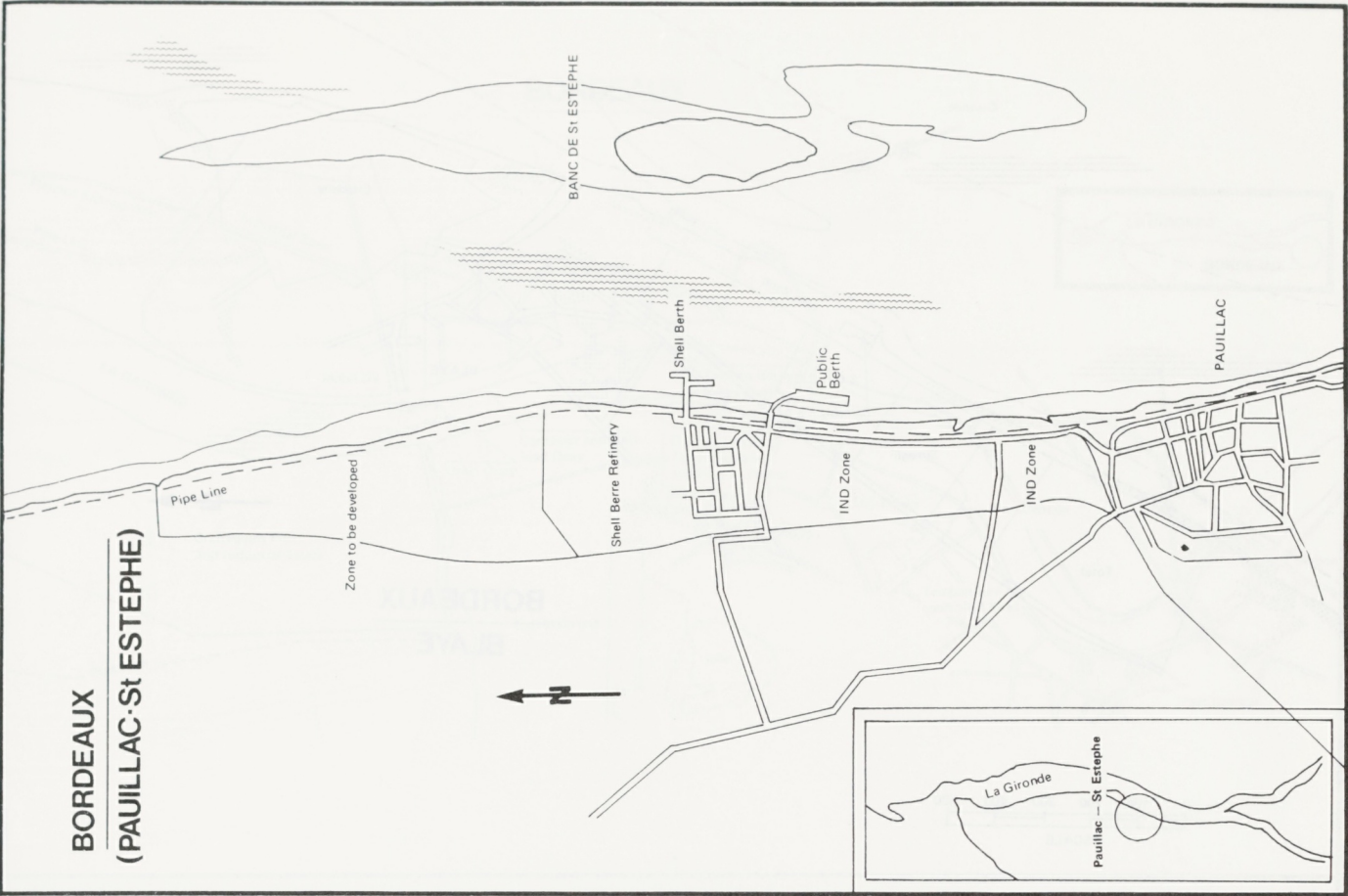
VAASA

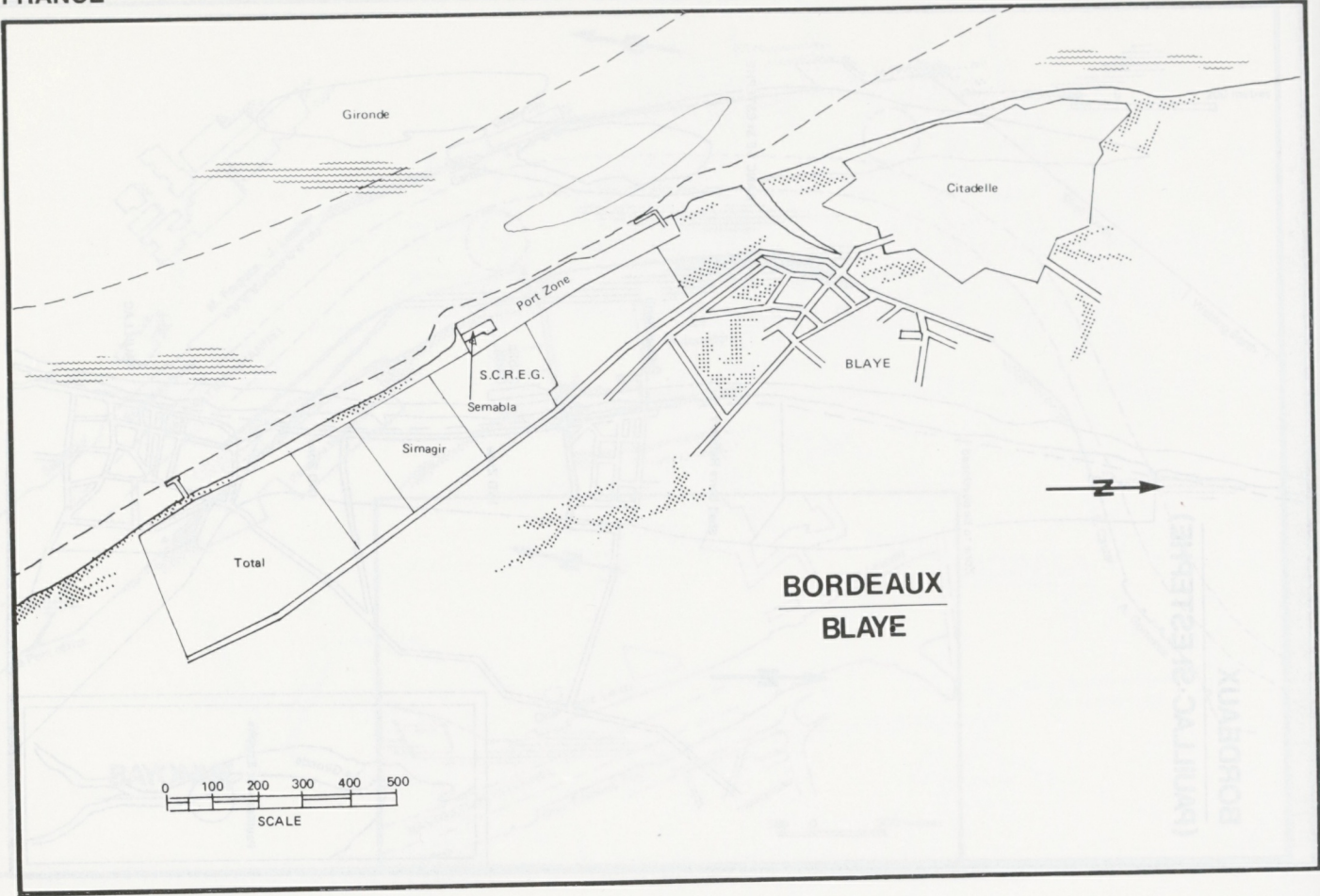
VEITSILUOTO

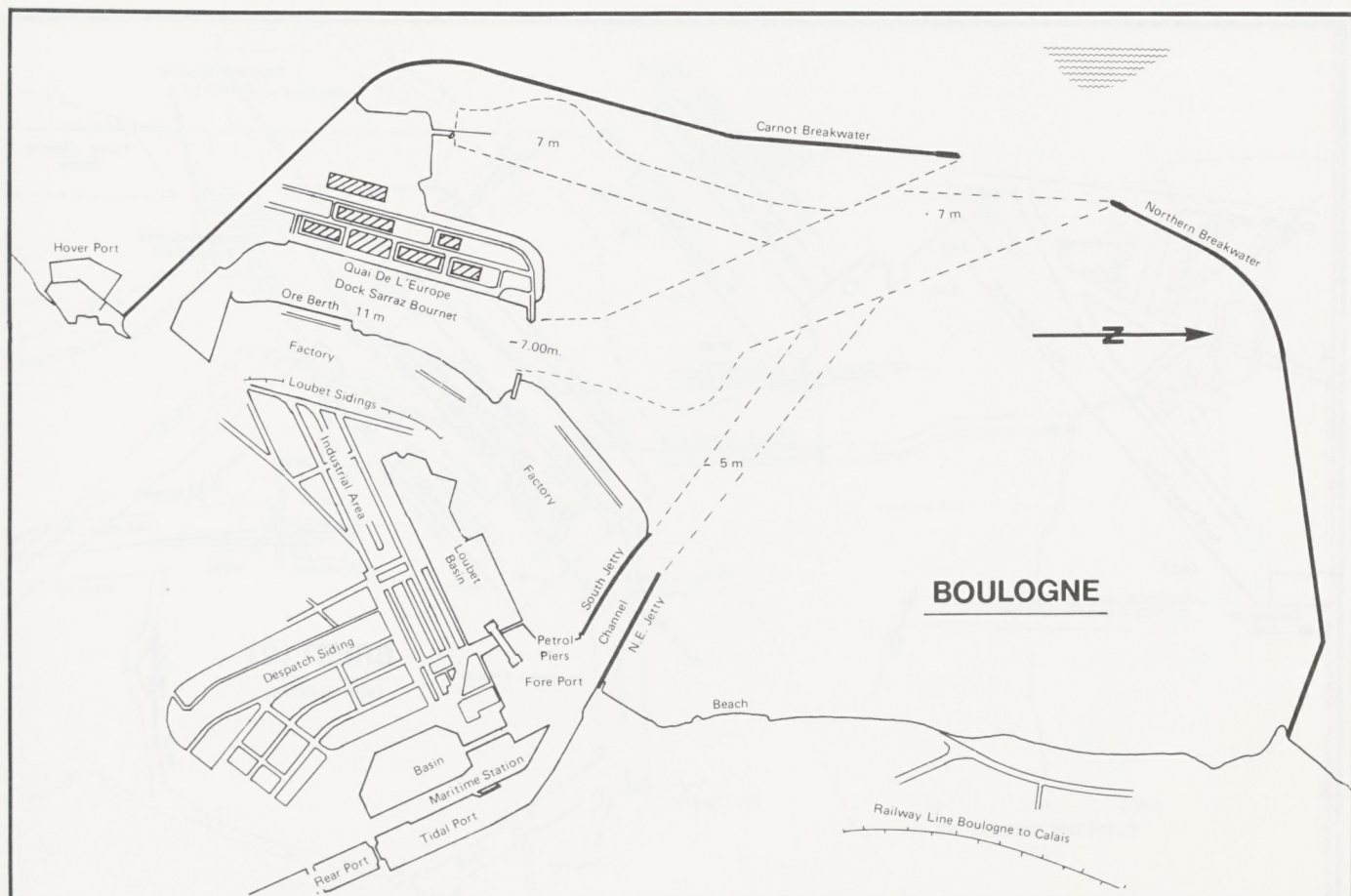


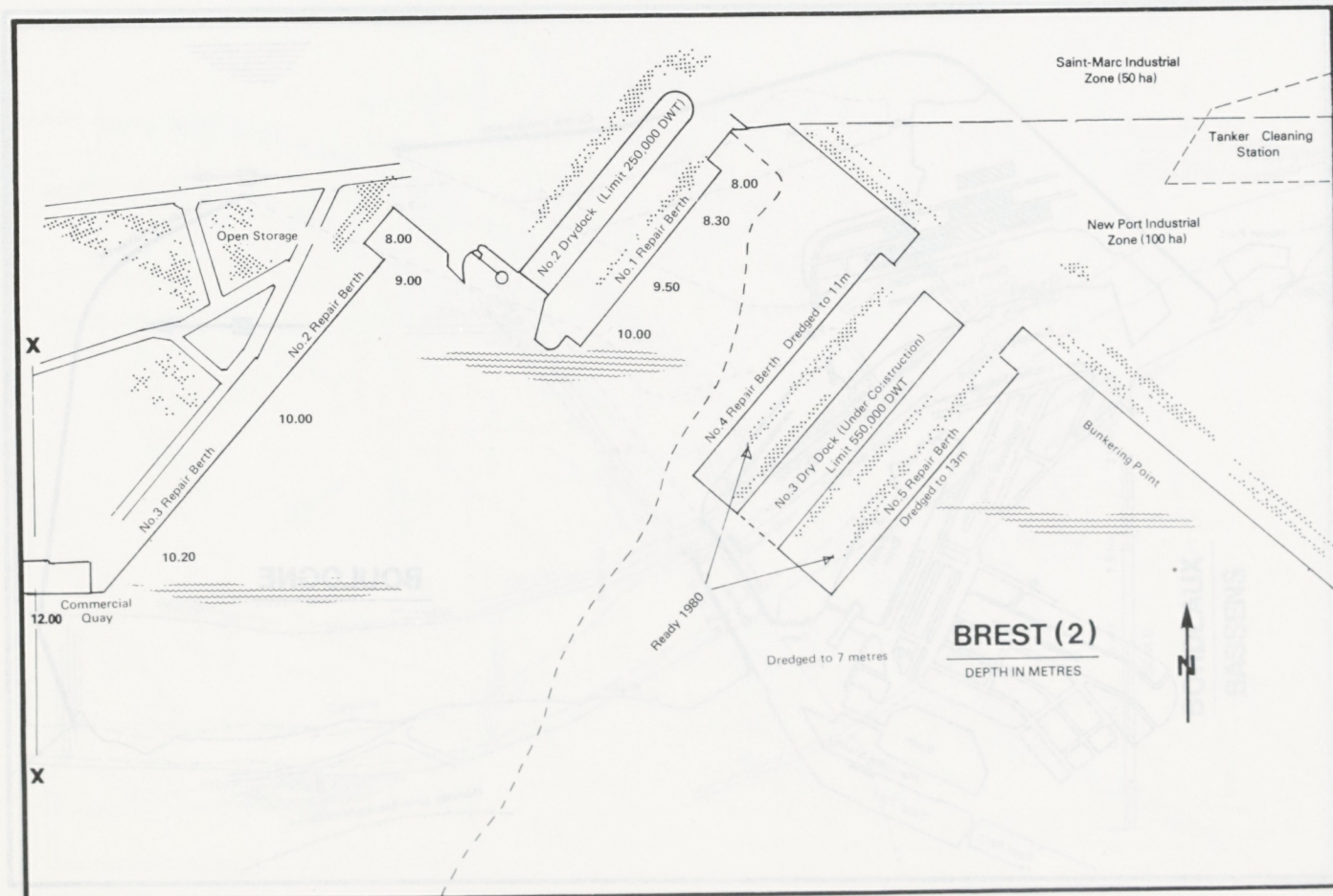
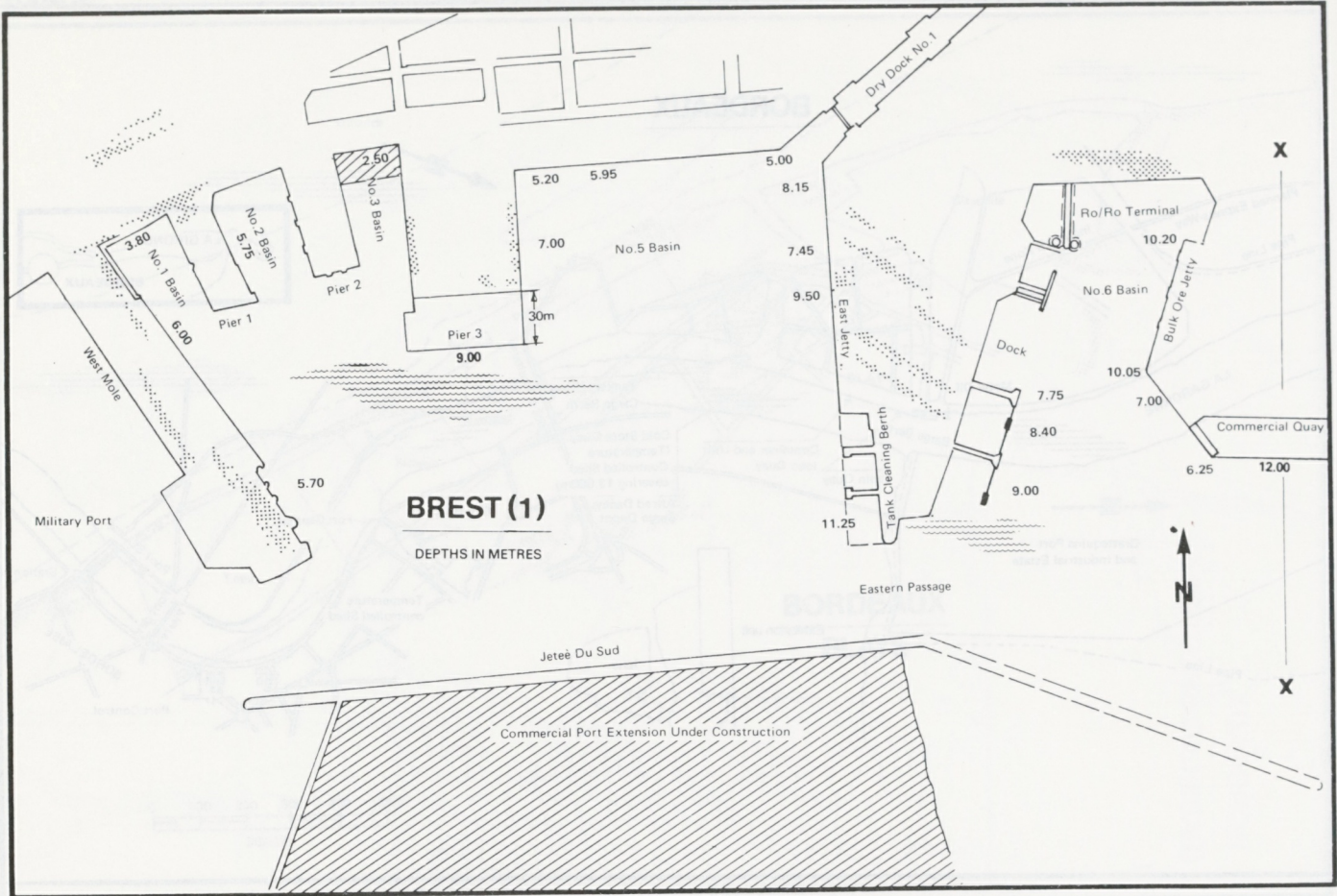


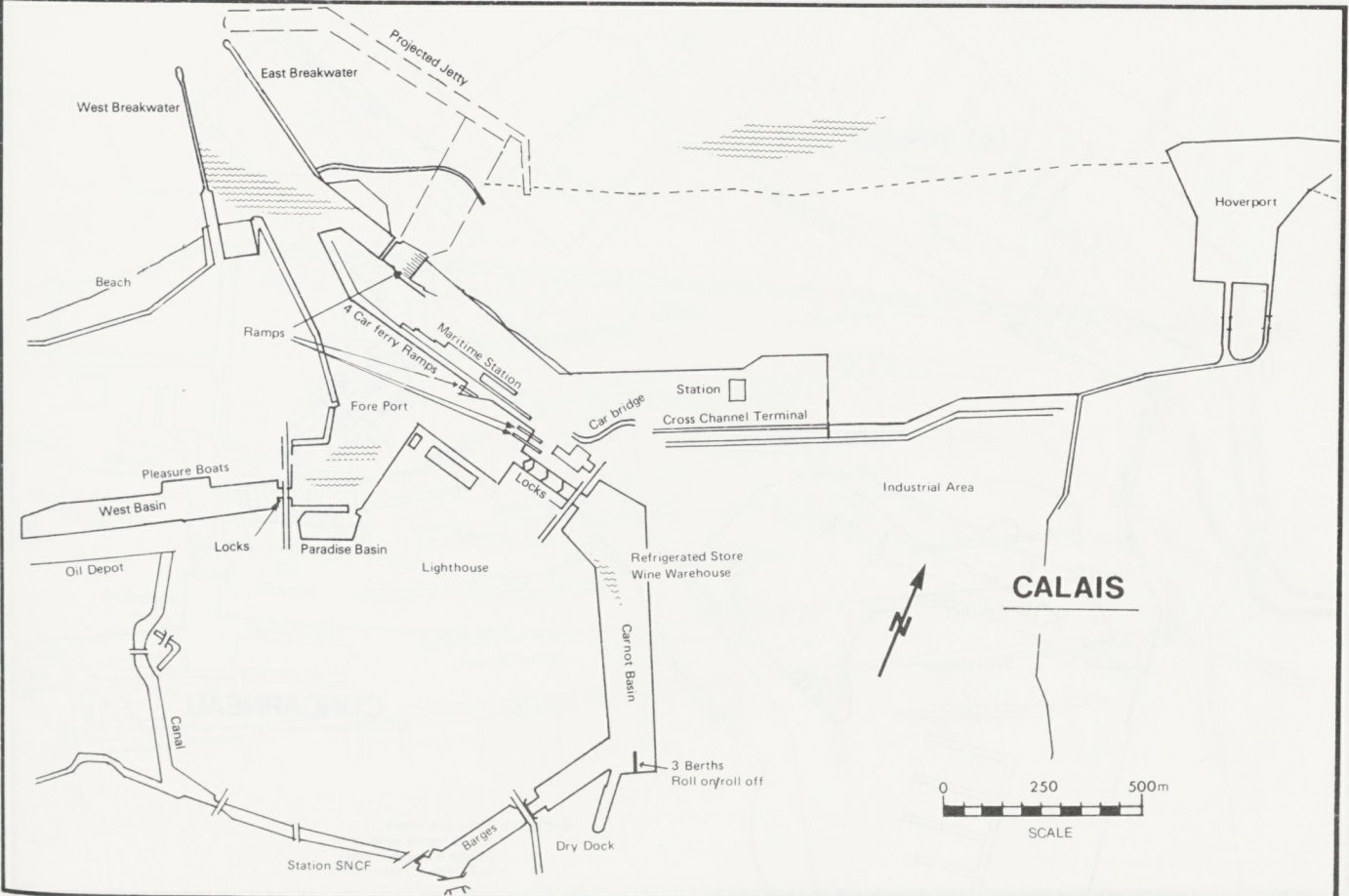
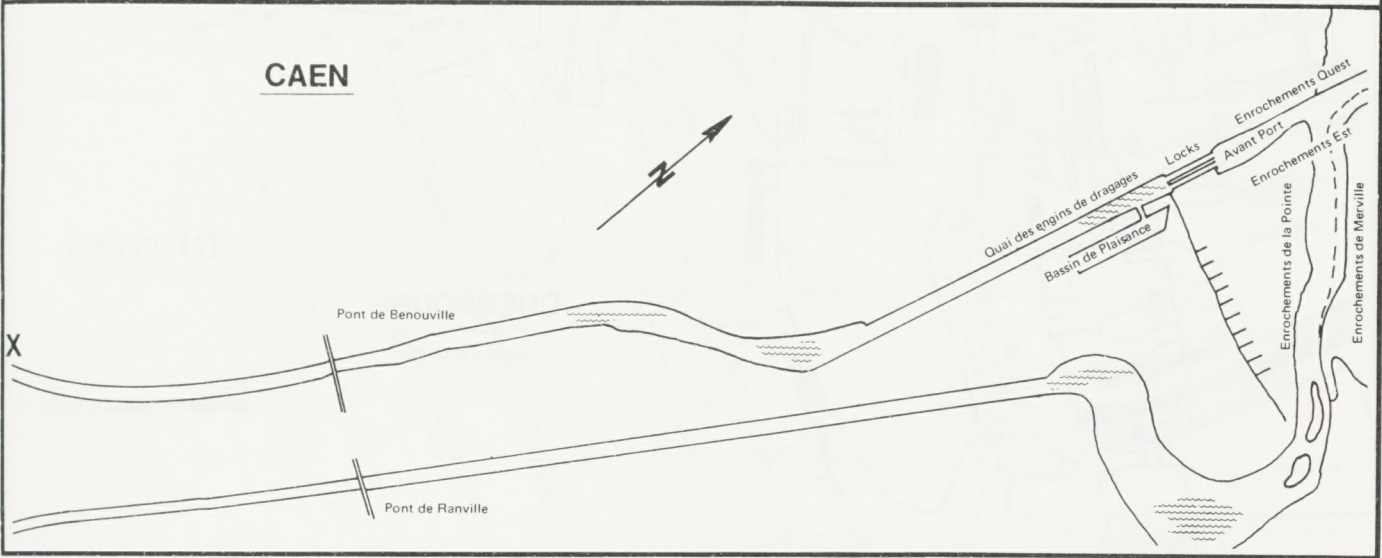
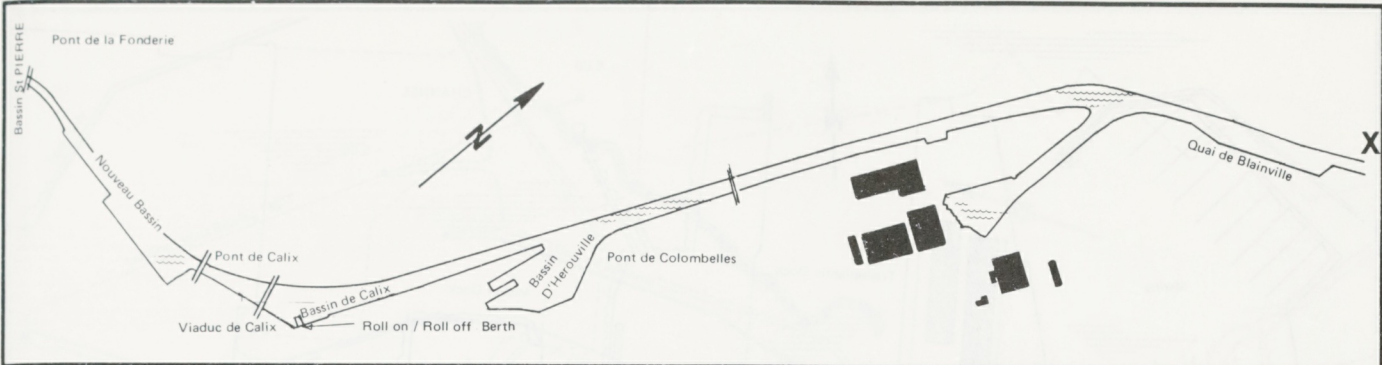


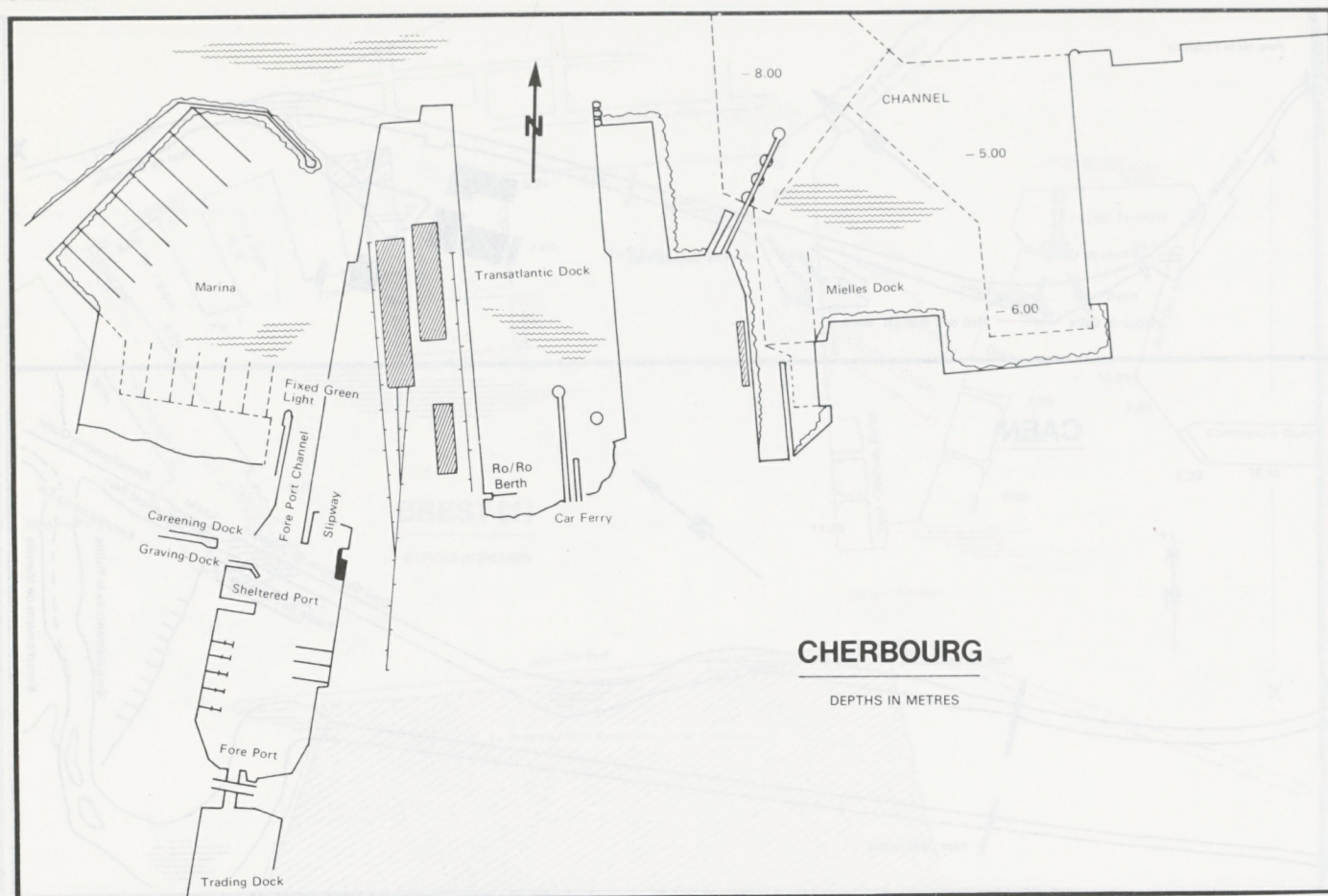




BORDEAUX

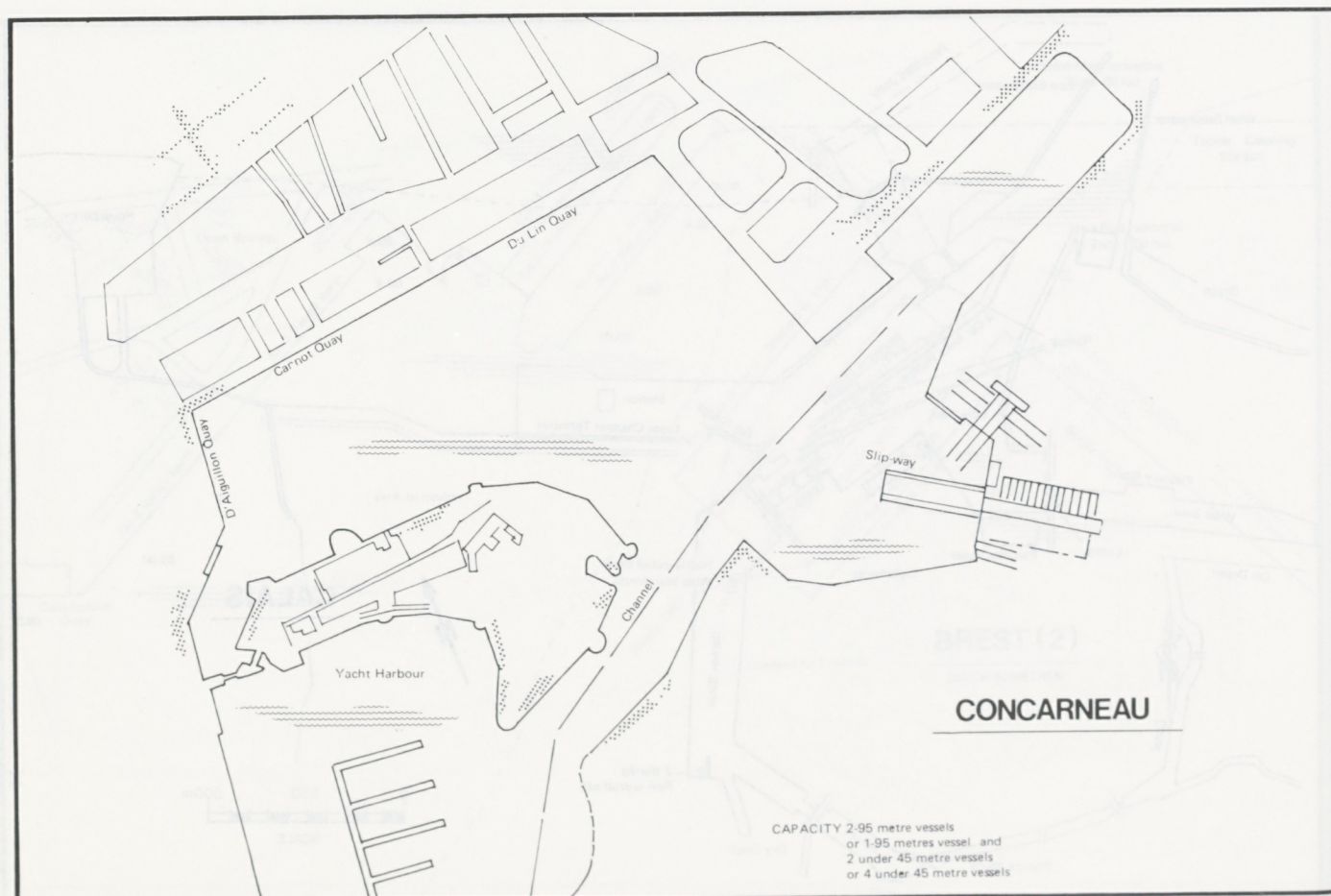






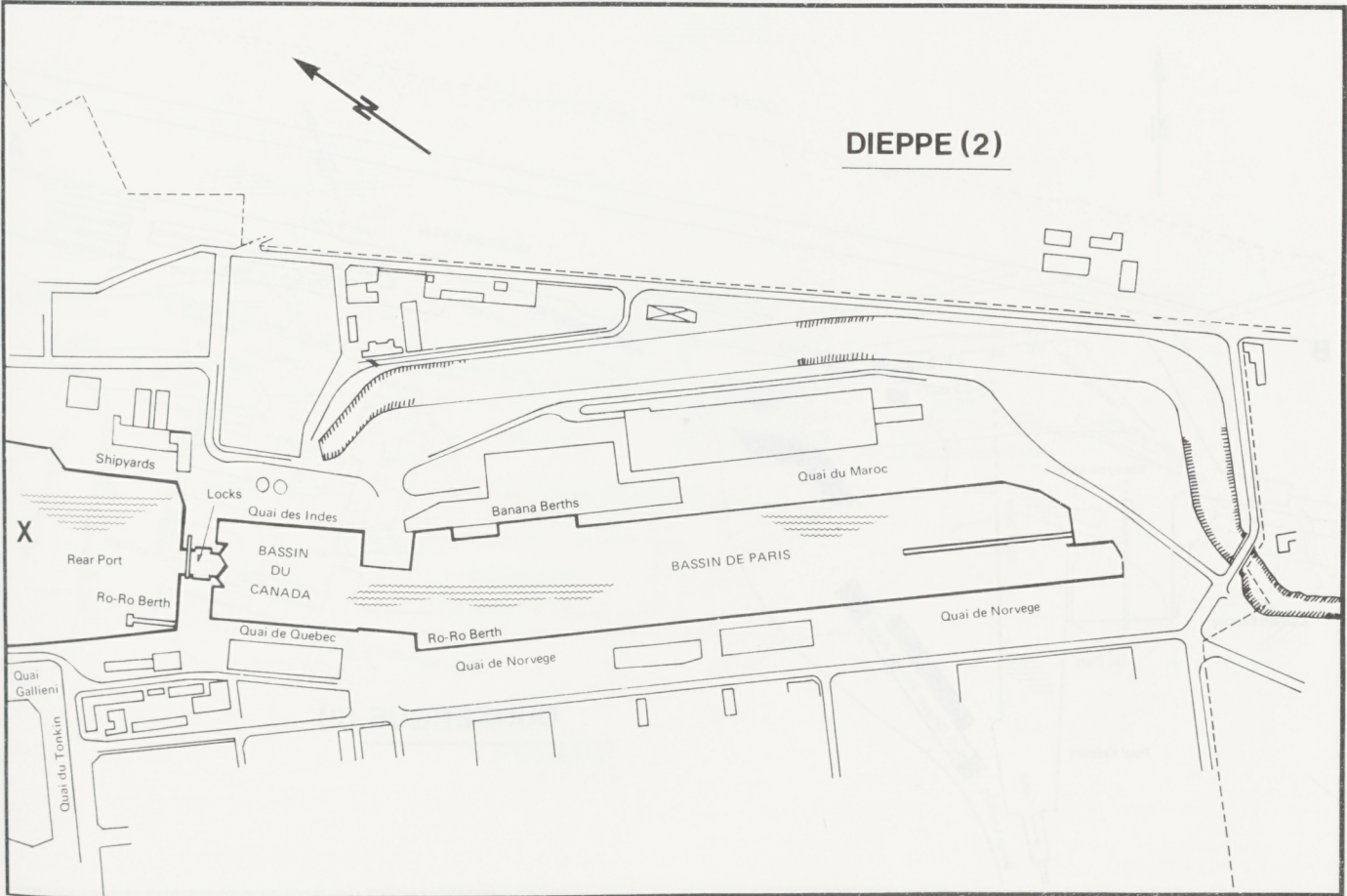
CHERBOURG

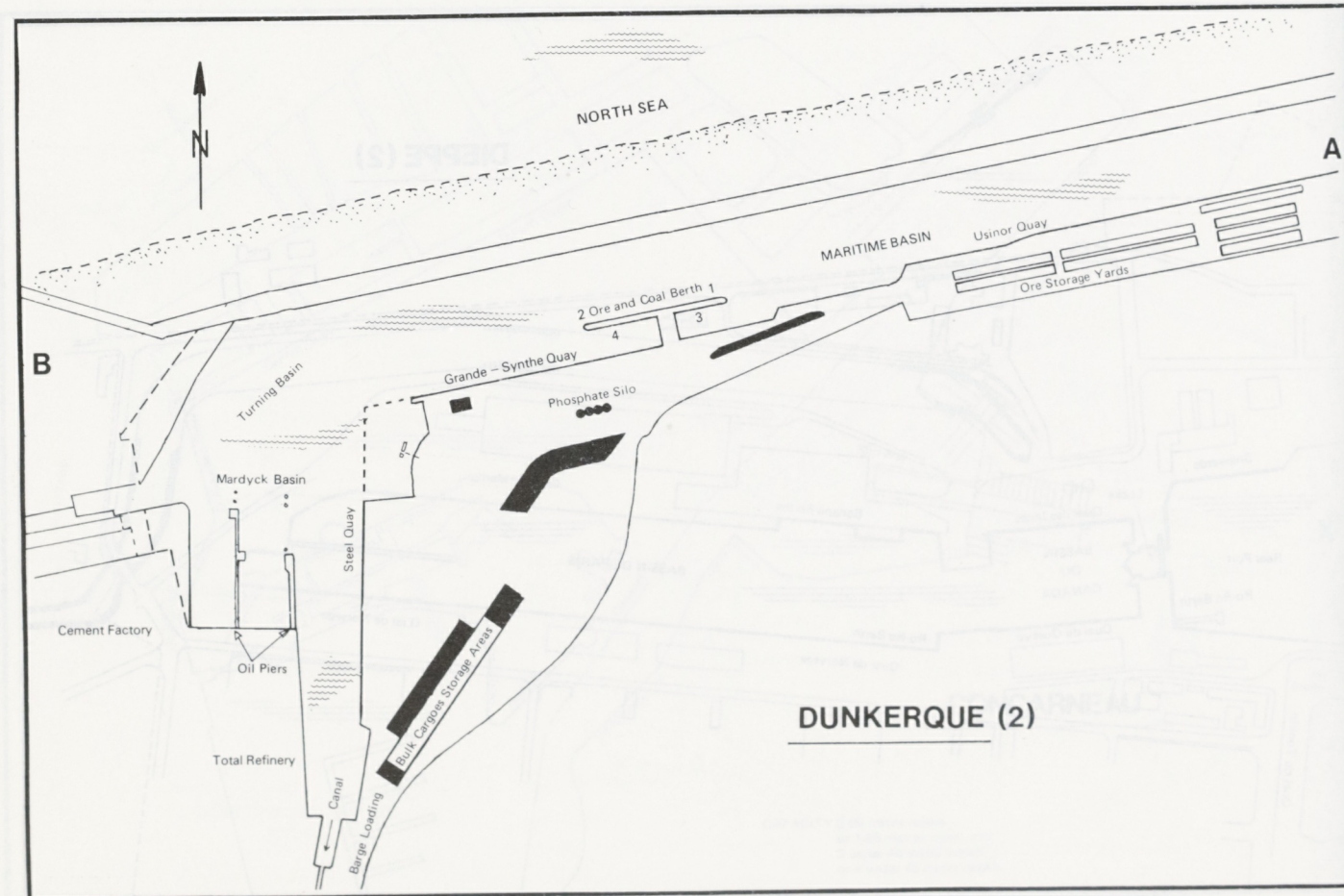
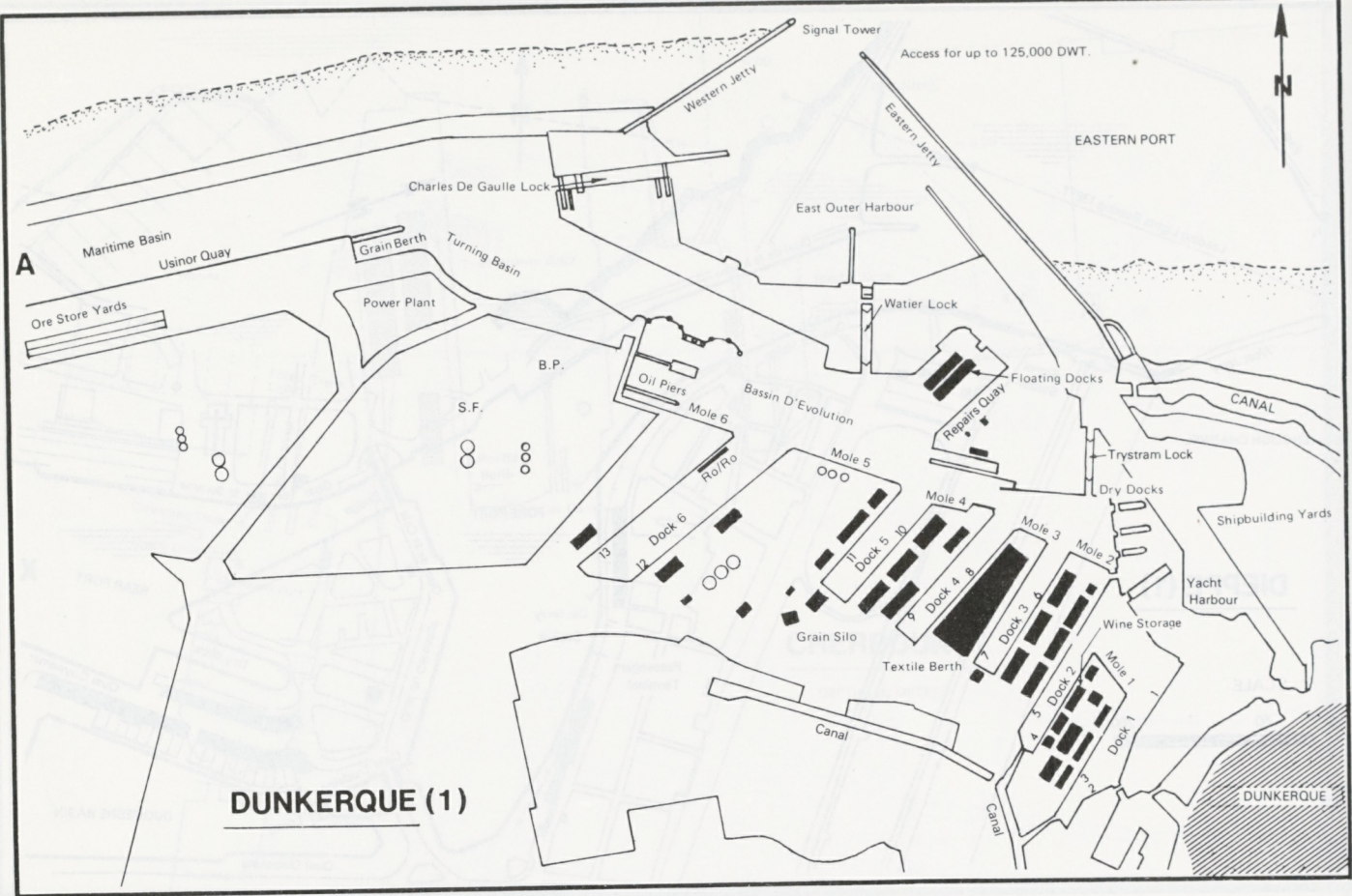
DEPTHS IN METRES

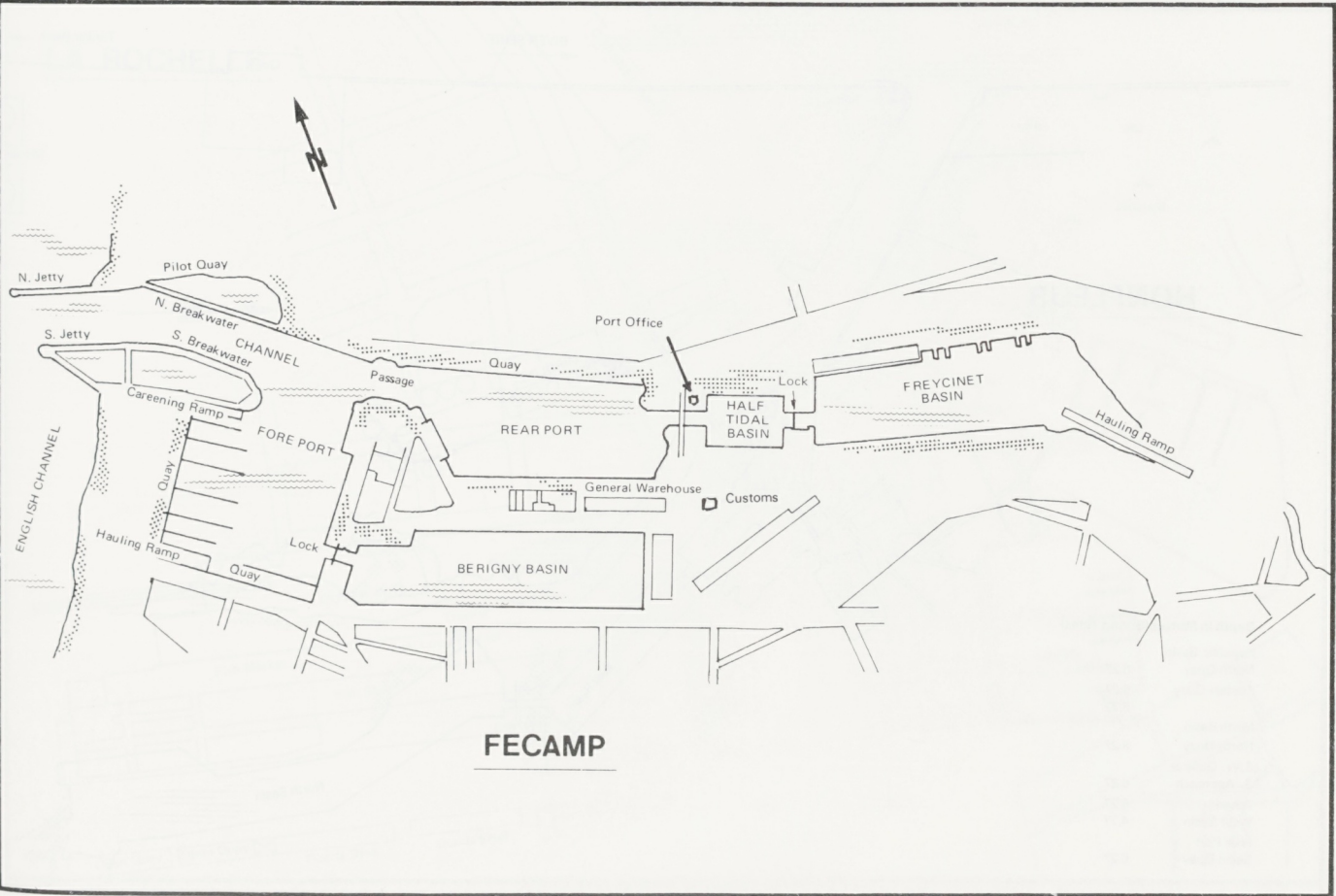


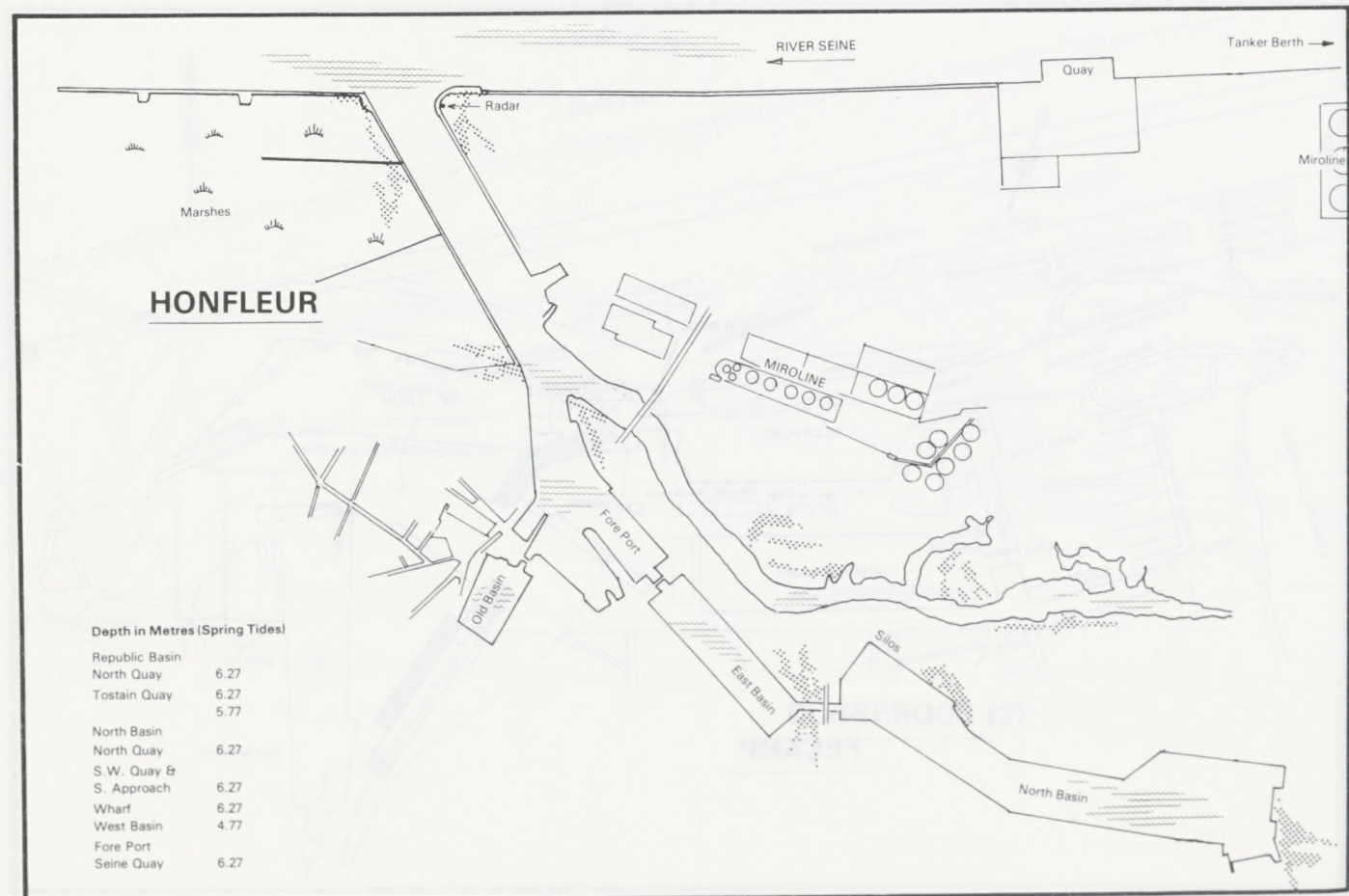
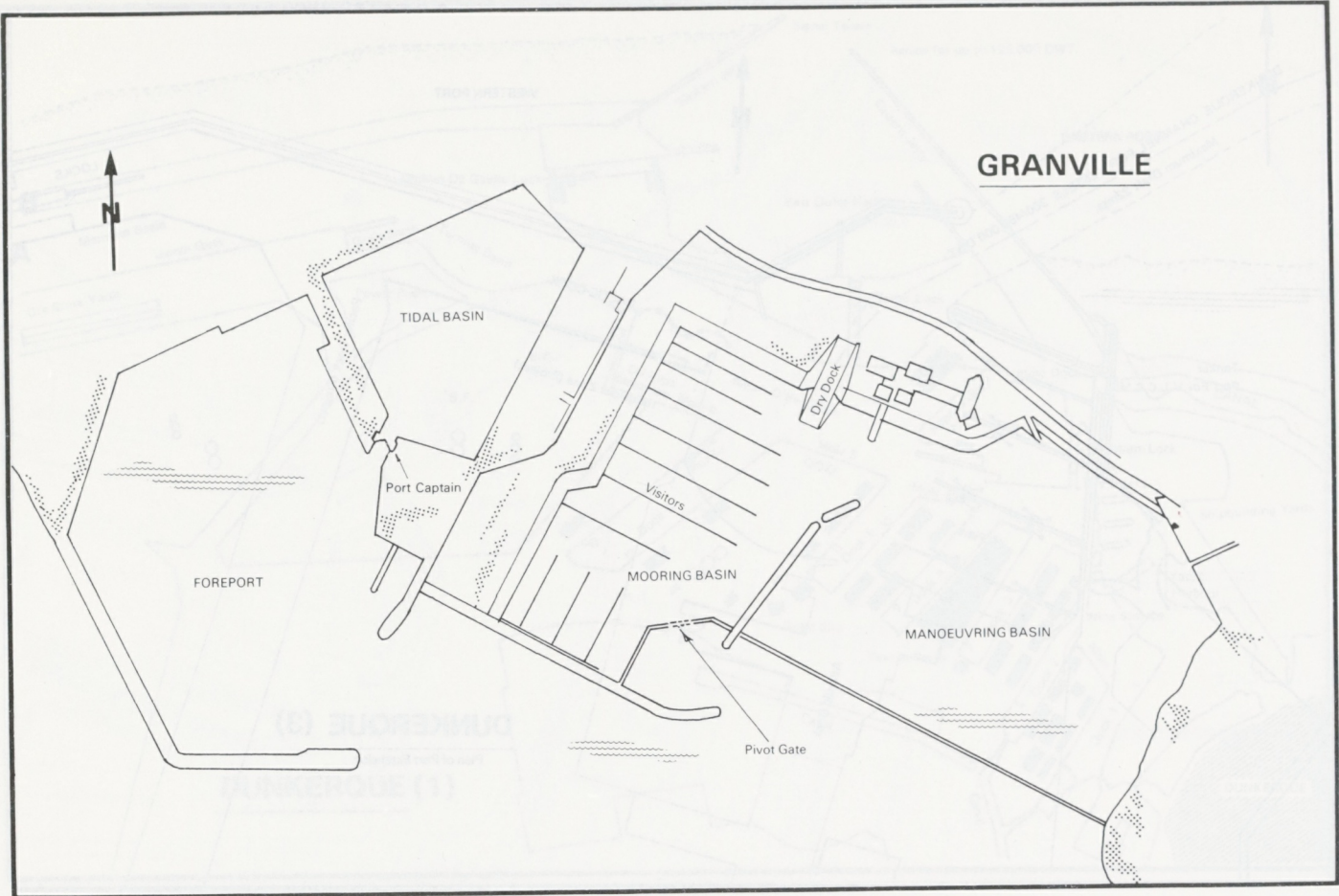
CONCARNEAU

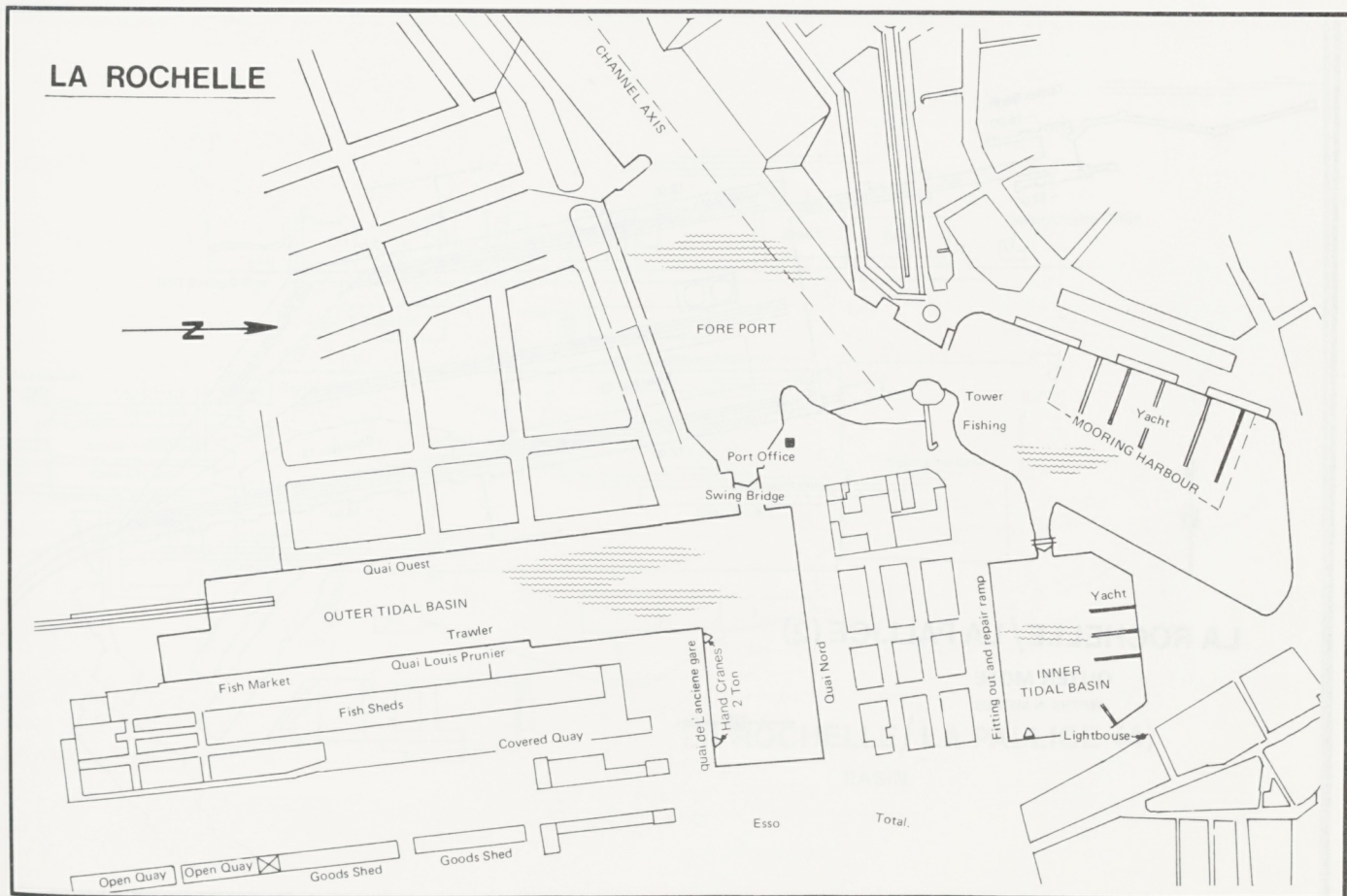
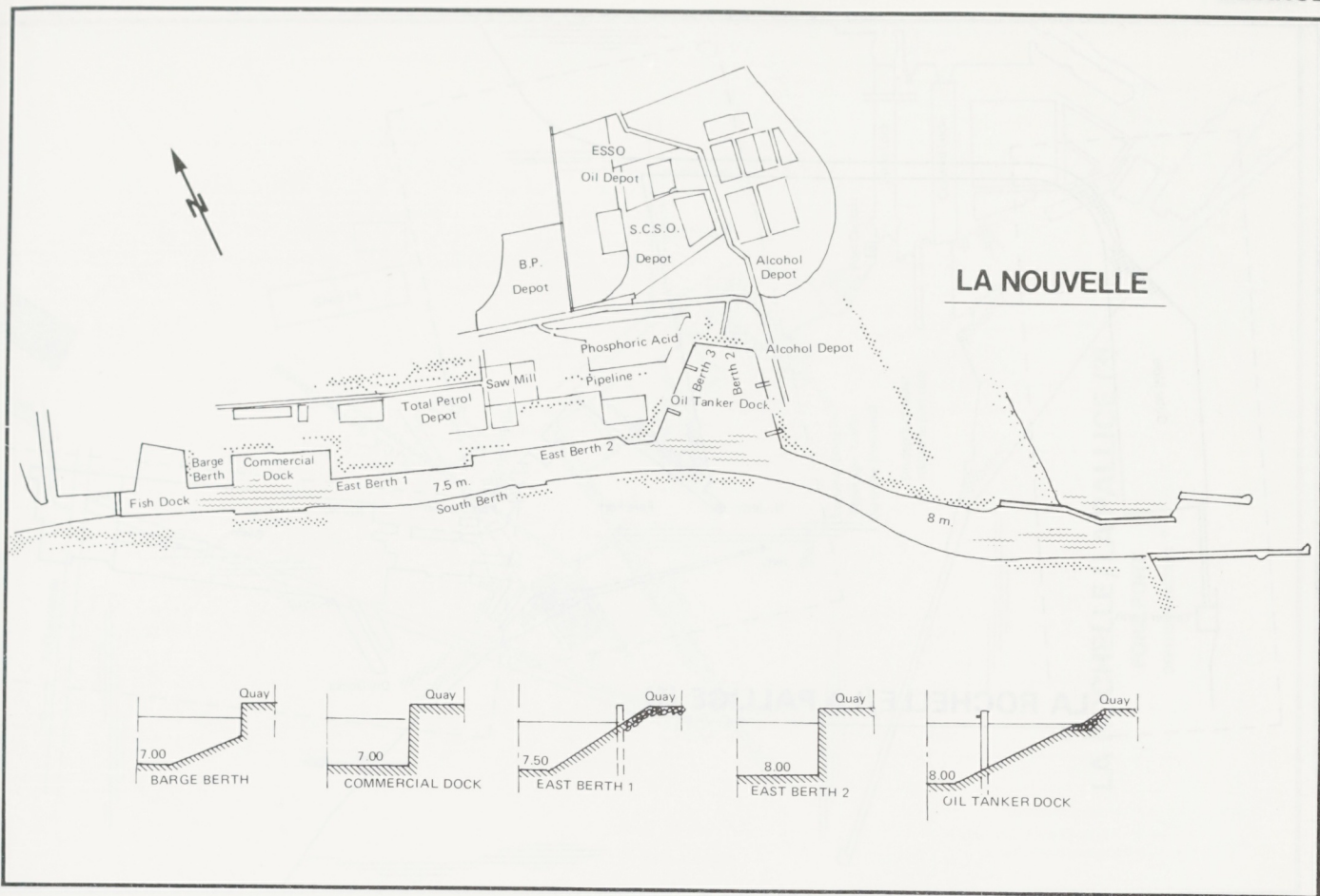
CAPACITY 2-95 metre vessels
or 1-95 metres vessel and
2 under 45 metre vessels
or 4 under 45 metre vessels

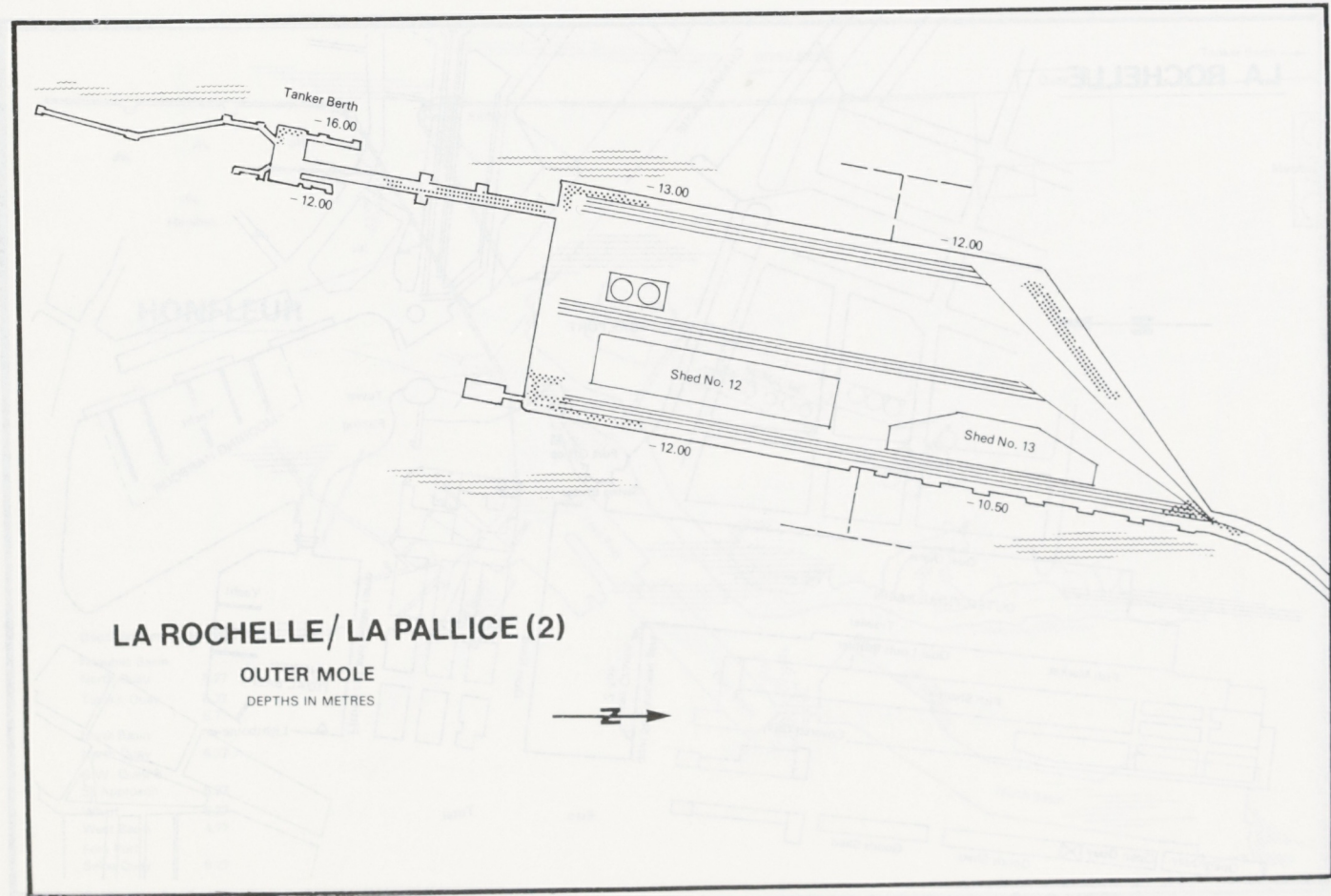
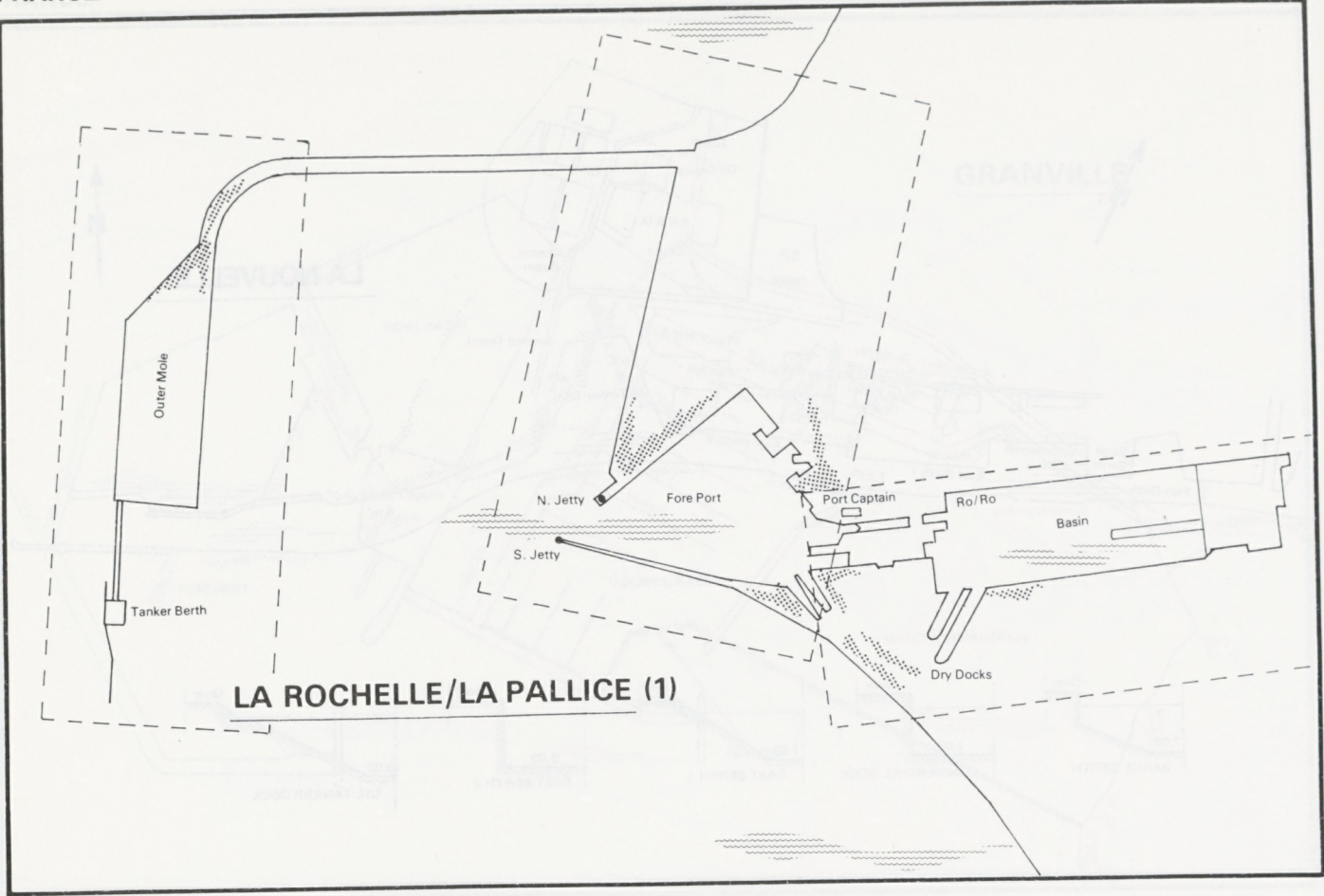


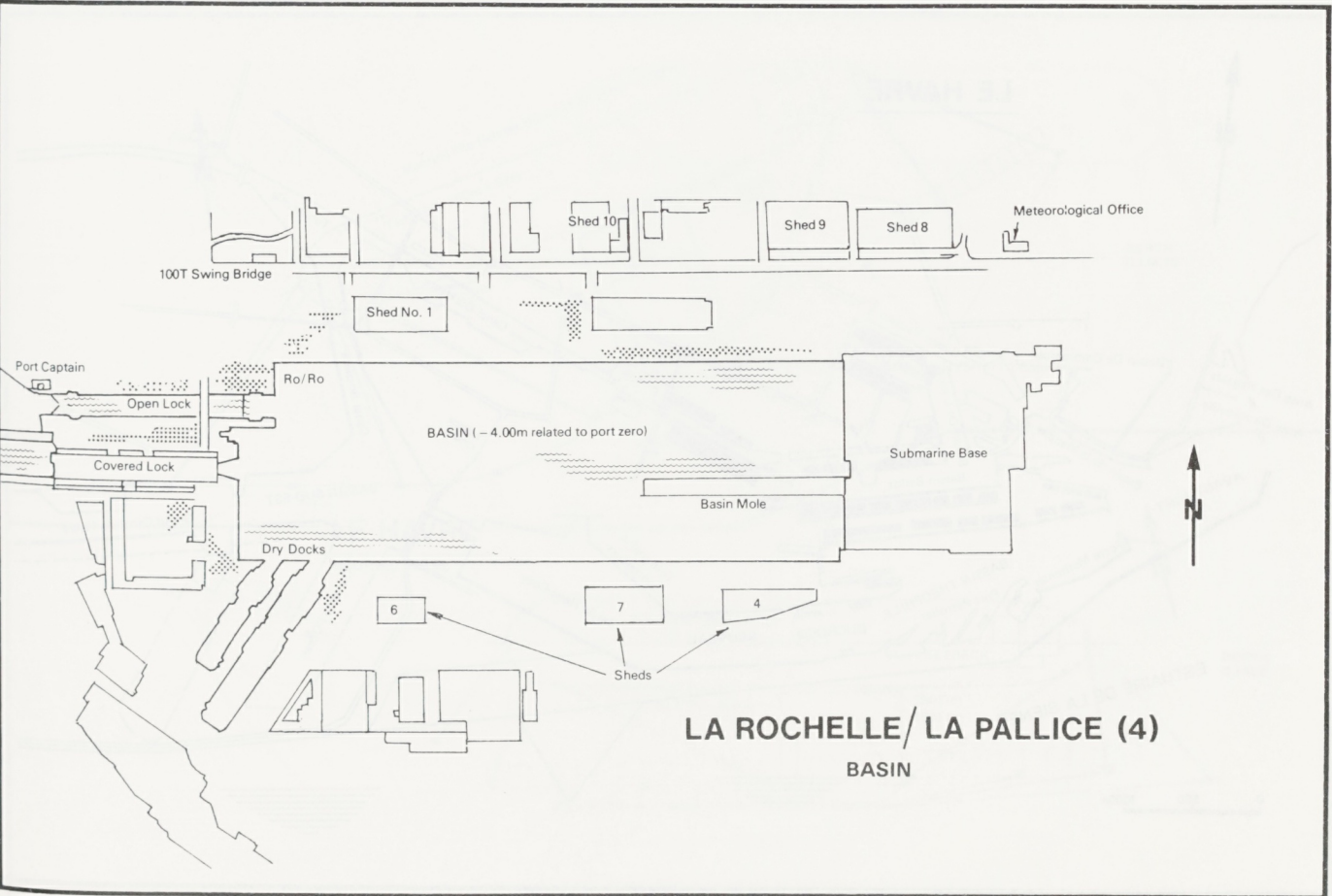
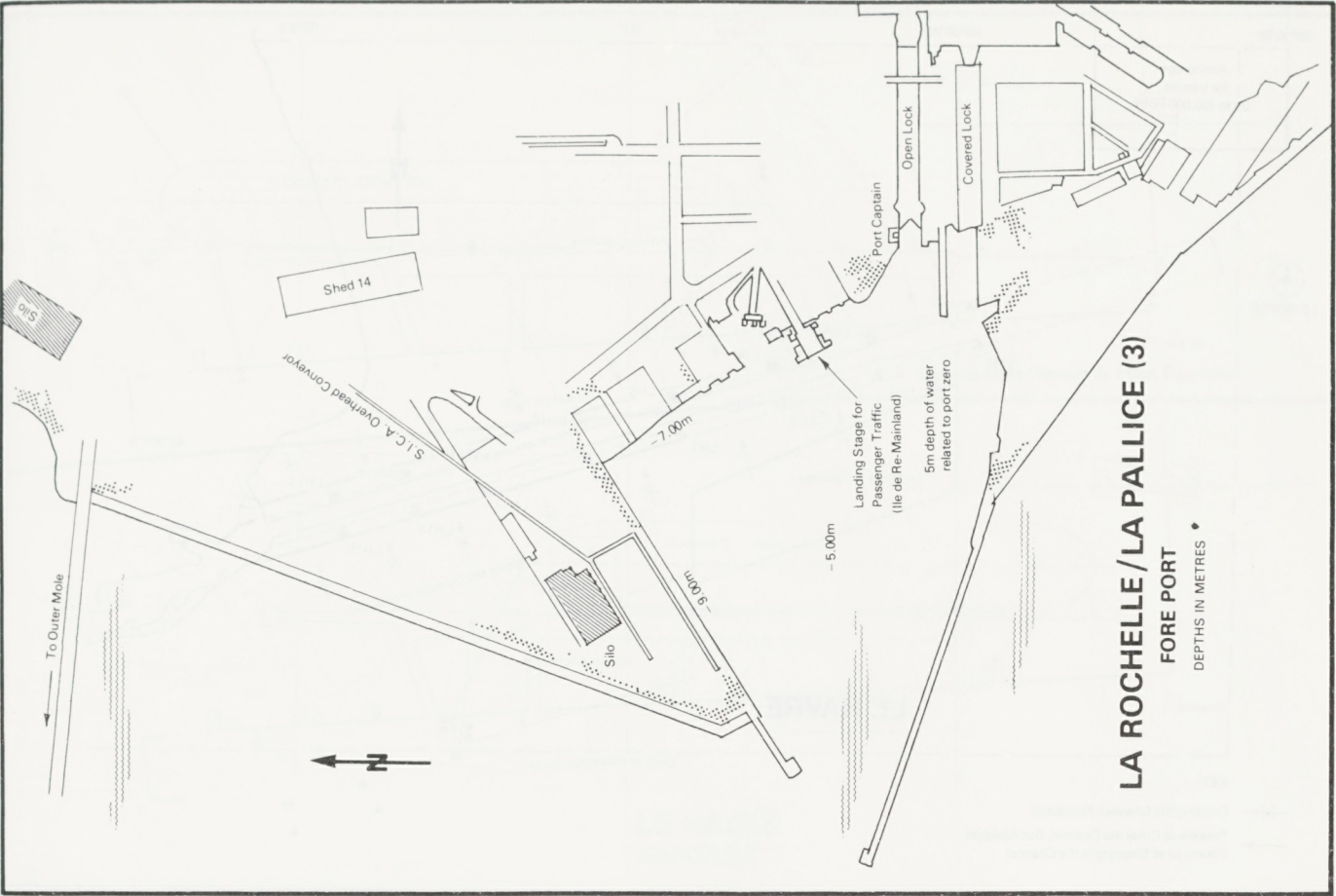


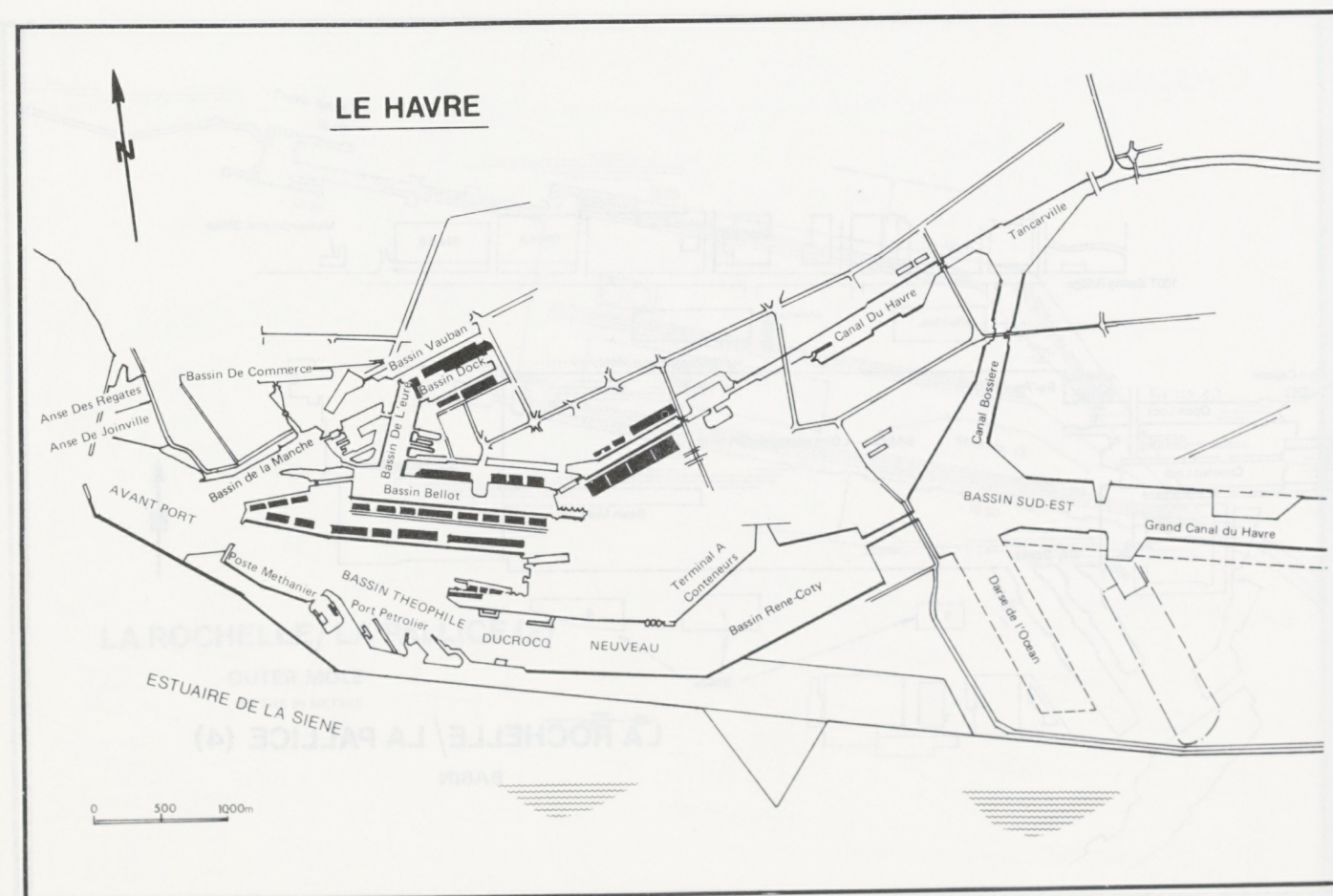
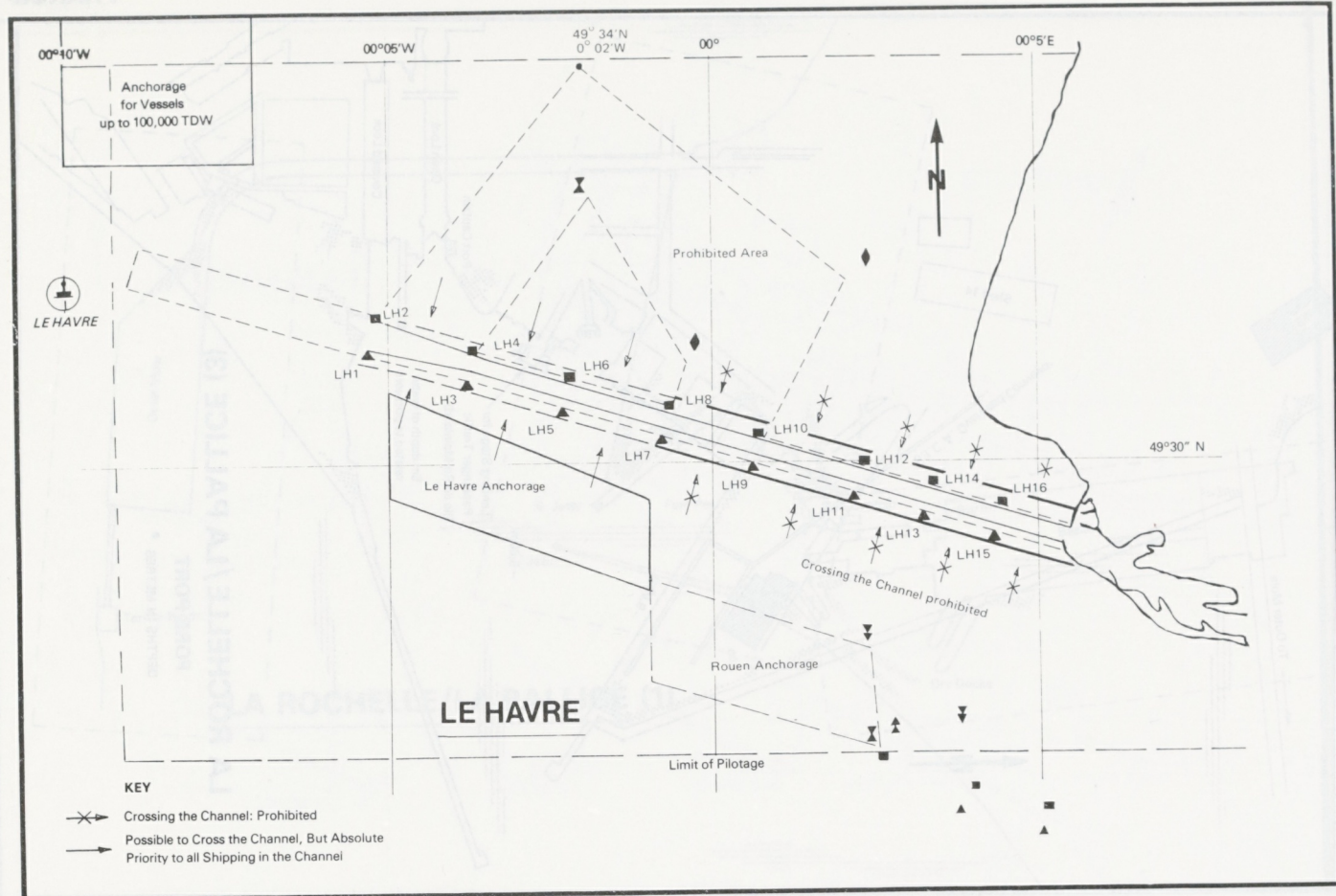


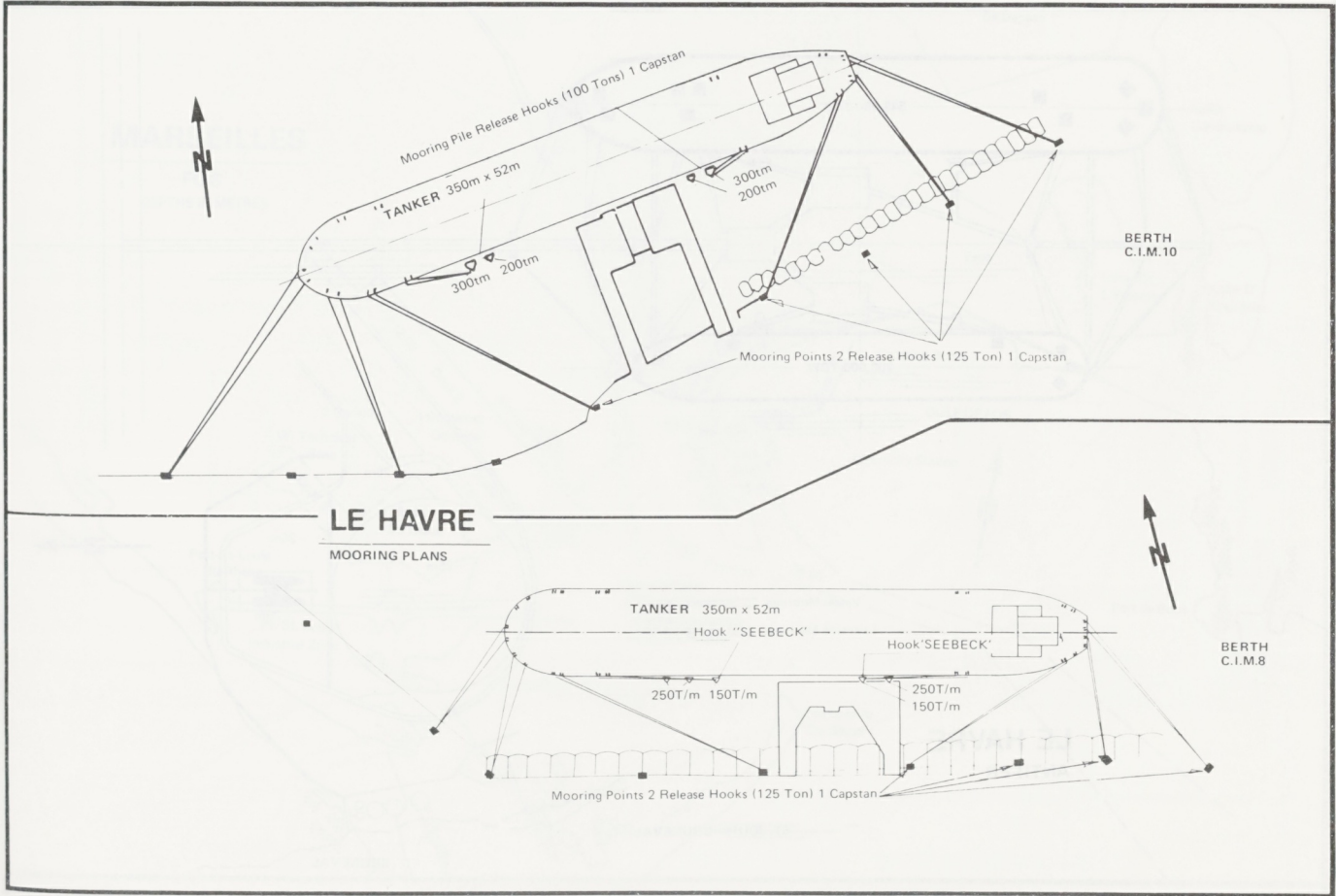
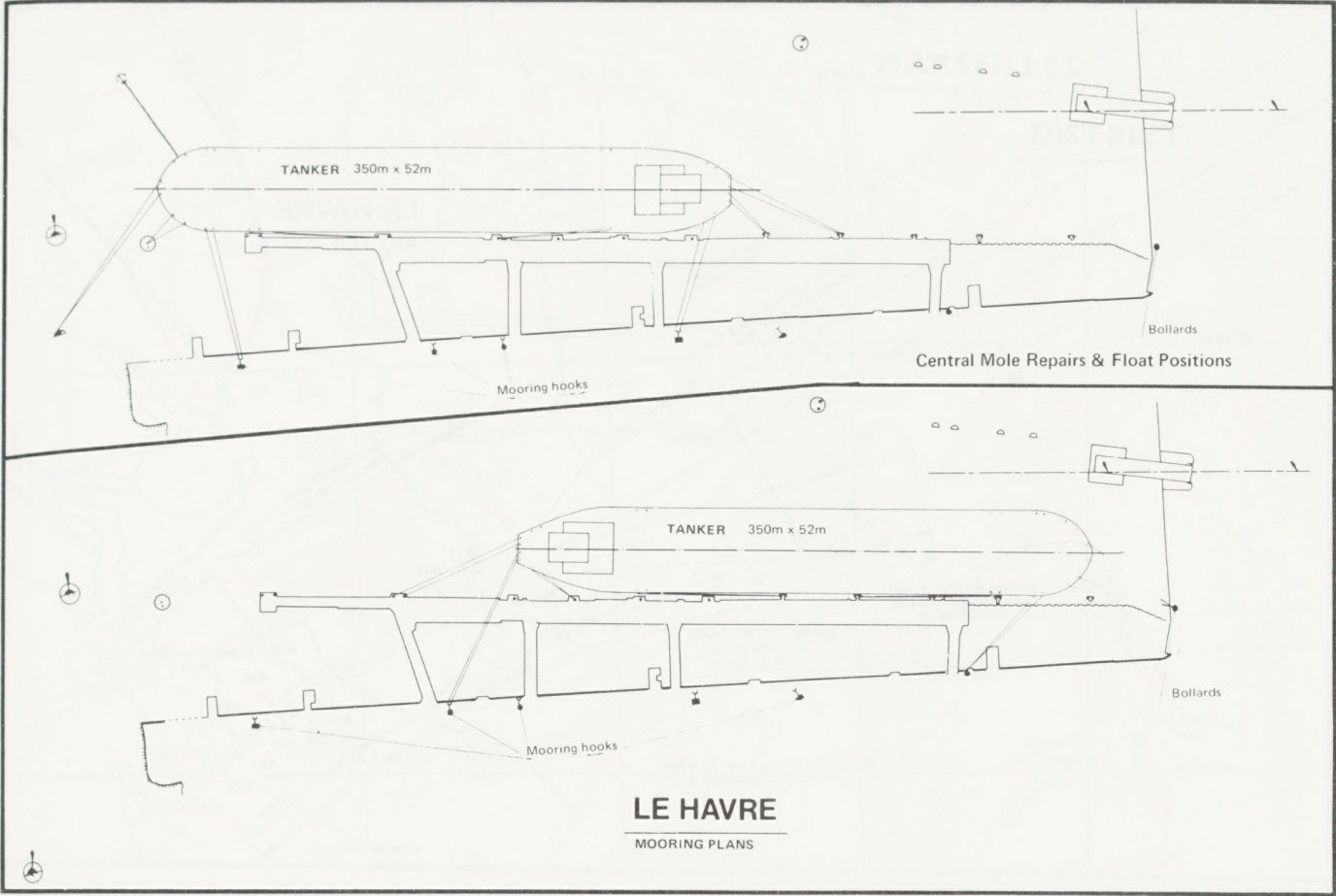




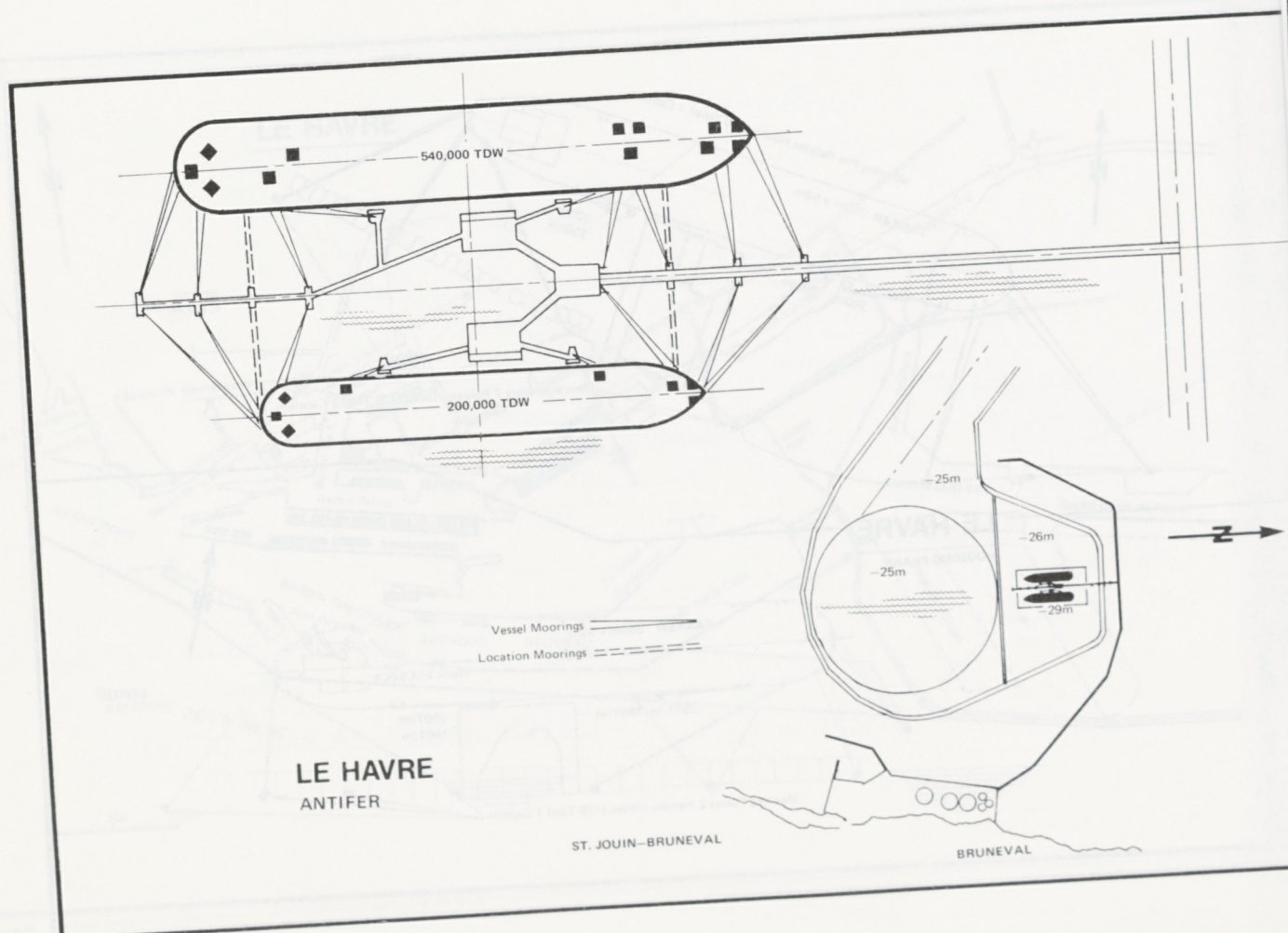
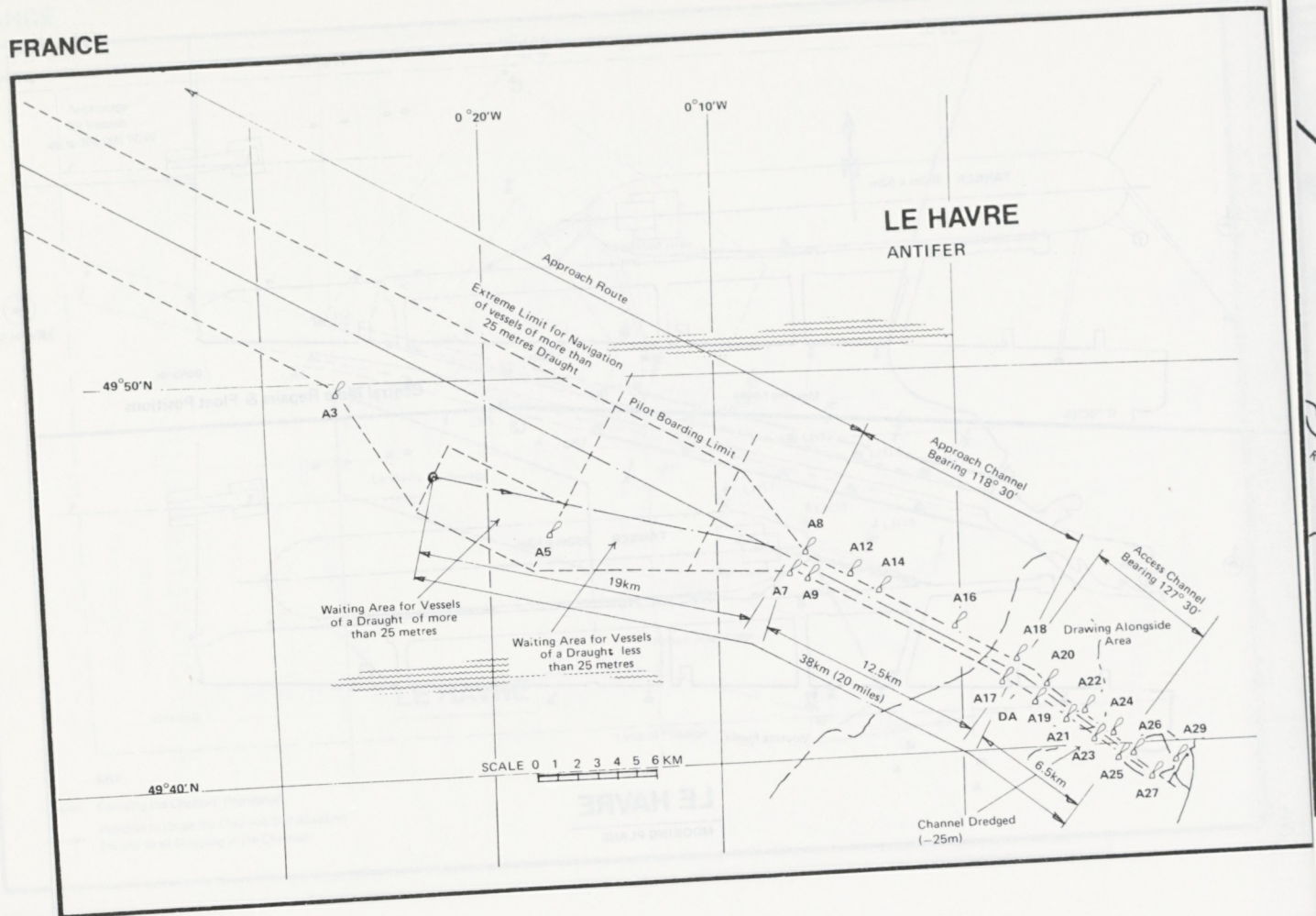


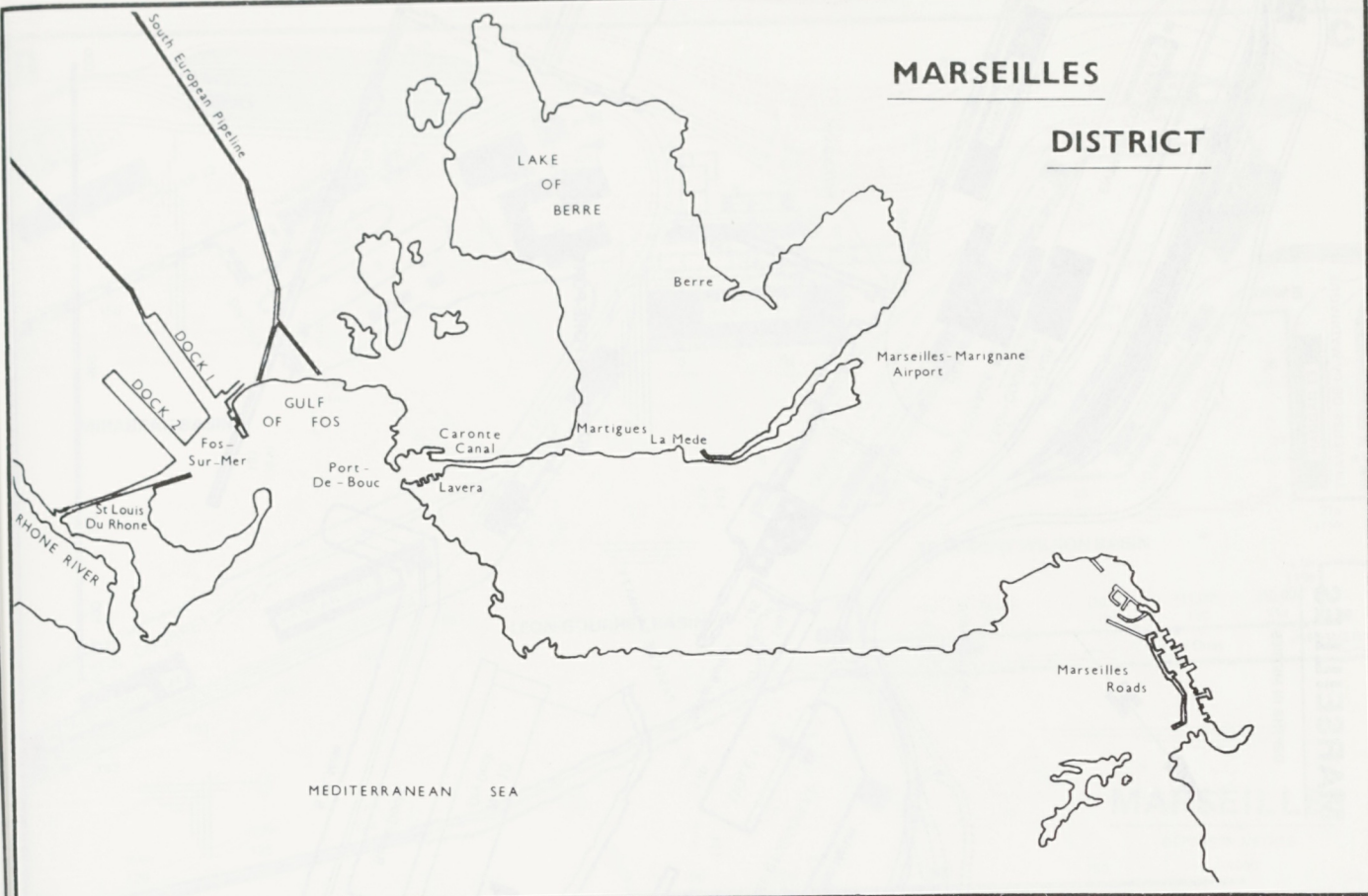




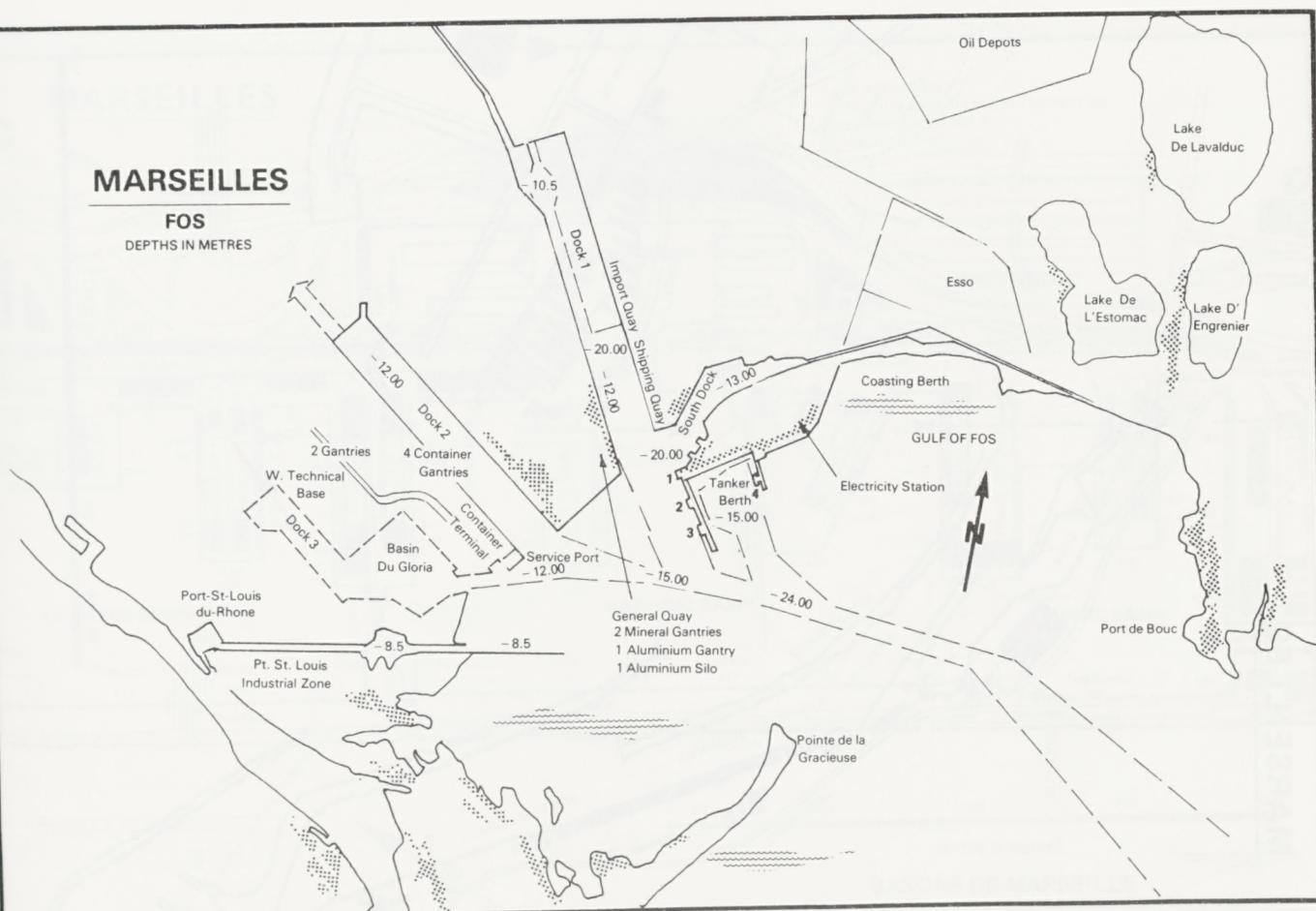


FRANCE

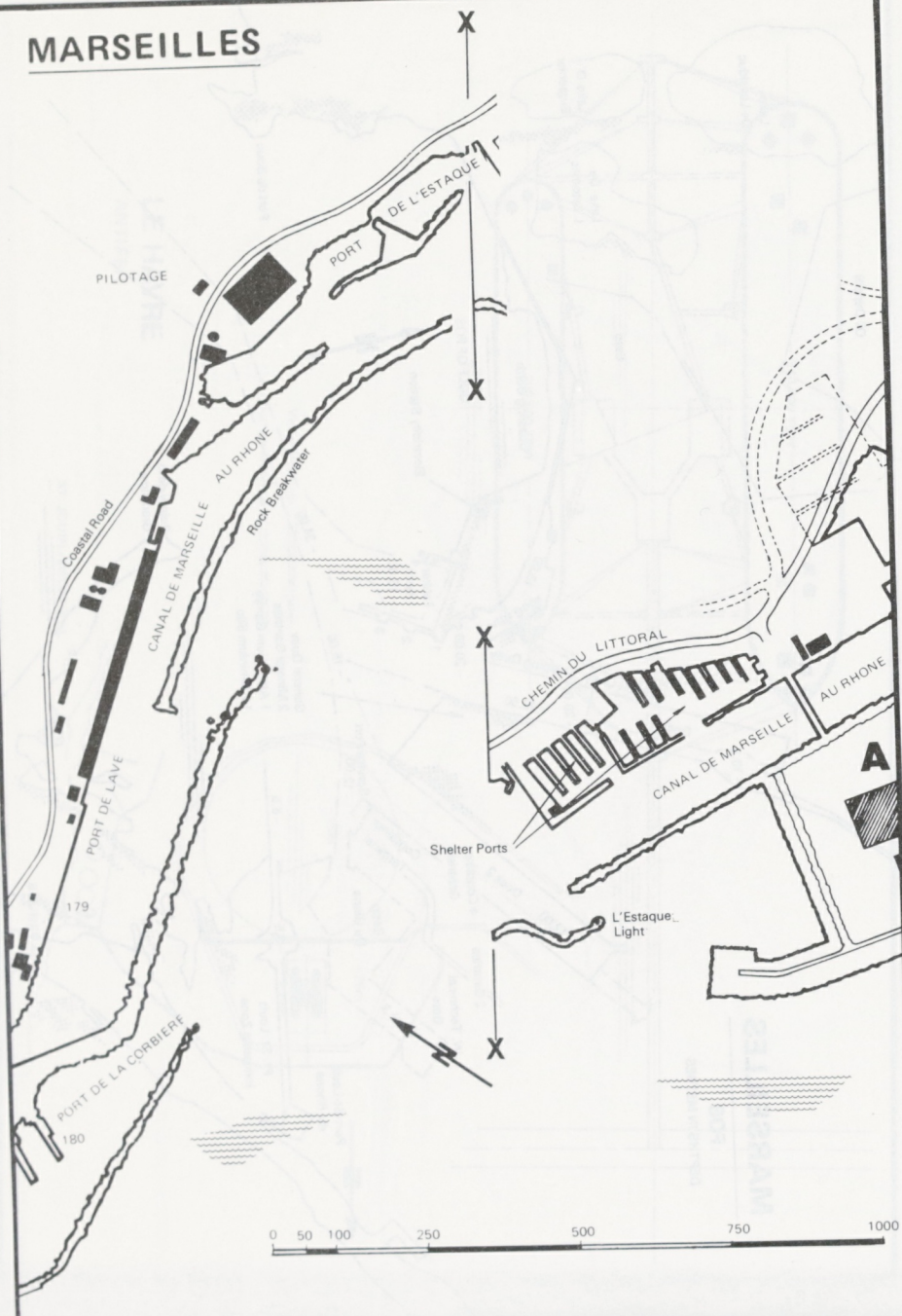


MARSEILLES**DISTRICT****MARSEILLES****FOS**

DEPTHS IN METRES

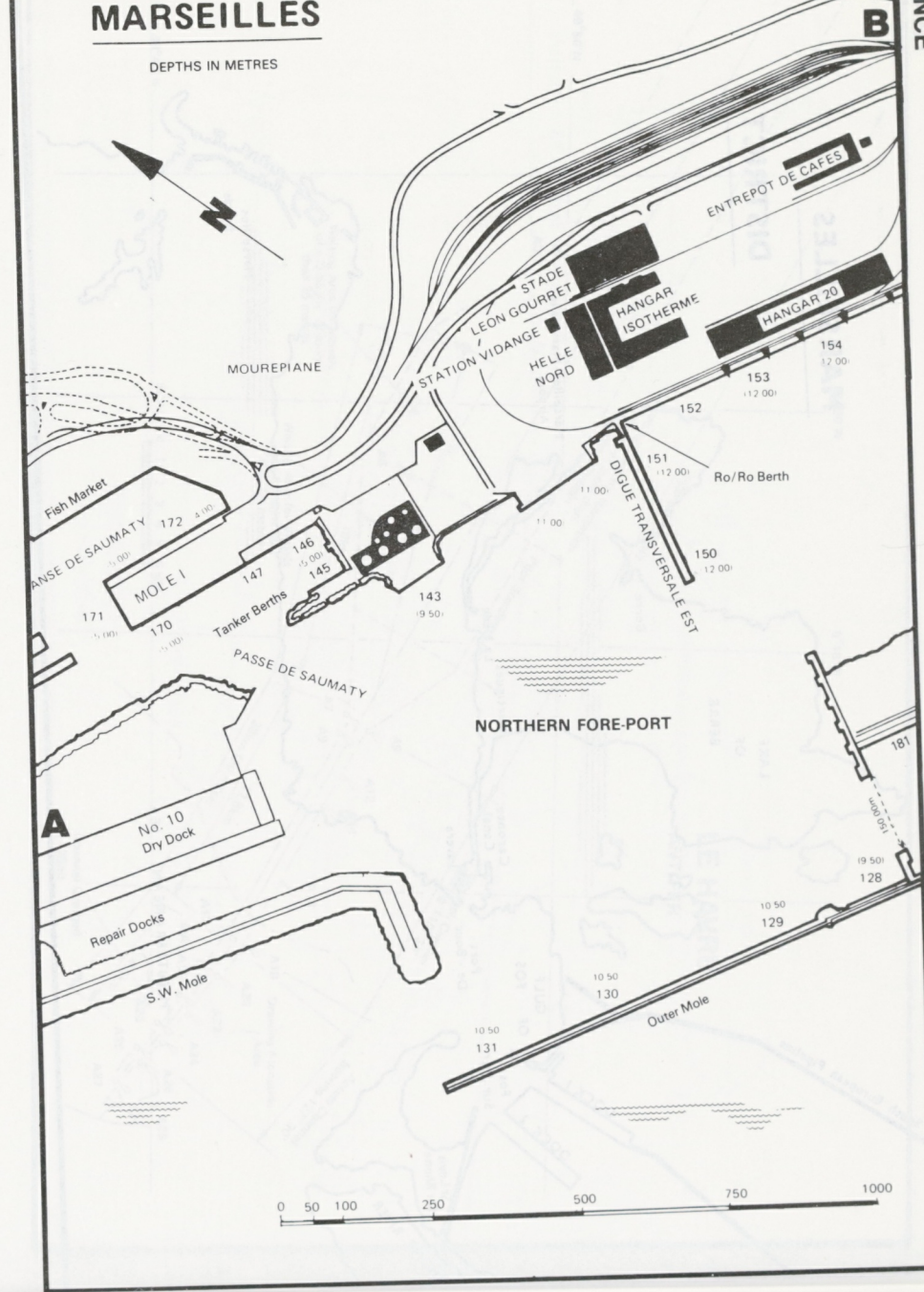


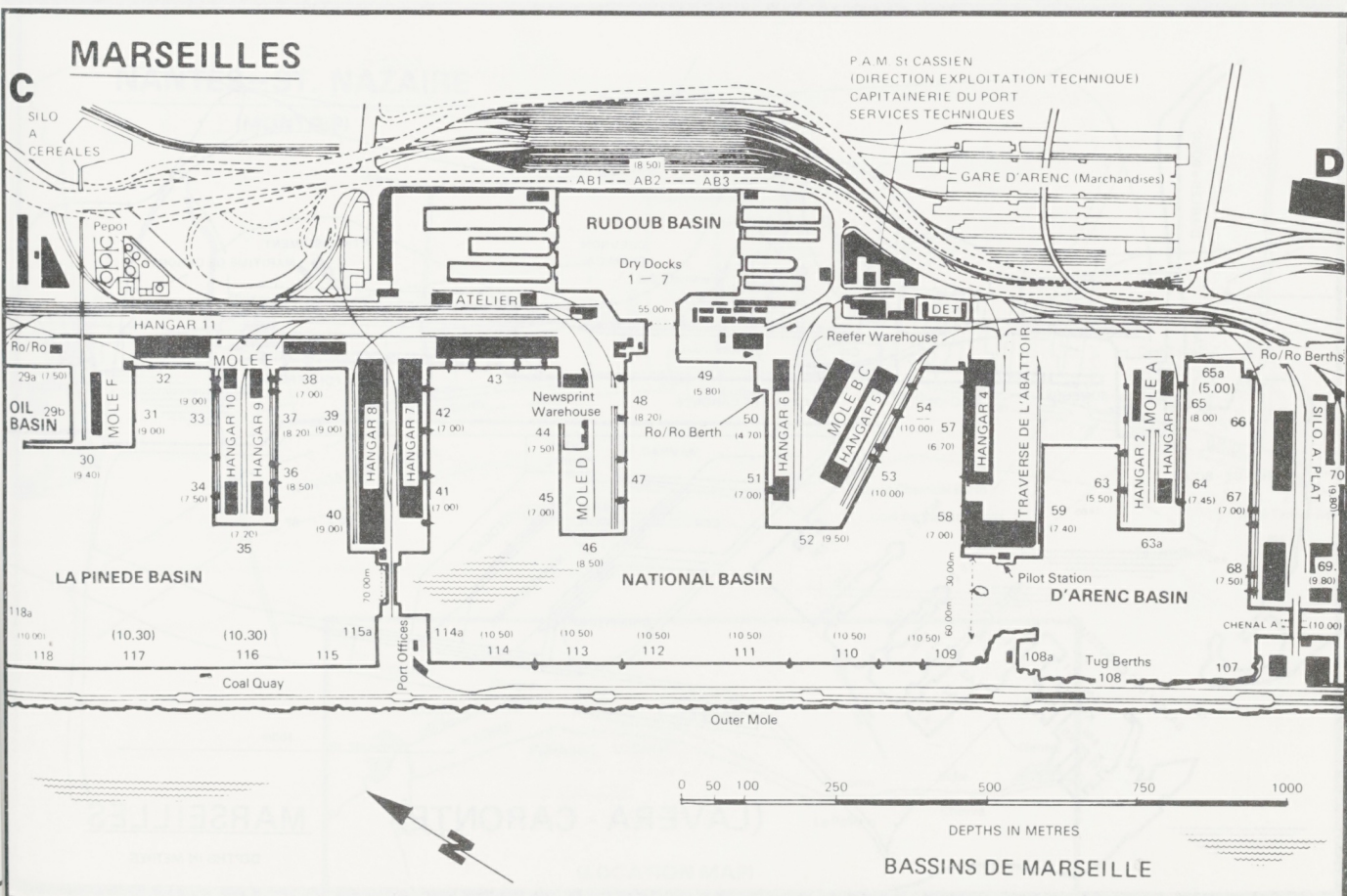
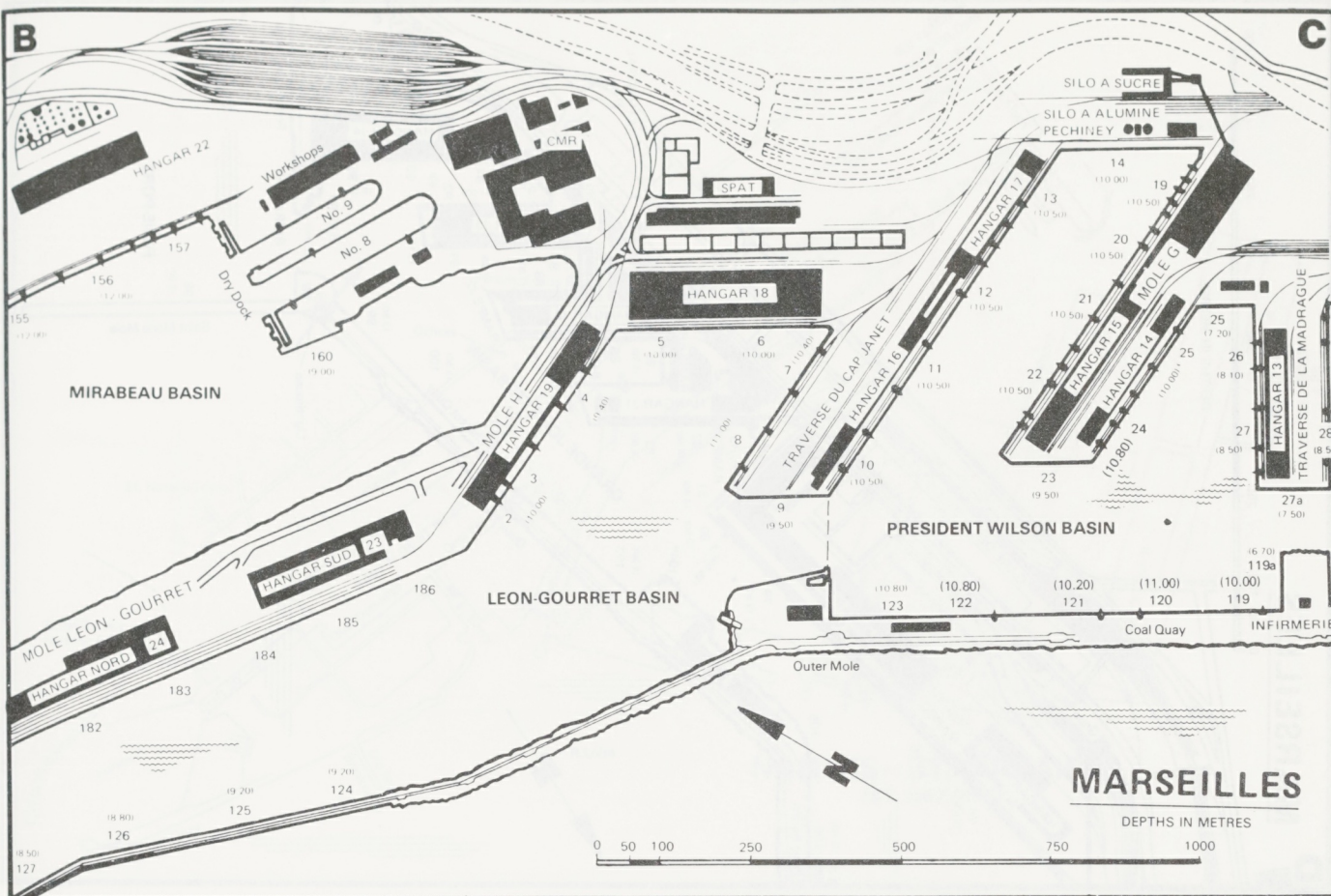
MARSEILLES

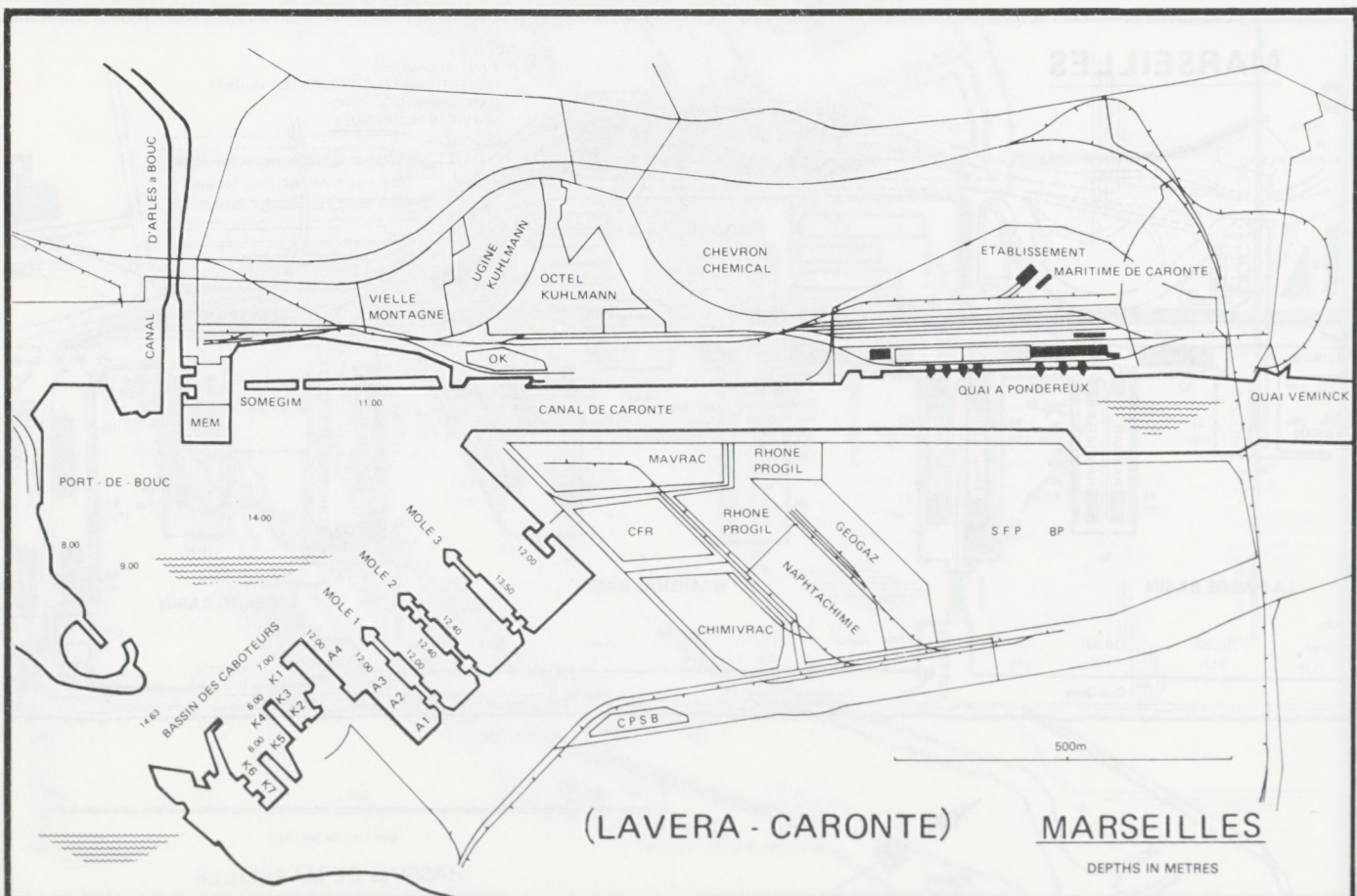


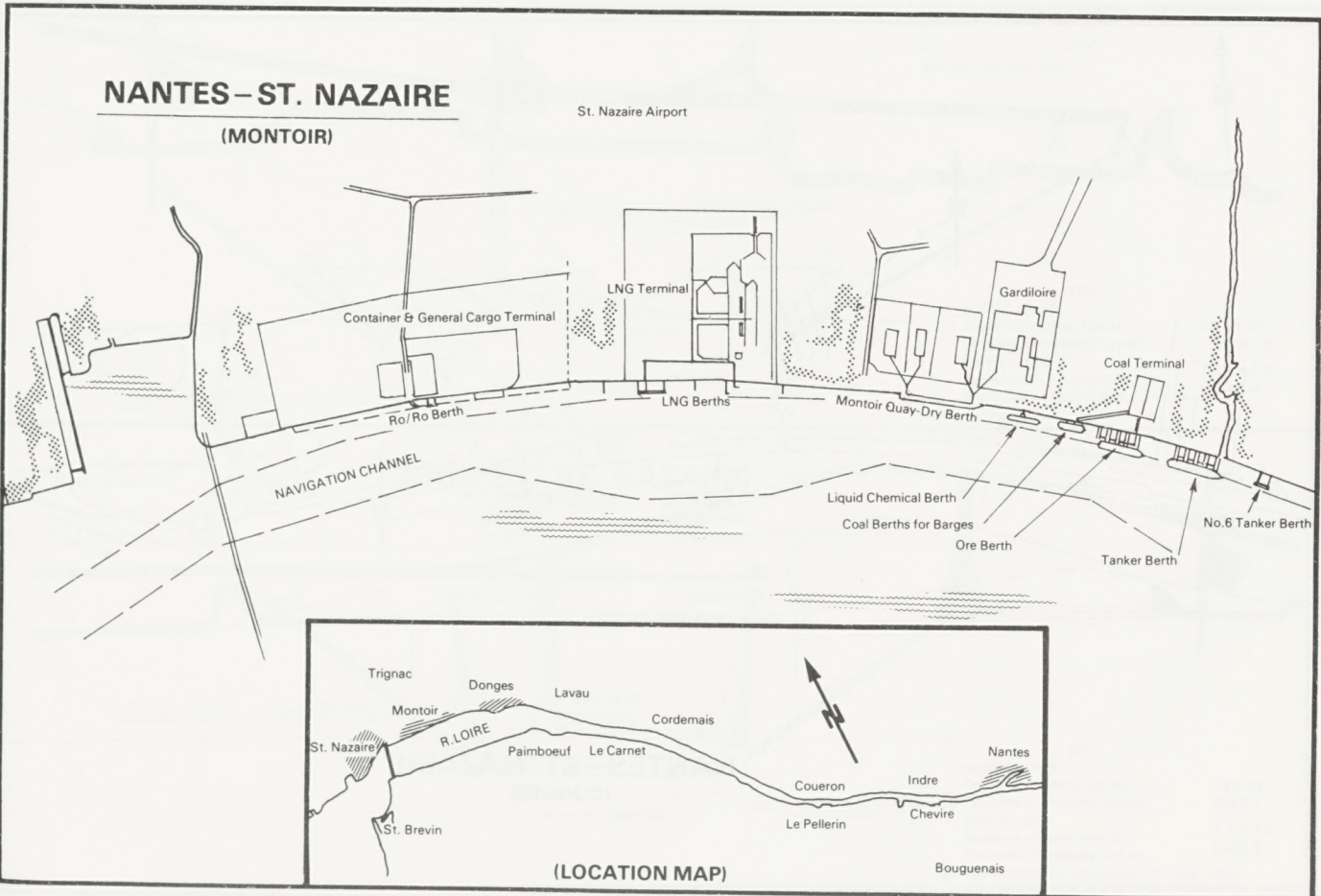
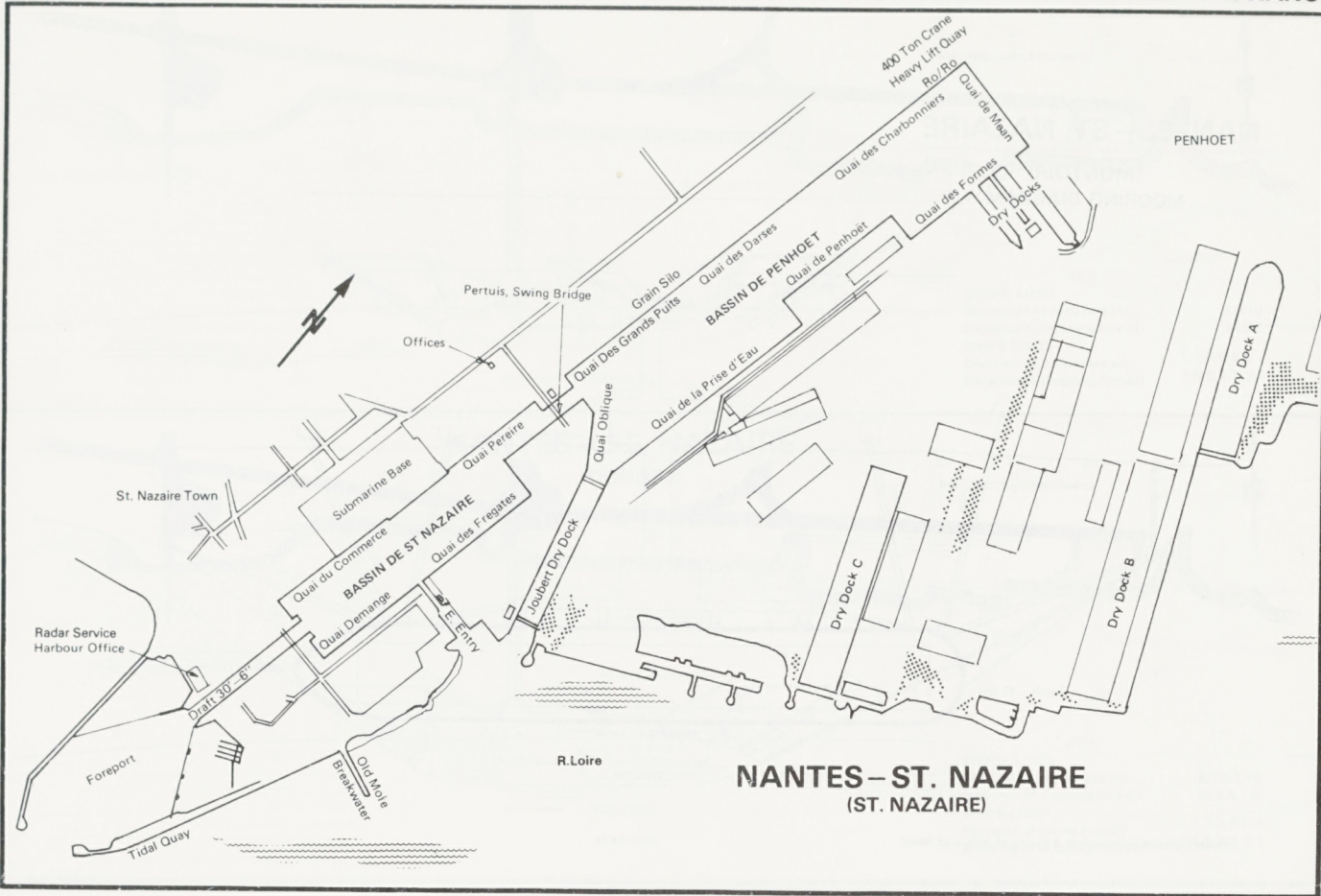
MARSEILLES

DEPTHS IN METRES



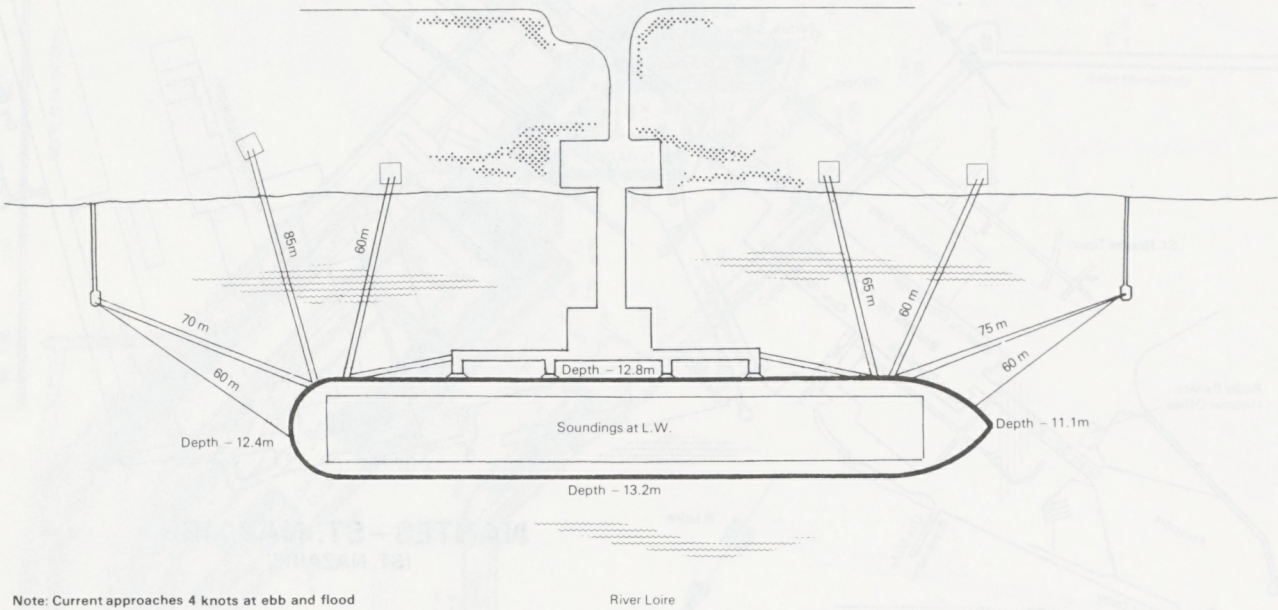




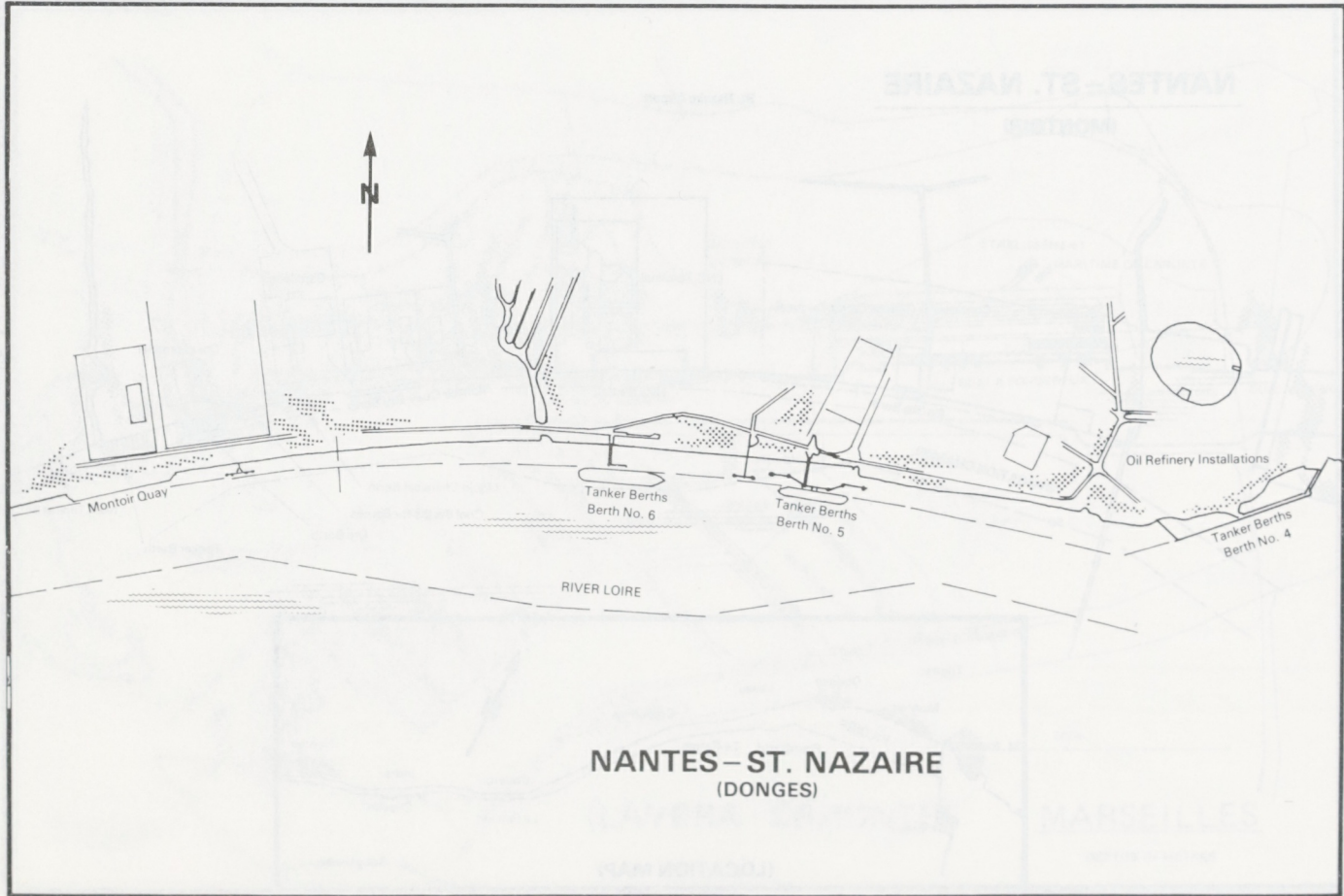


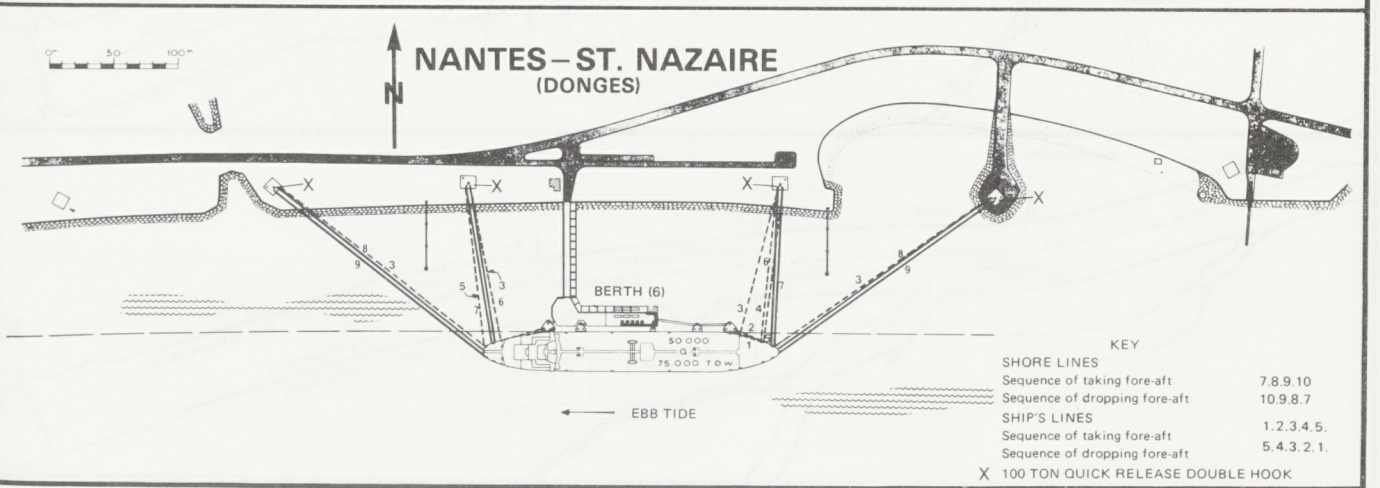
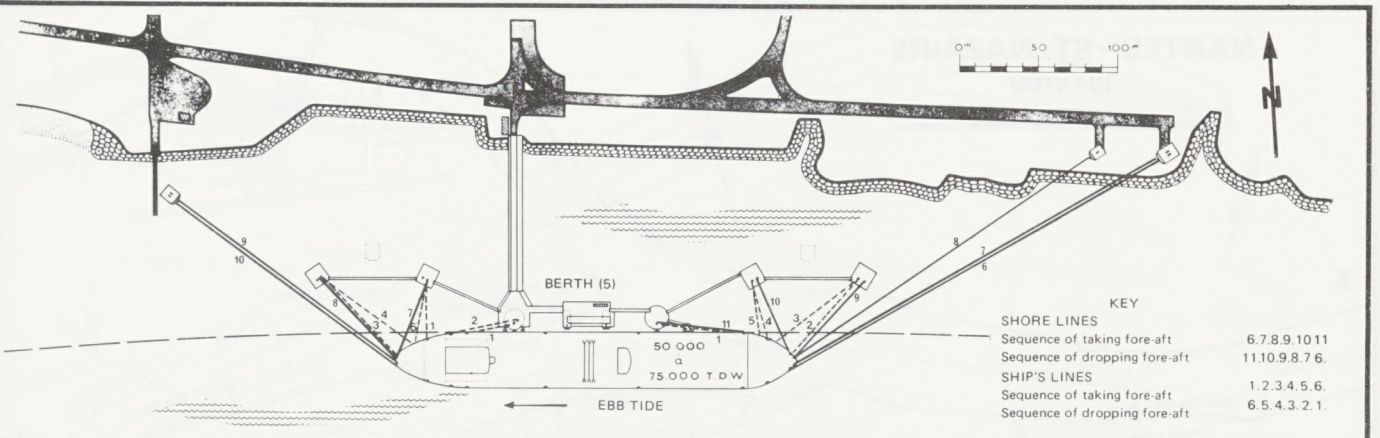
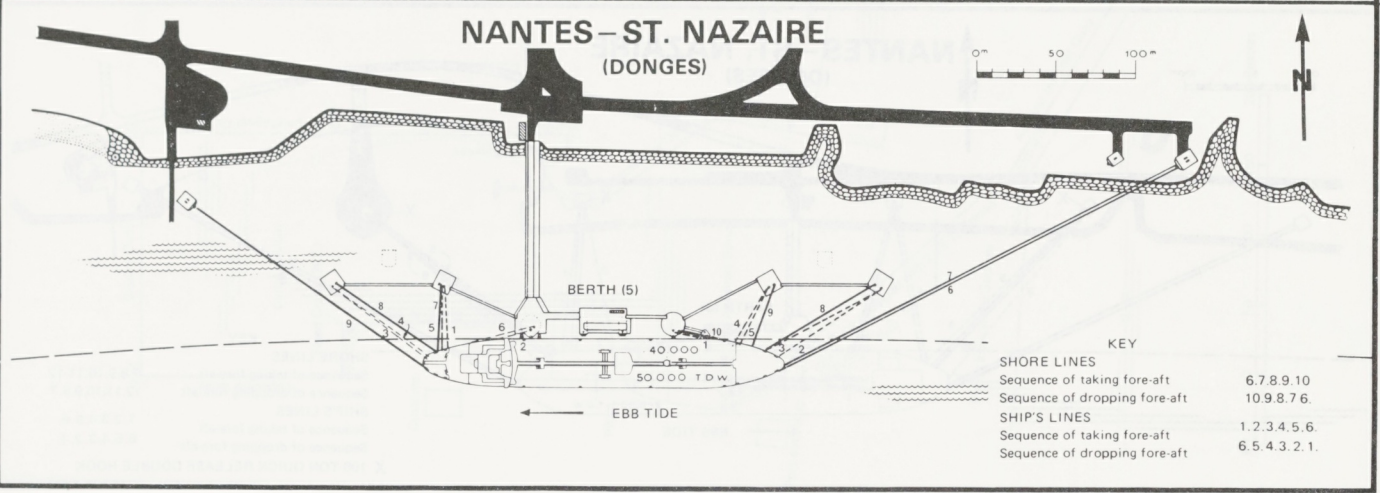
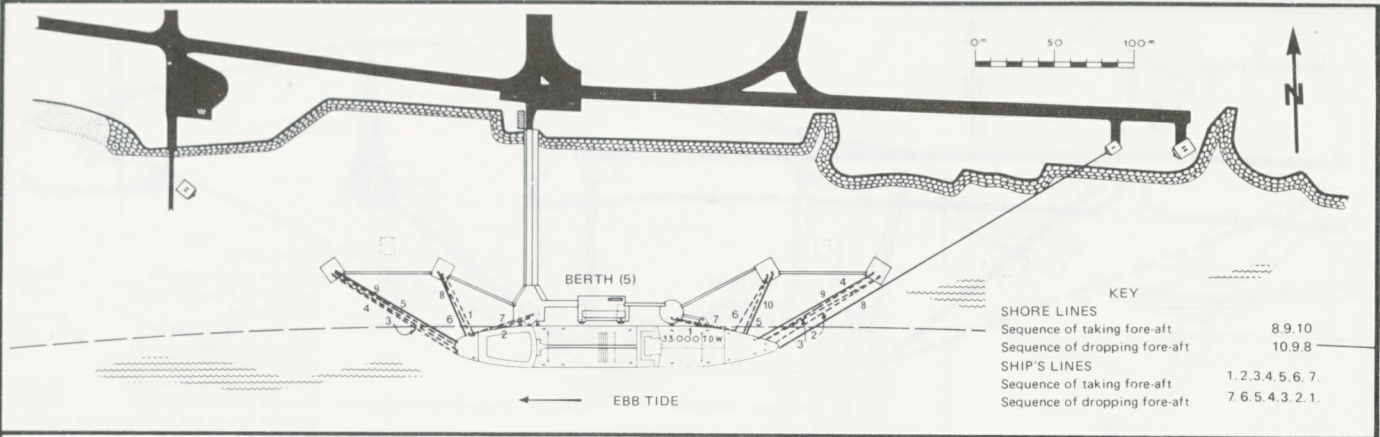
NANTES – ST. NAZAIRE

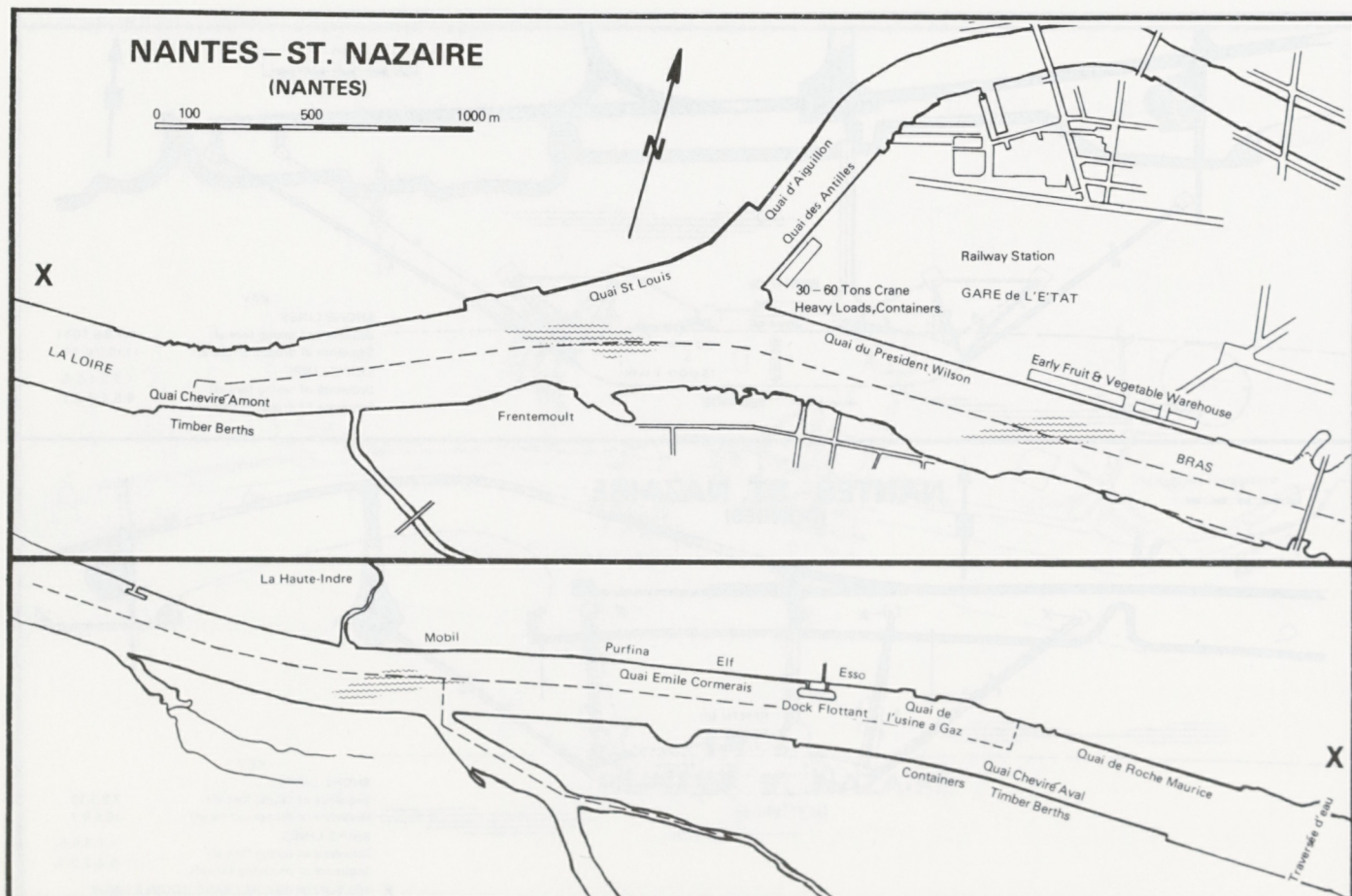
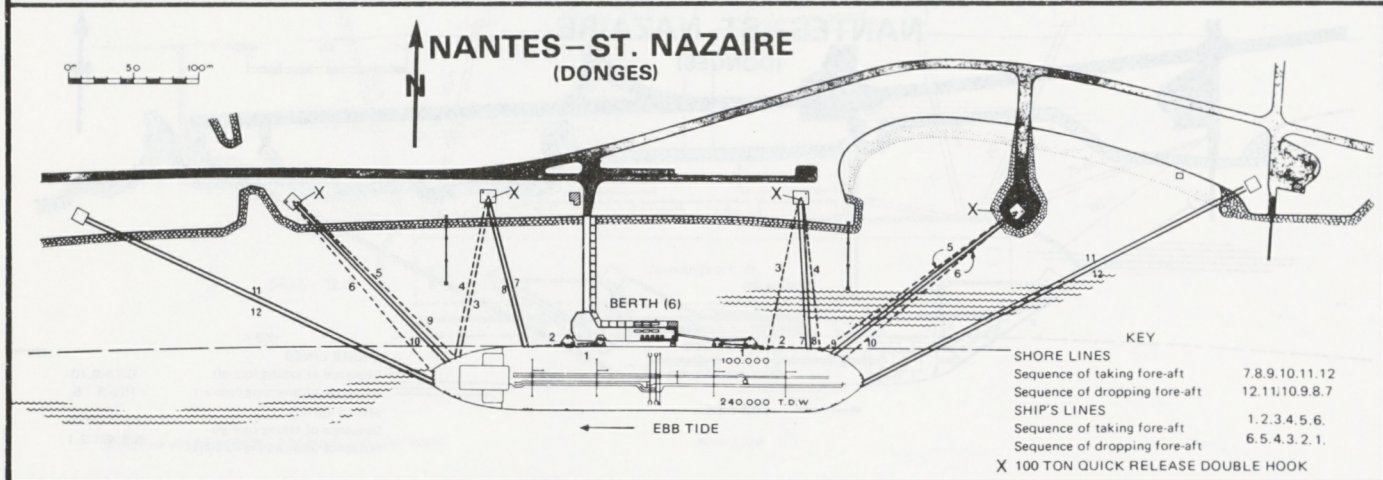
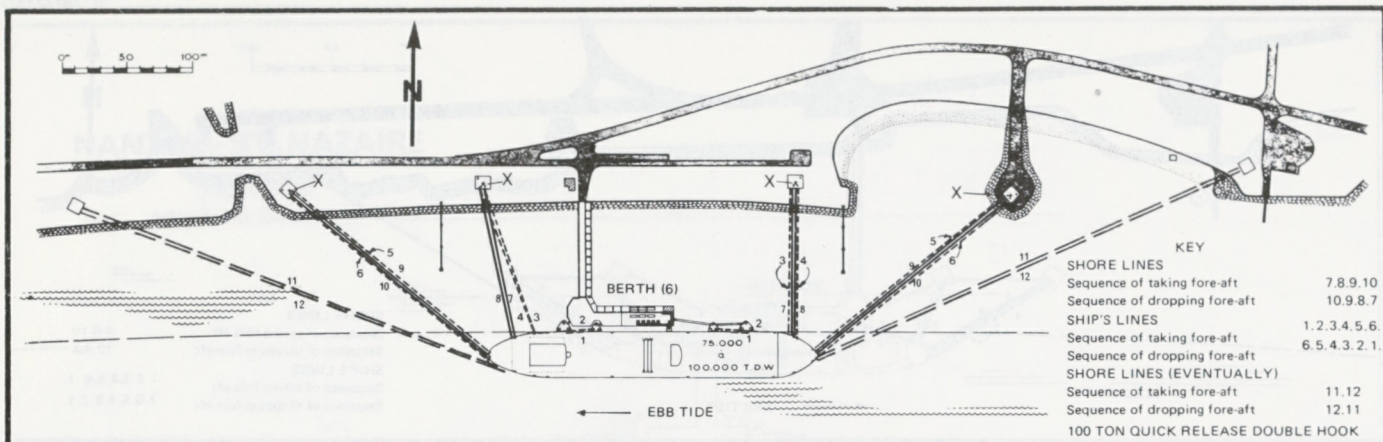
(MONTAIR)
MOORING DIAGRAM

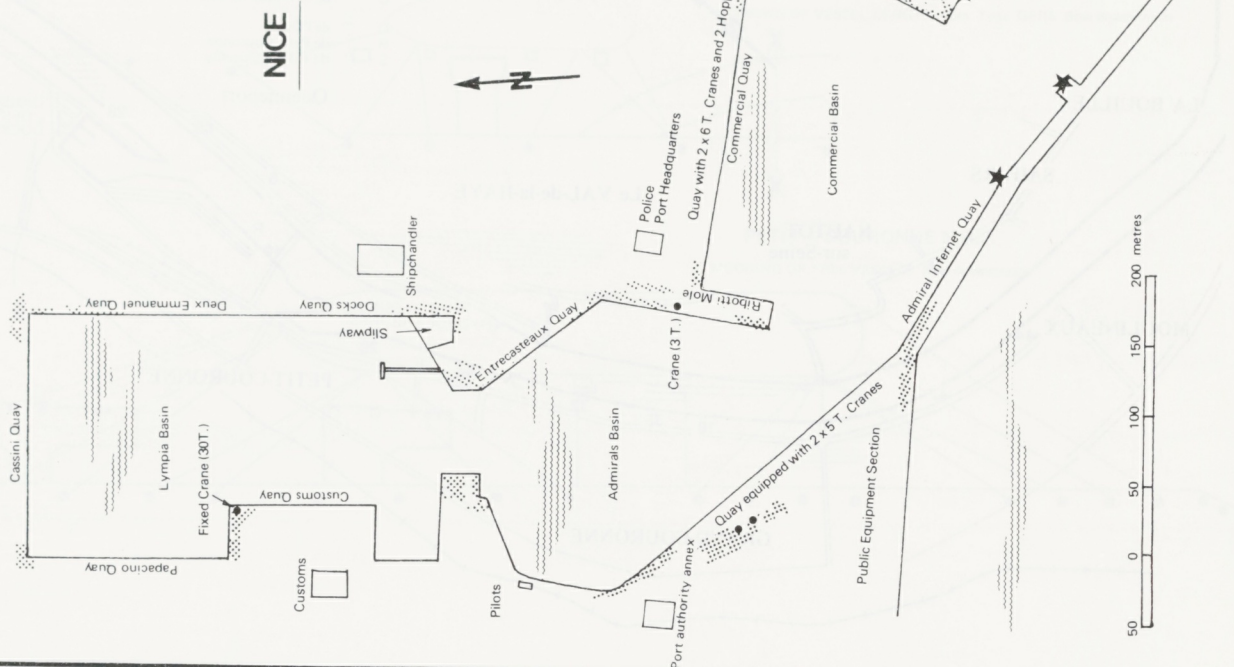


"Plan supplied by Ship's Master"

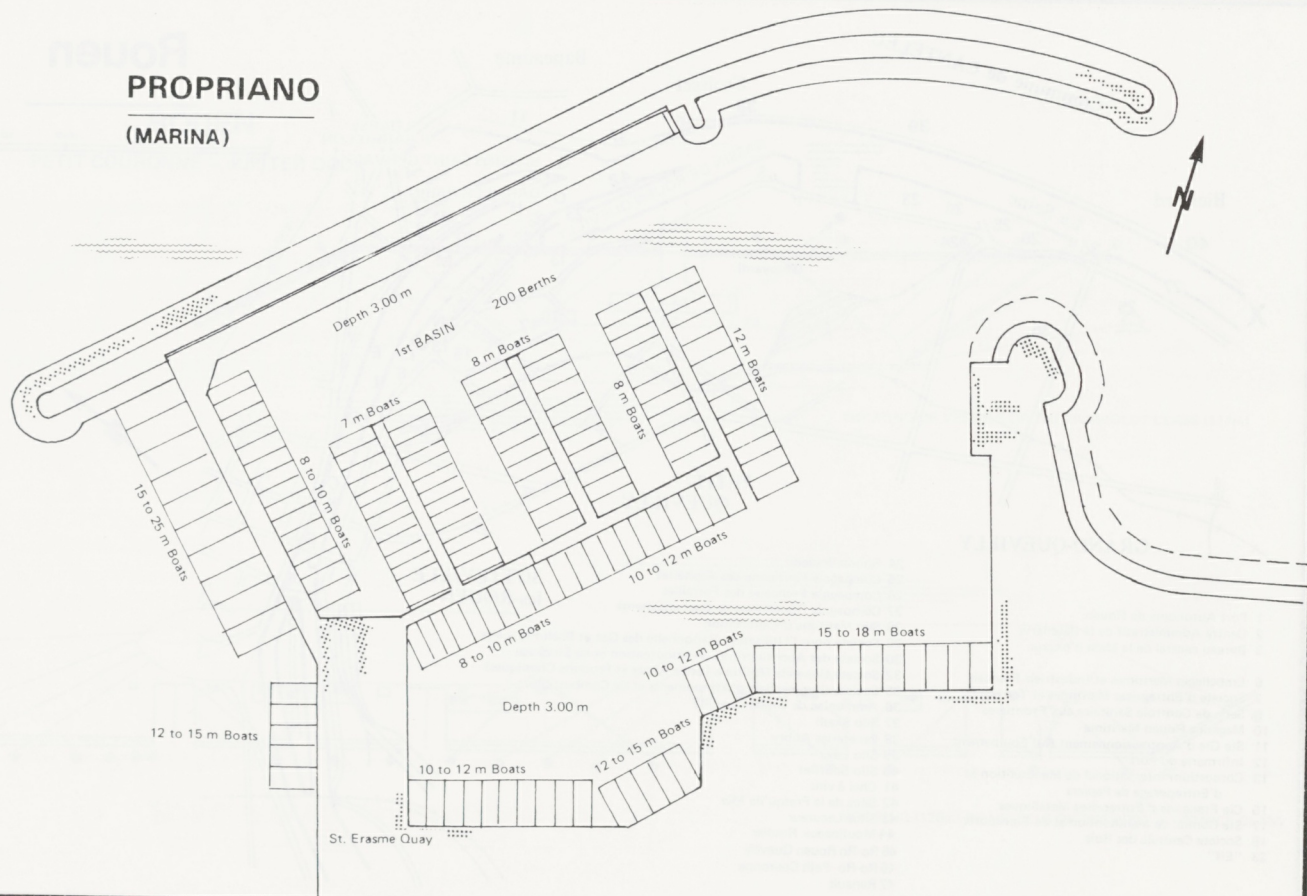


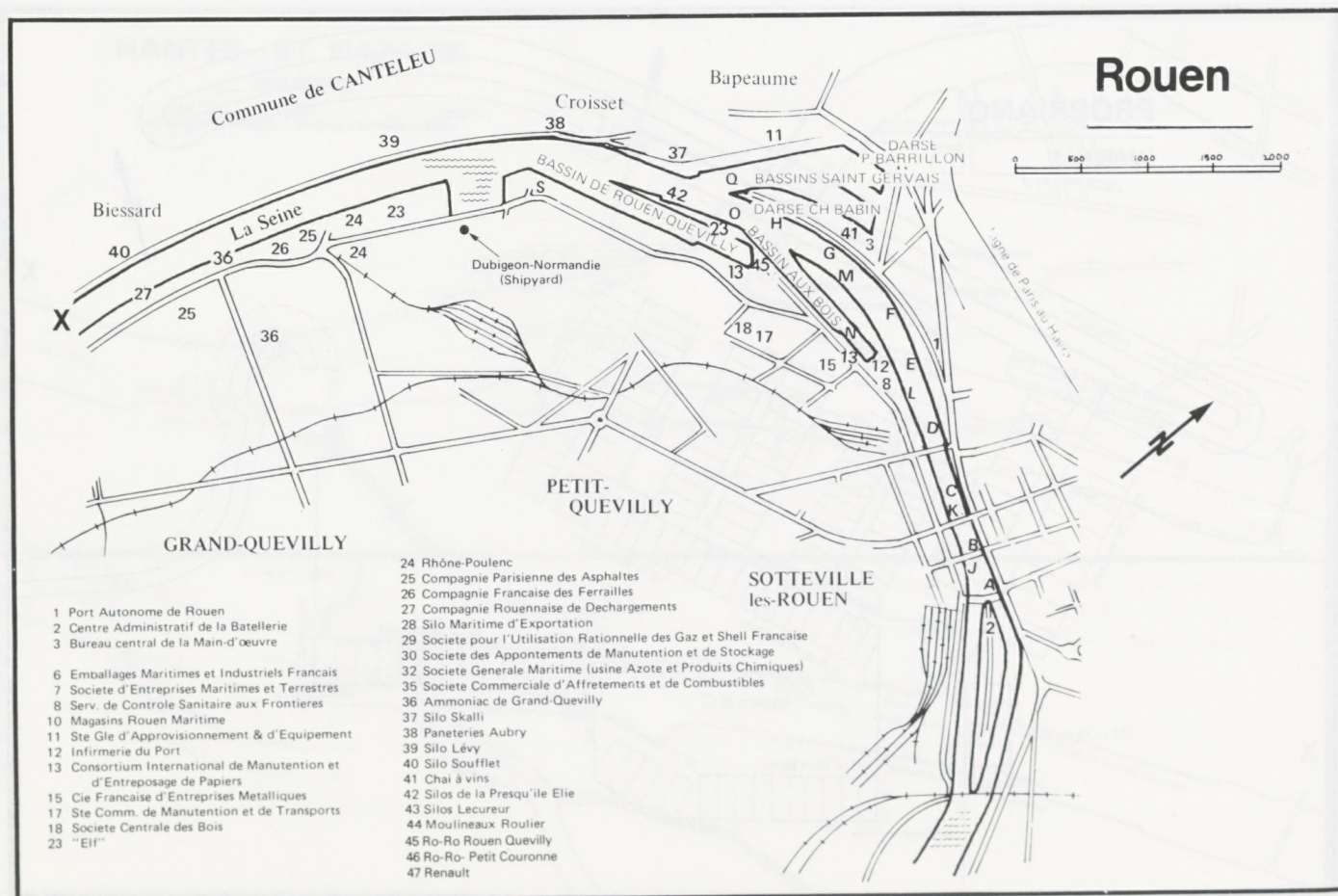
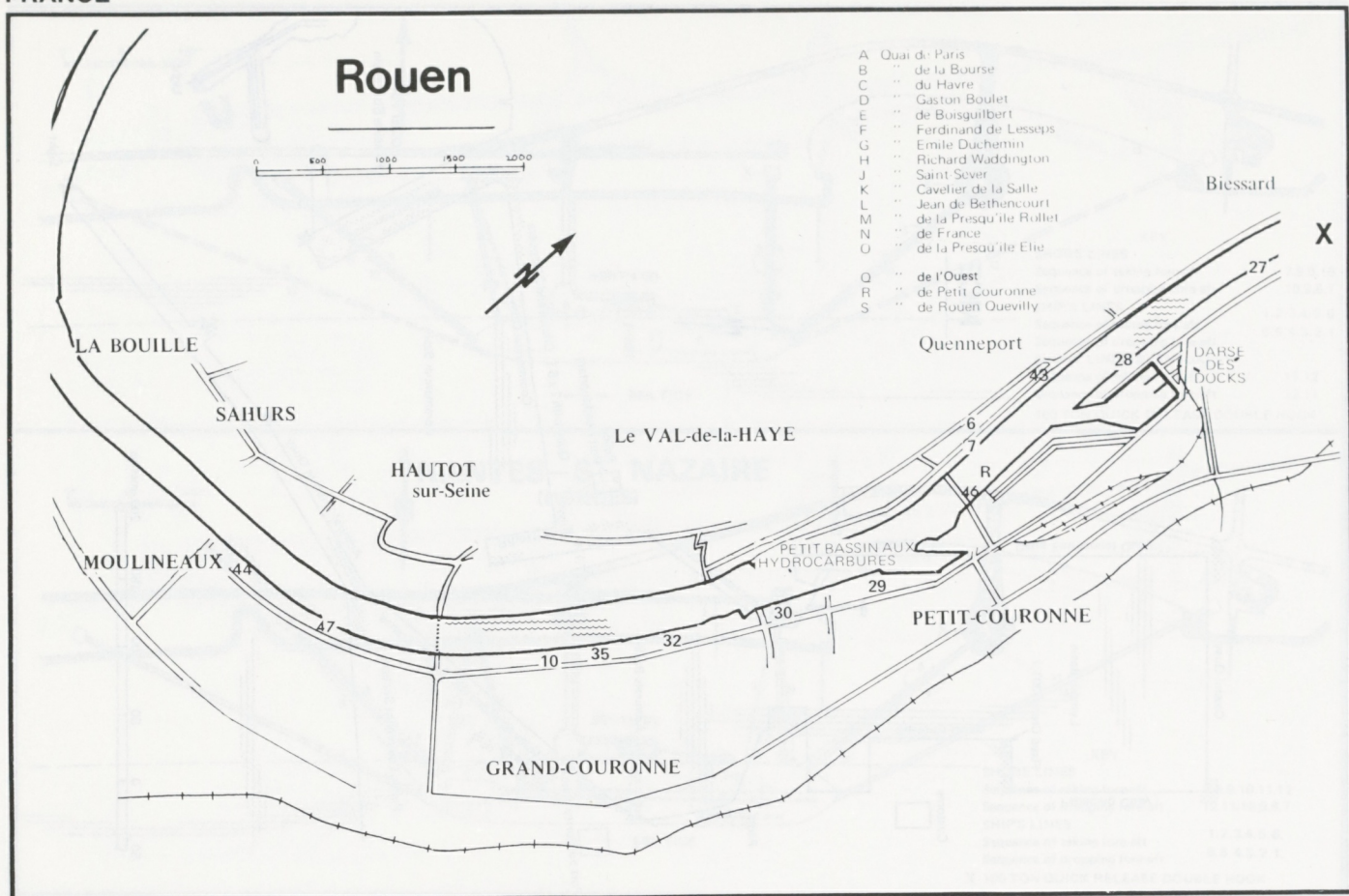






PROPRIANO
(MARINA)

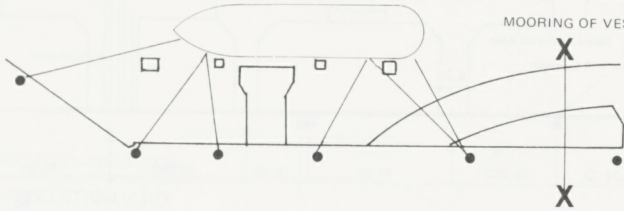




ROUEN

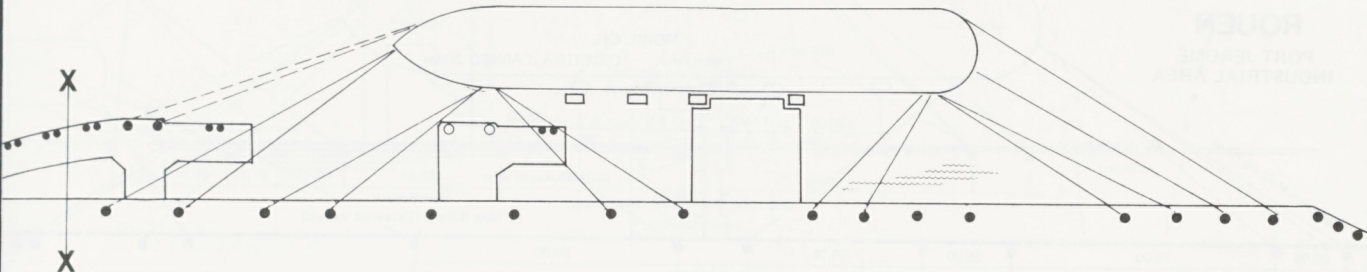
PETIT-COURONNE P.A.J.

MOORING OF VESSEL LENGTH 75m Type GERS Bow downstream



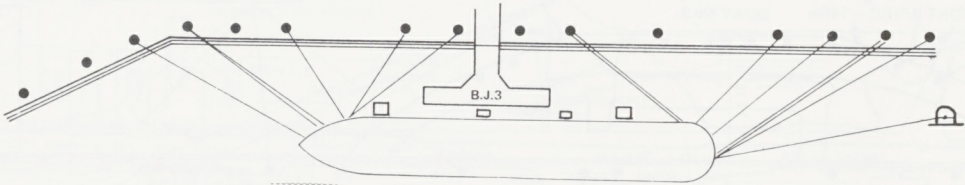
PETIT – COURONNE N.A.J.

MOORING OF 170m VESSELS Bow downstream

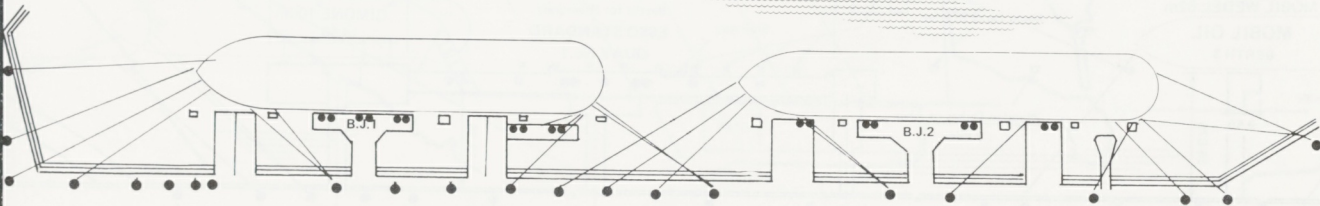


ROUEN

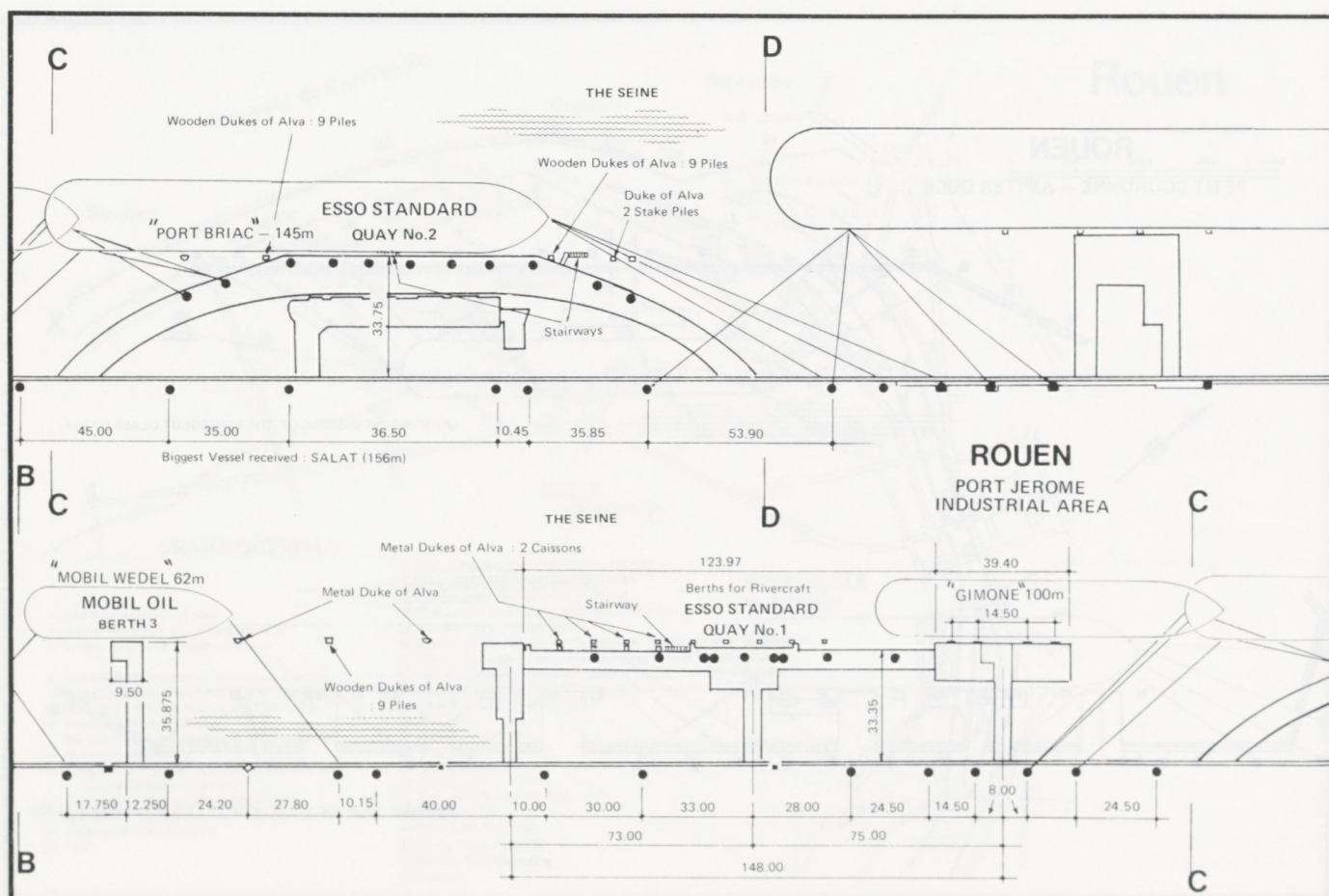
PETIT COURONNE – JUPITER DOCK



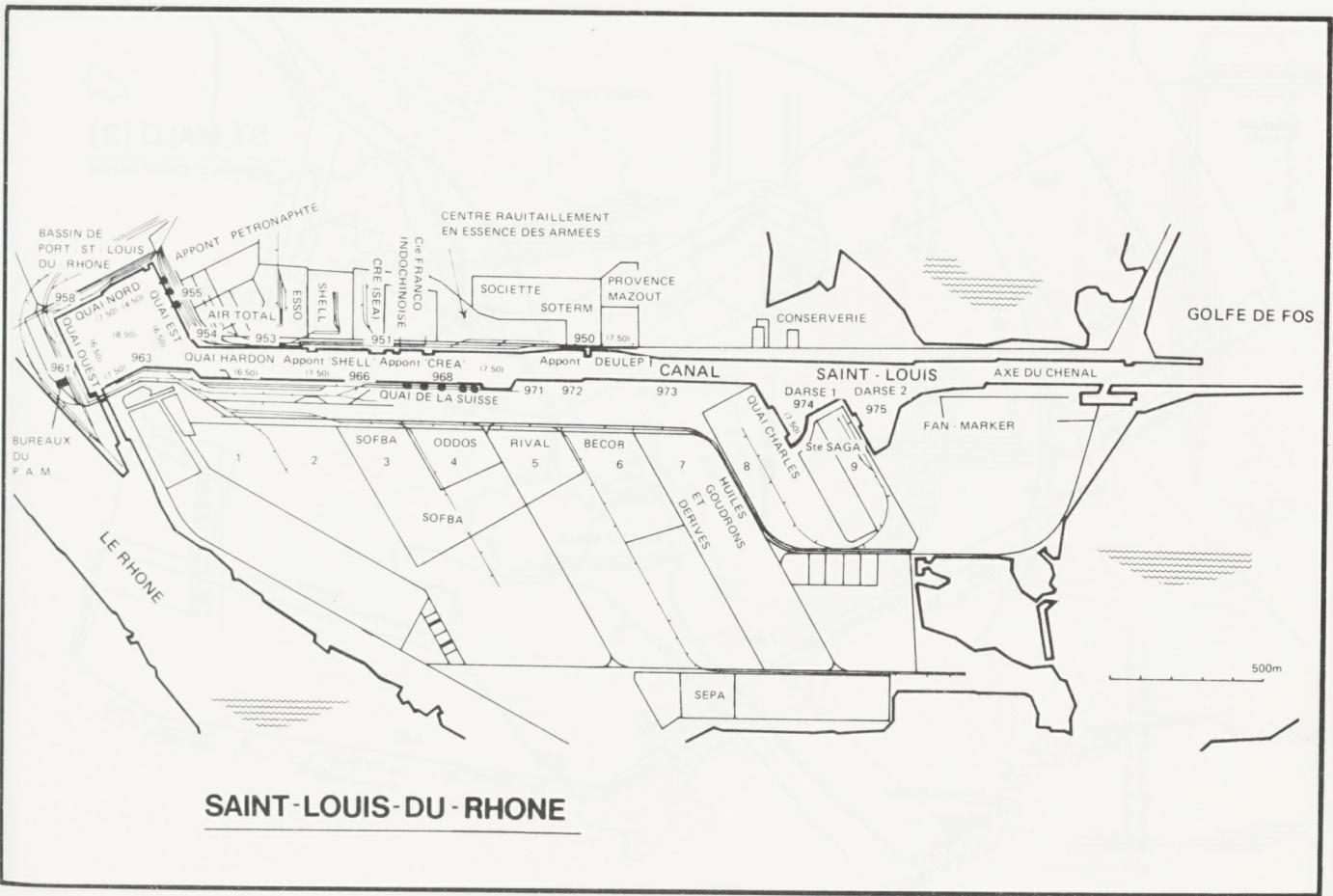
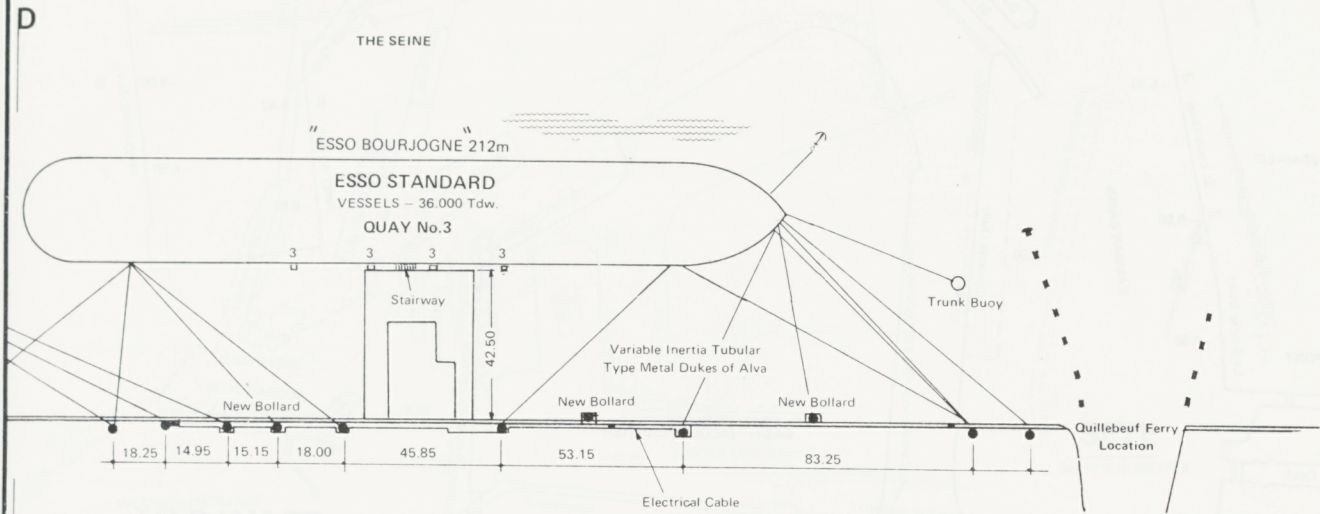
MOORING OF VESSELS OF THE HUMBOLDT CLASS (117m)

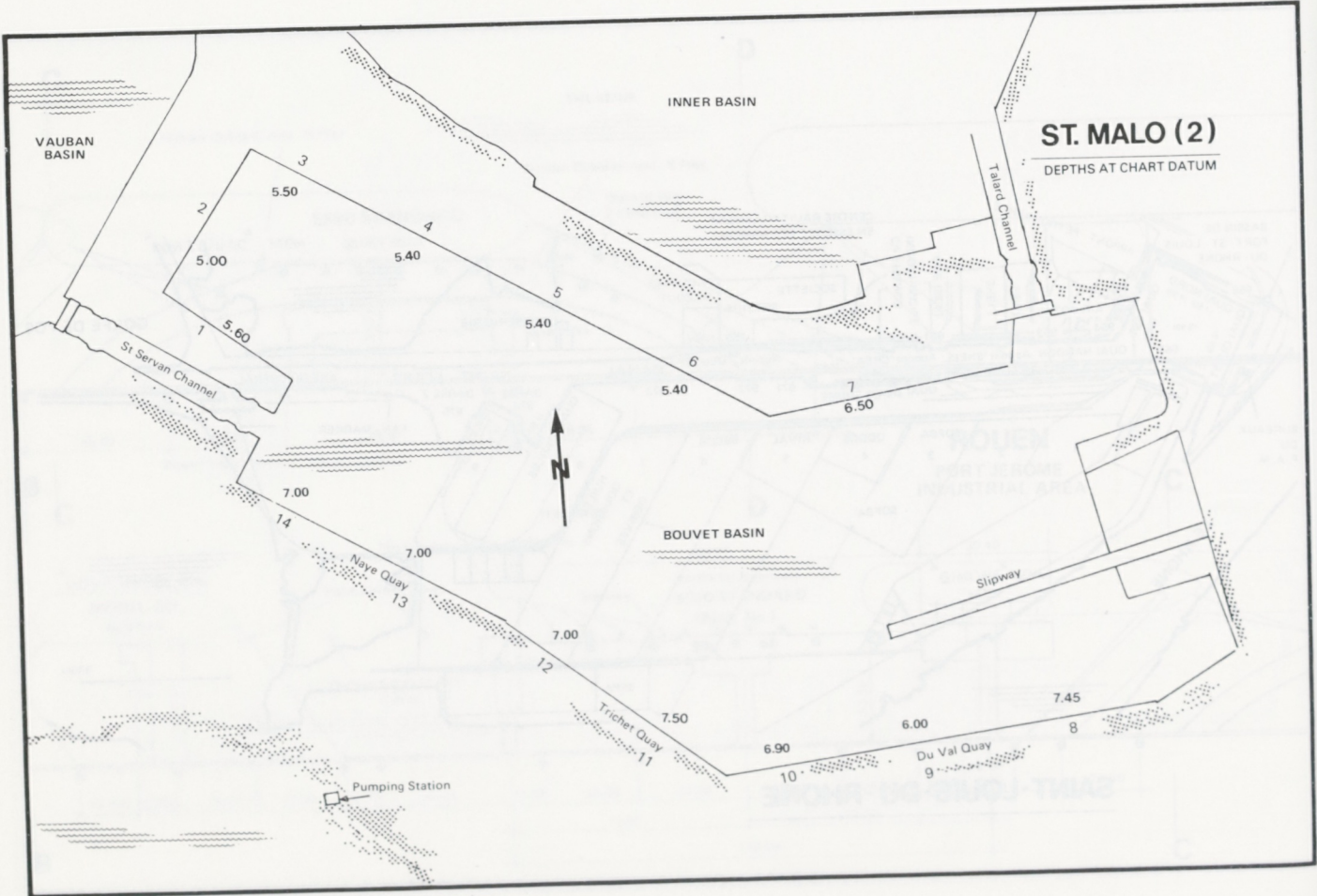
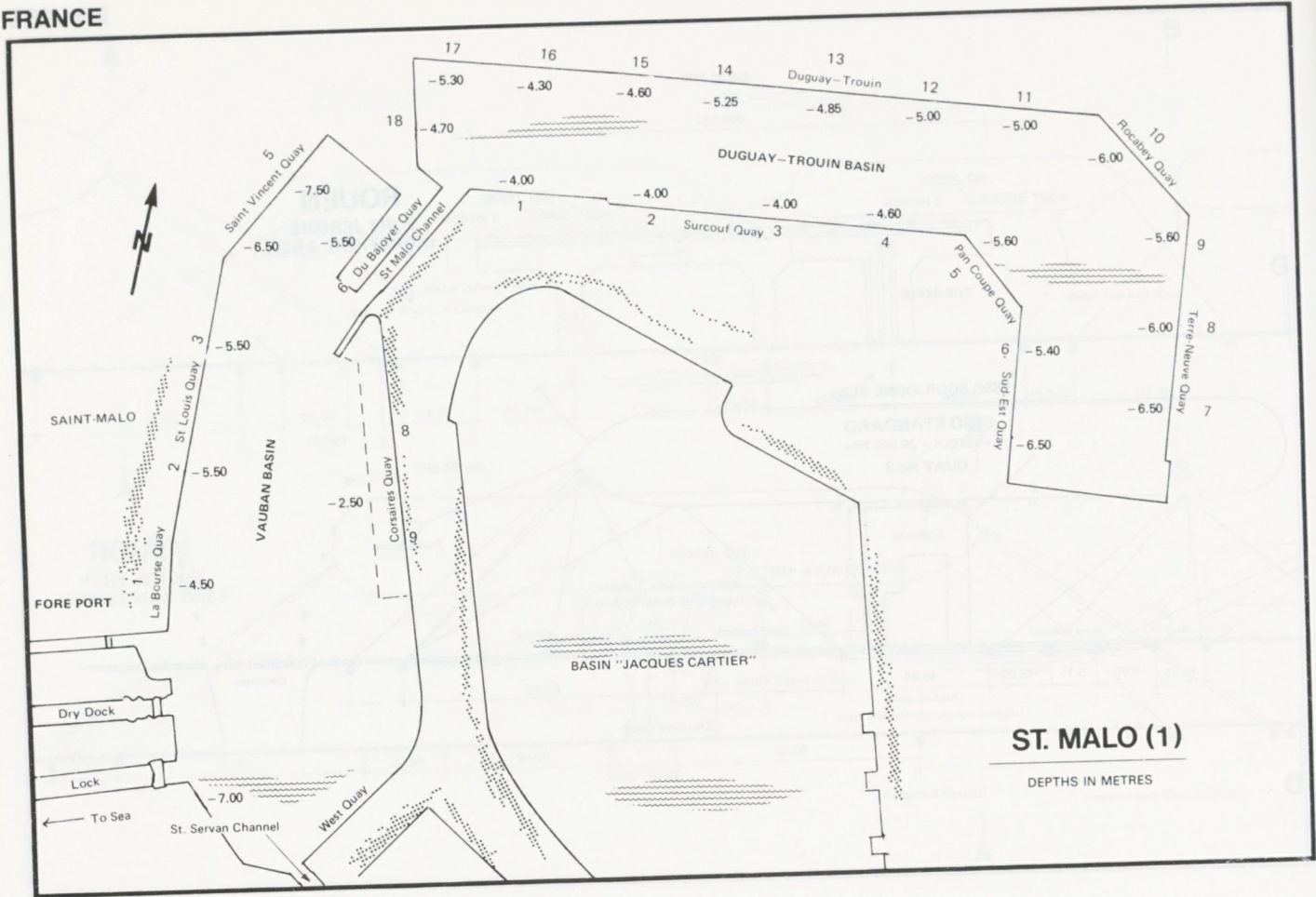


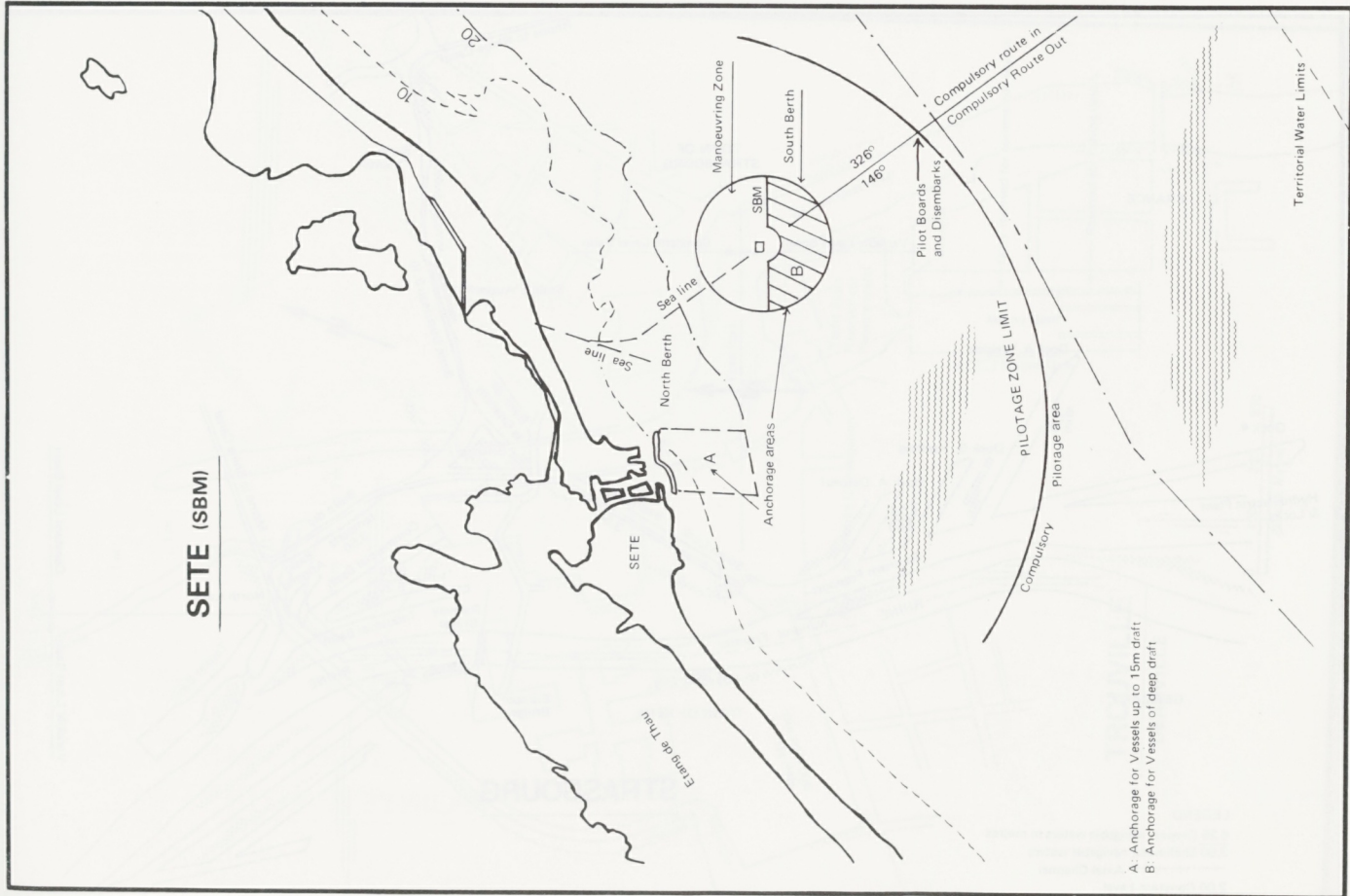
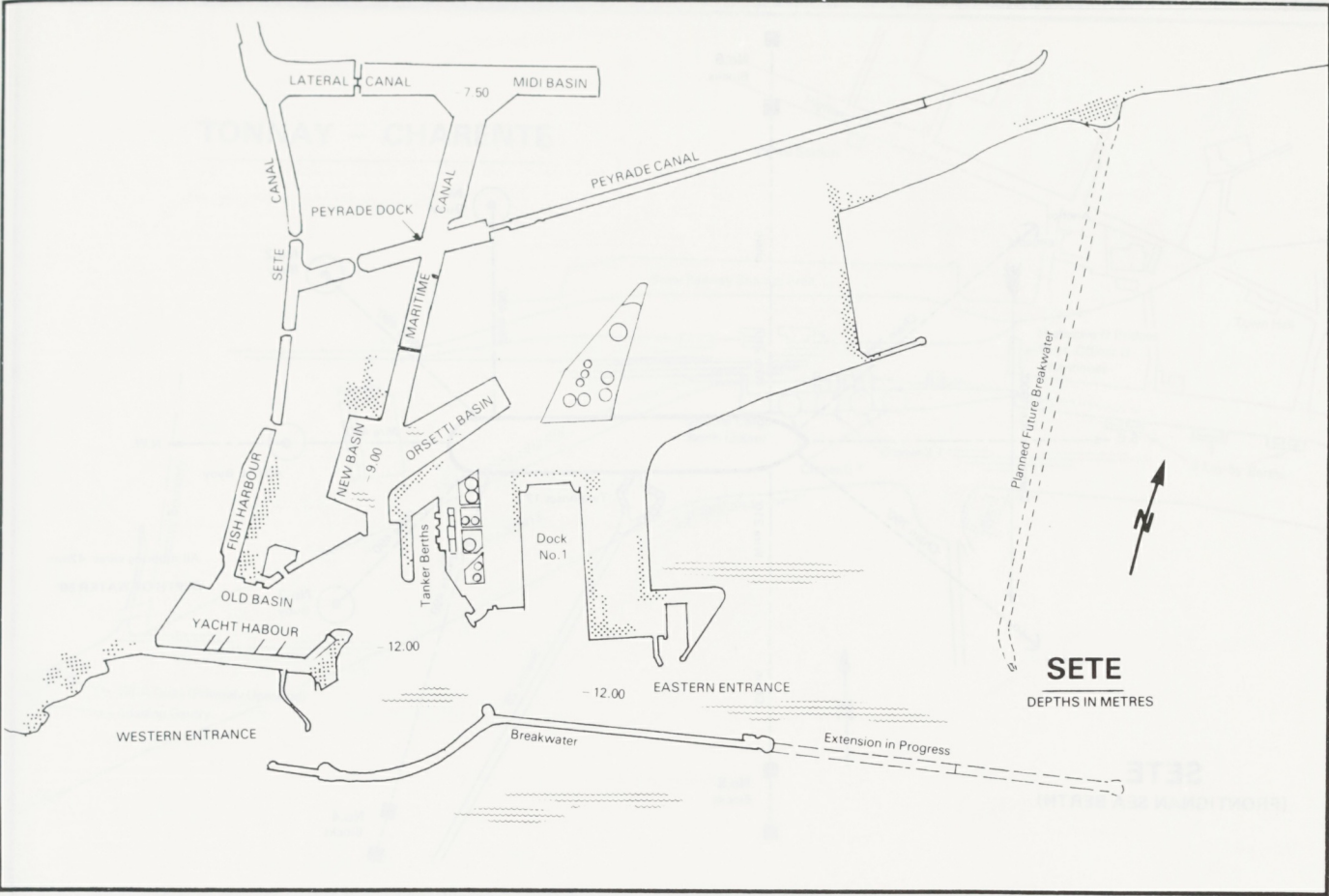
MOORING (120m) OF VESSELS OF THE PORT AU PRINCE CLASS

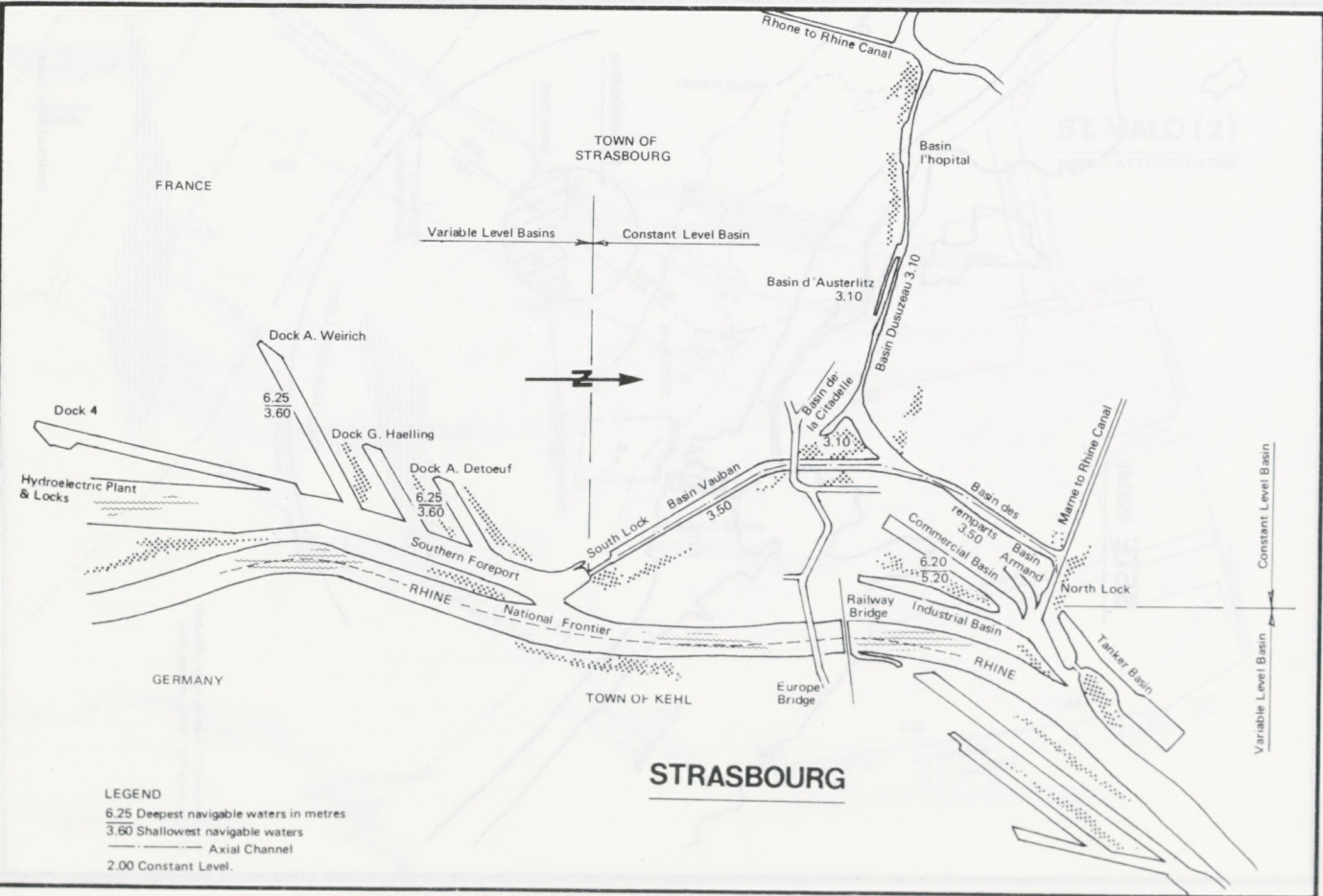
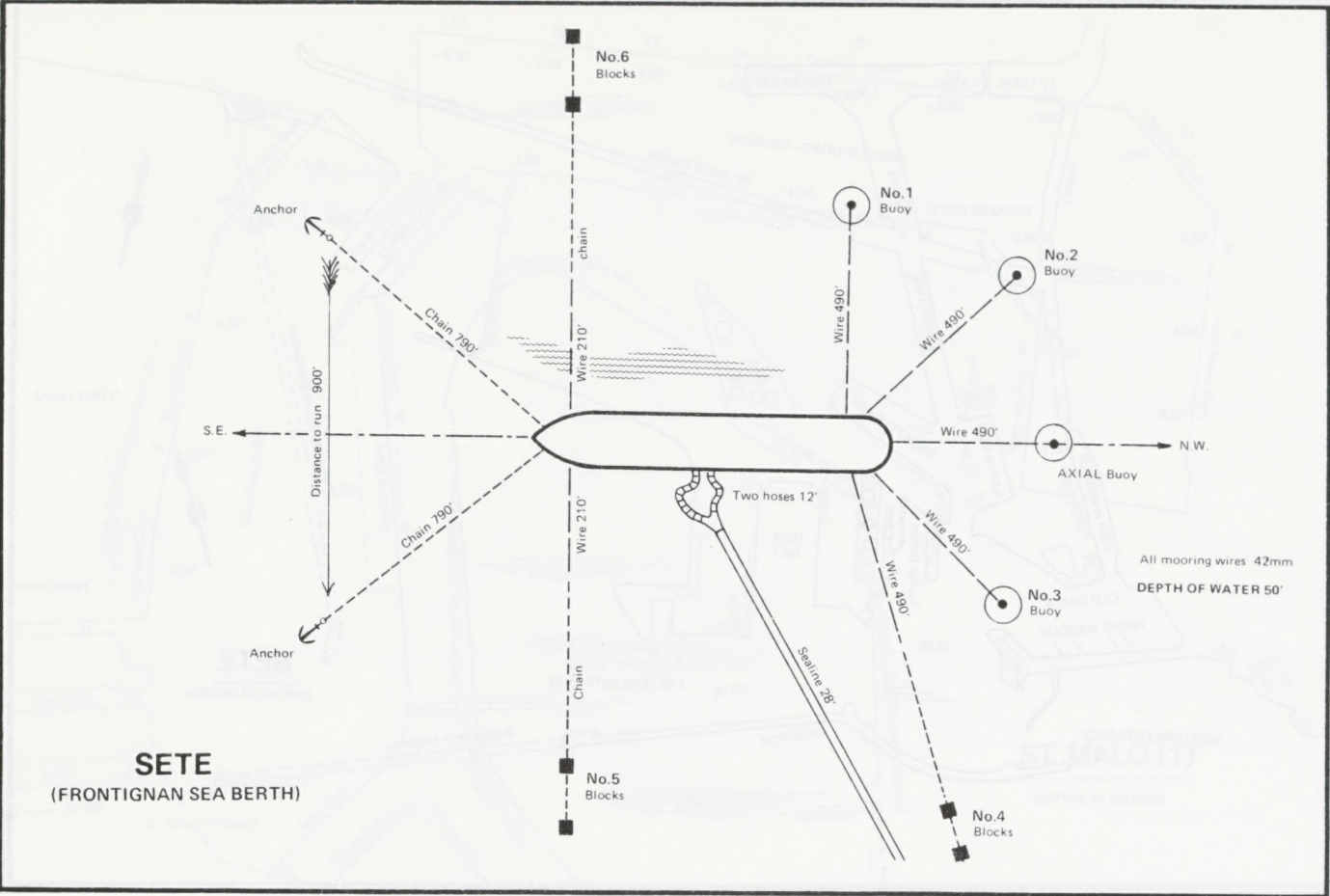


ROUEN
PORT JEROME
INDUSTRIAL AREA

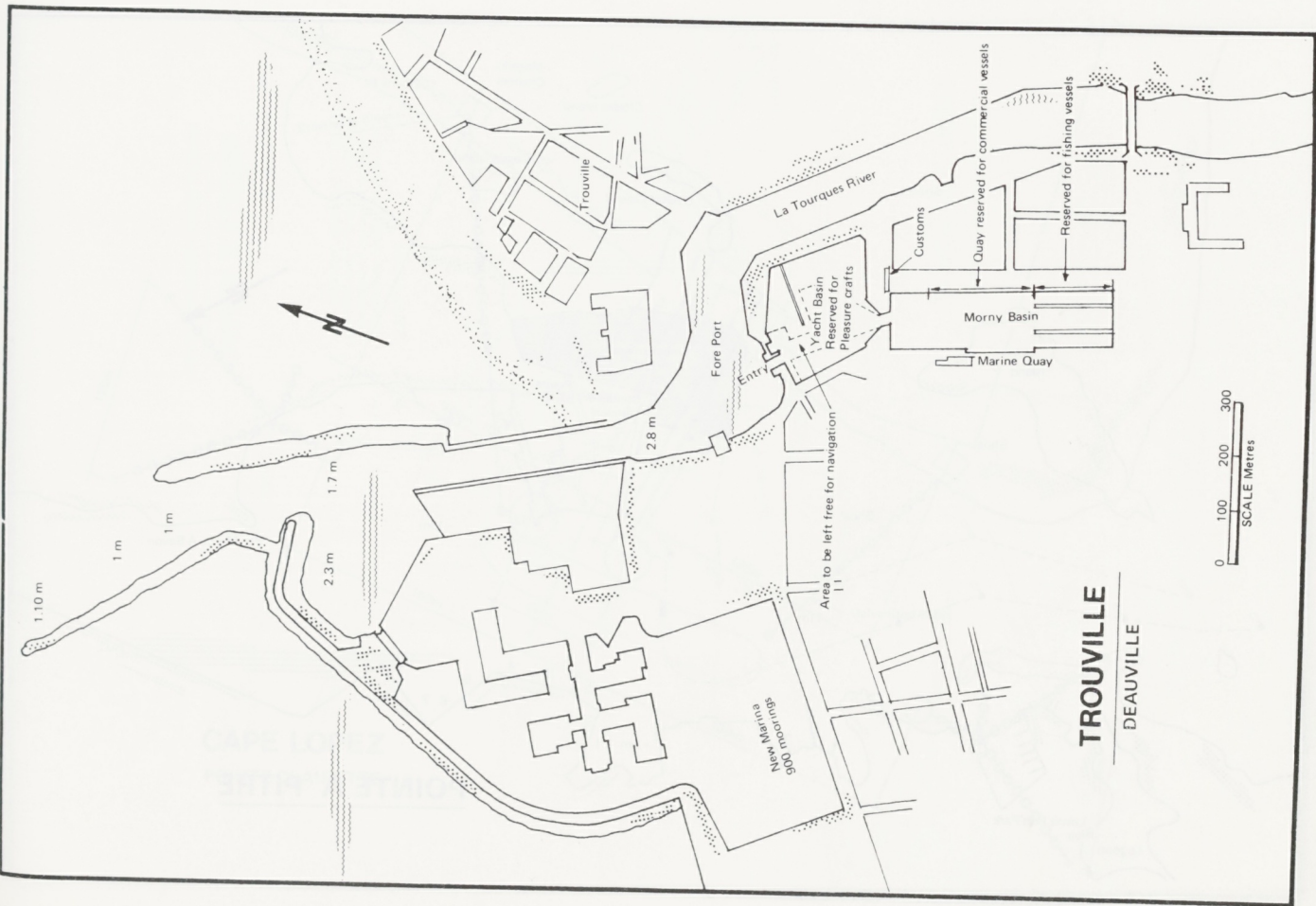
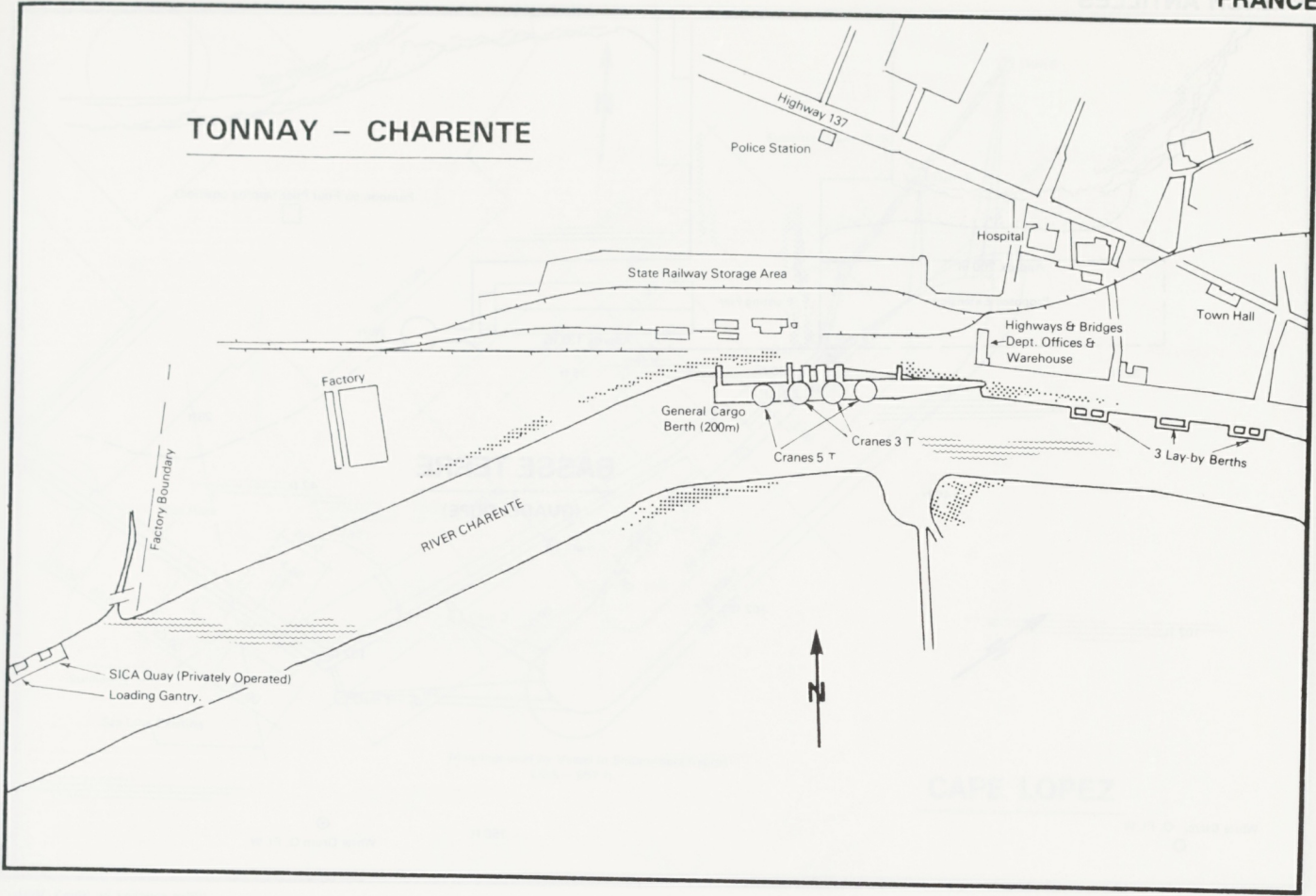






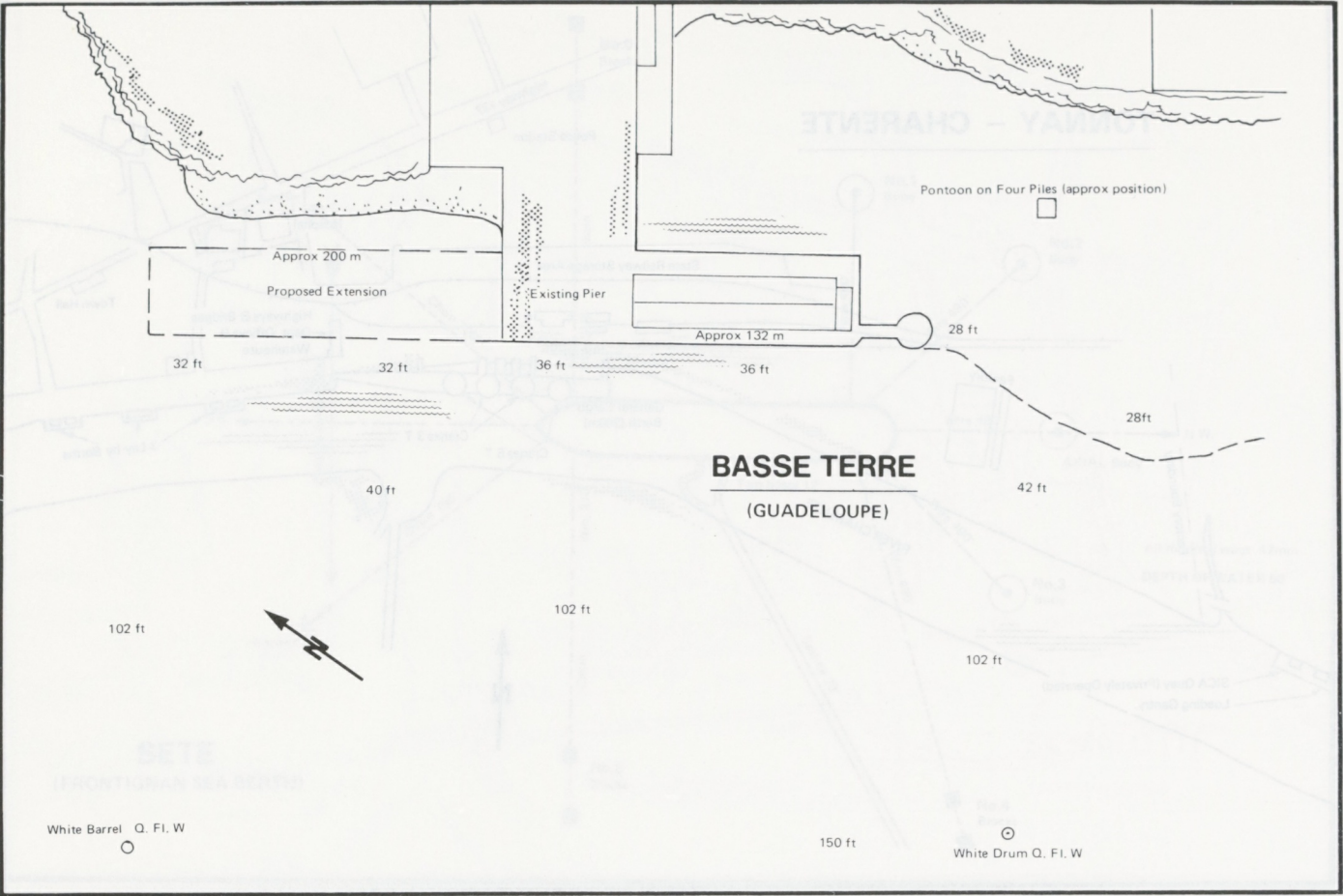


TONNAY – CHARENTE

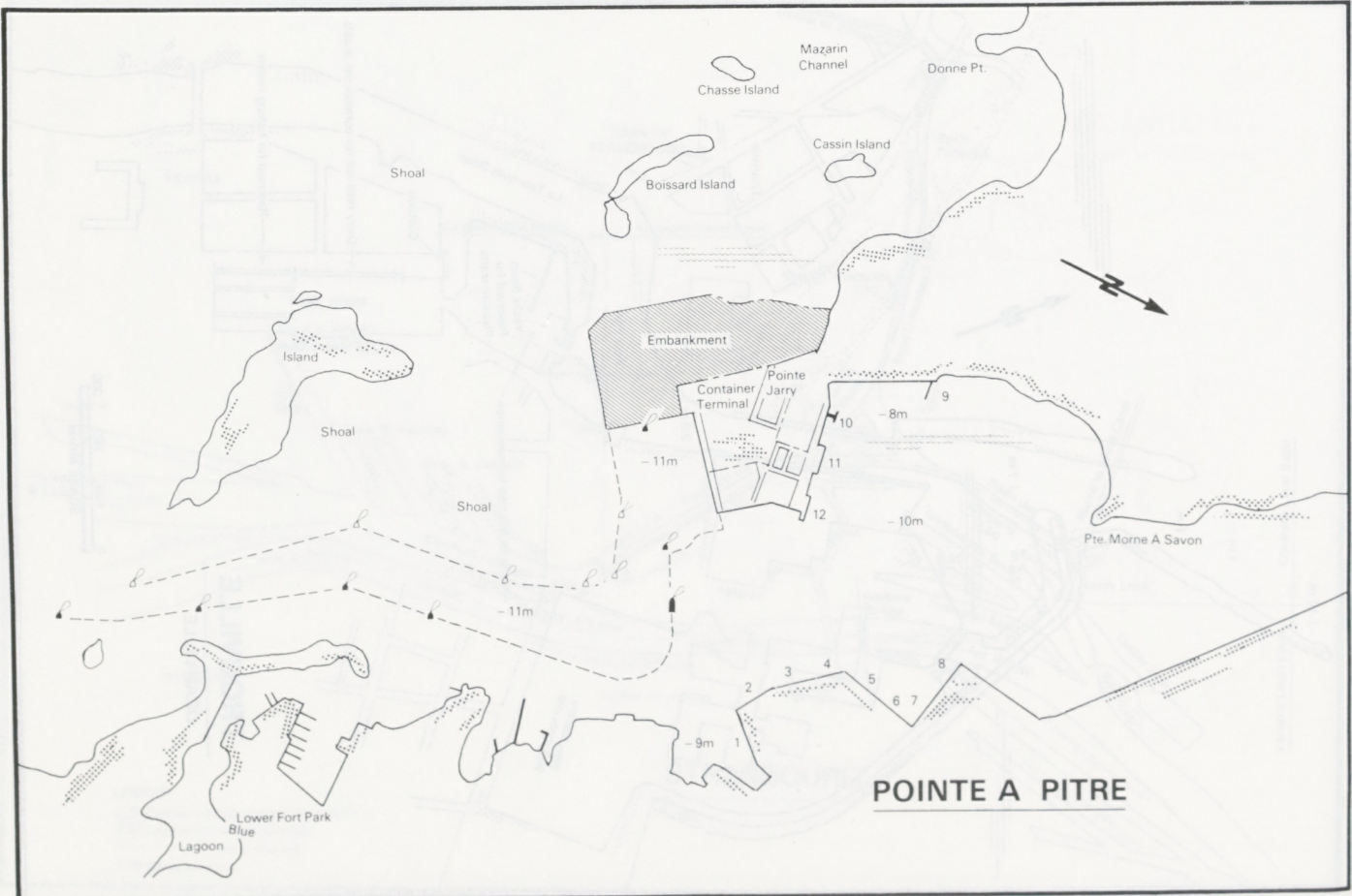


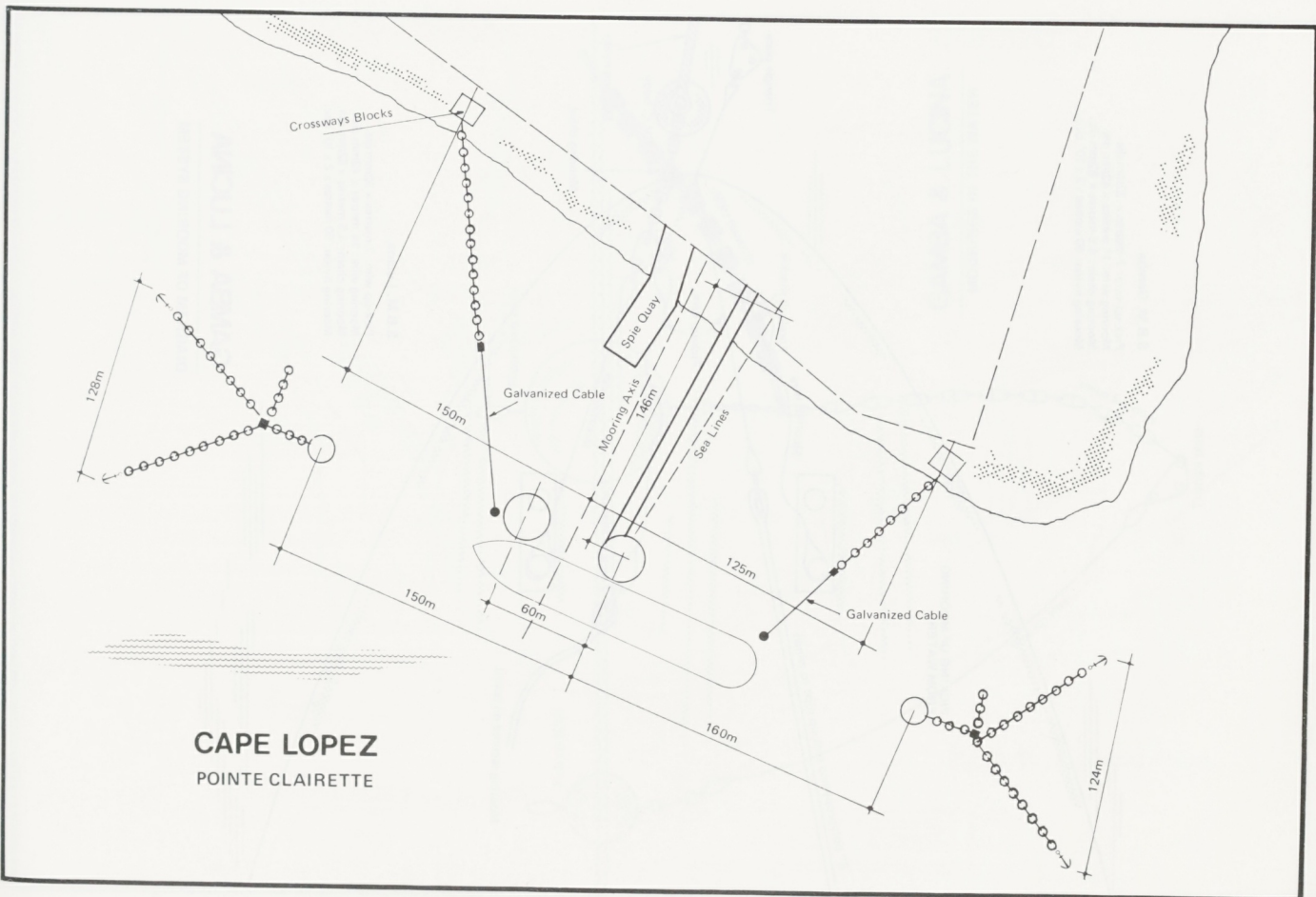
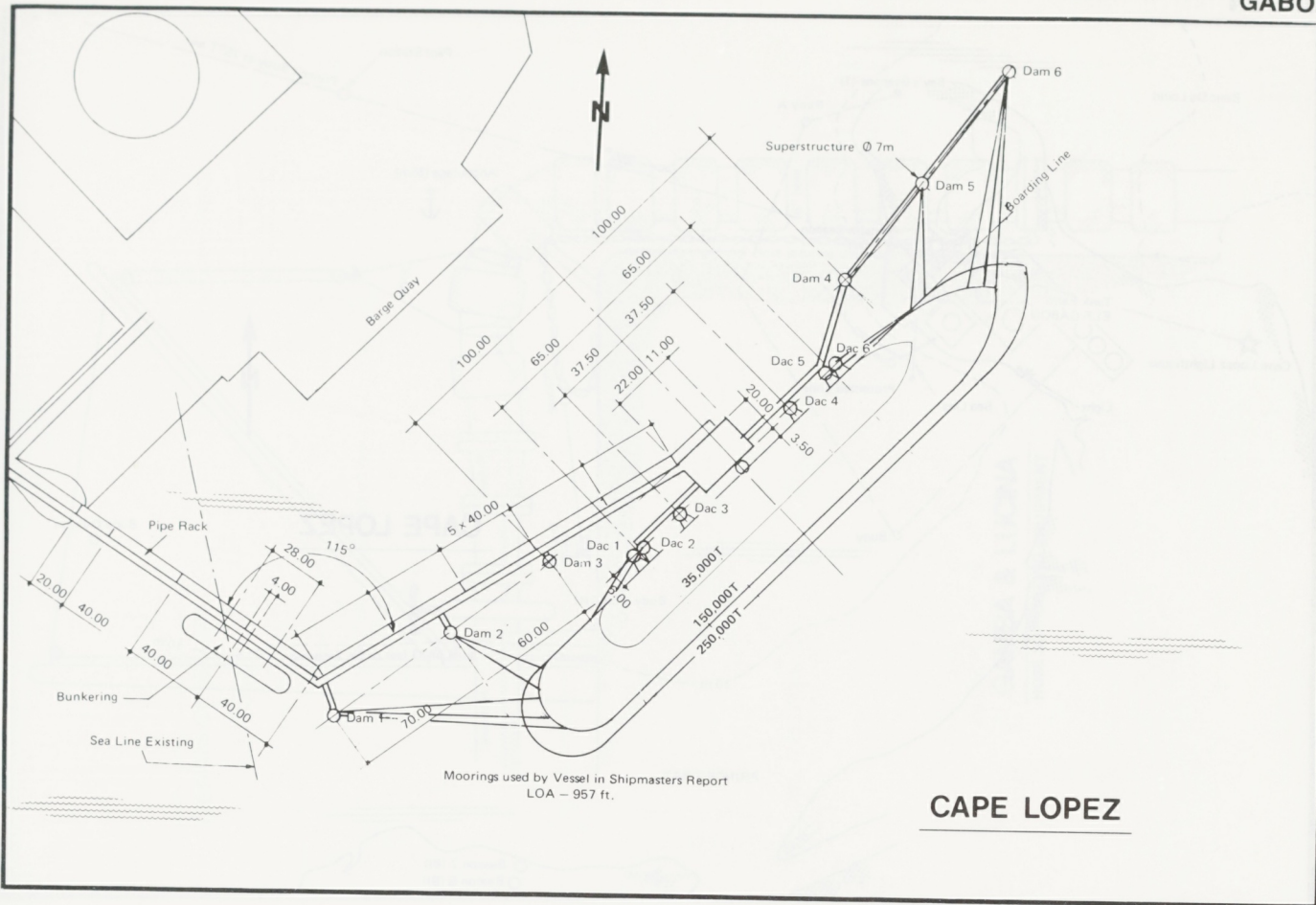
TROUVILLE
DEAUVILLE

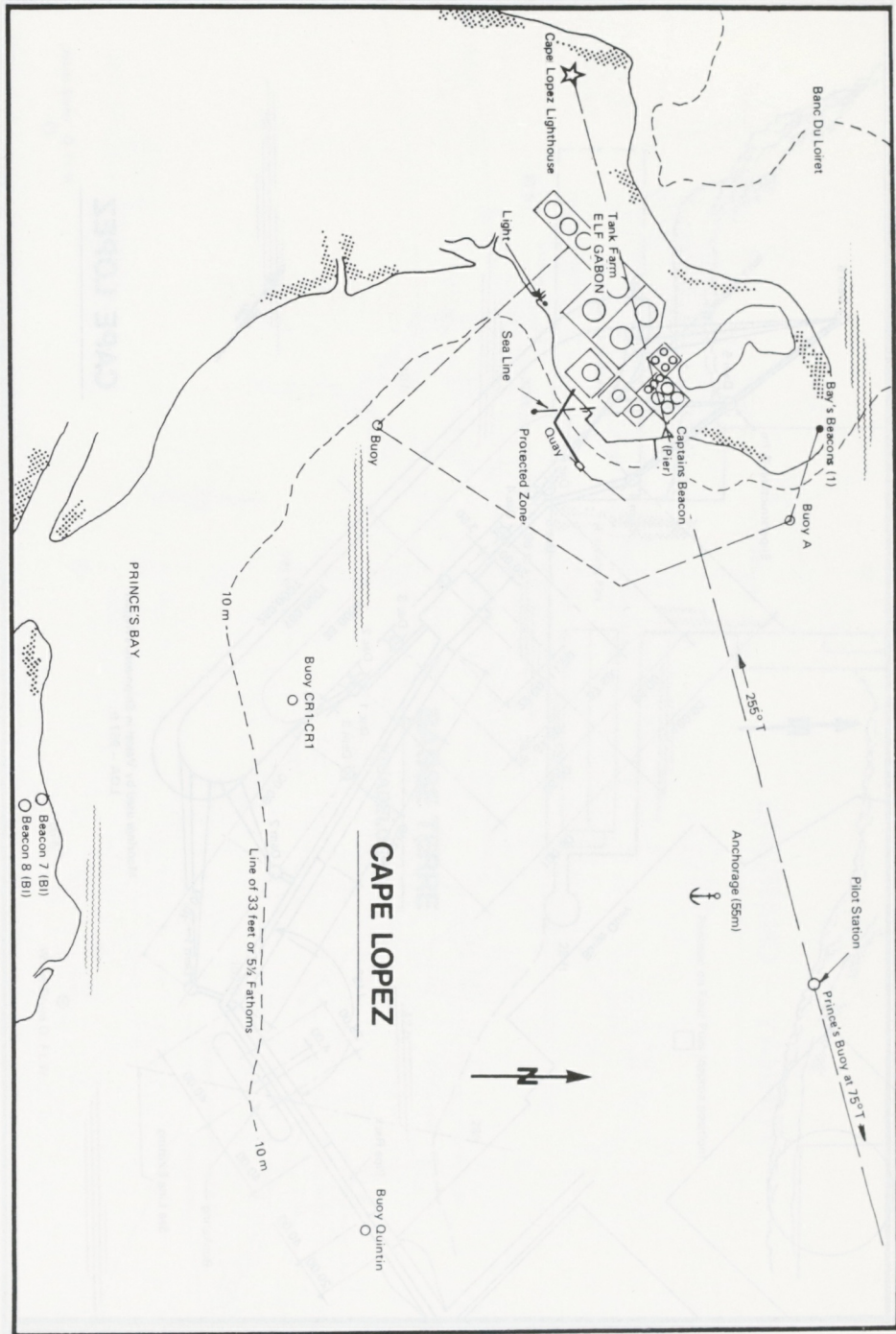
FRENCH ANTILLES



"Plan supplied by Ship's Master"







S.B.M. Gamba

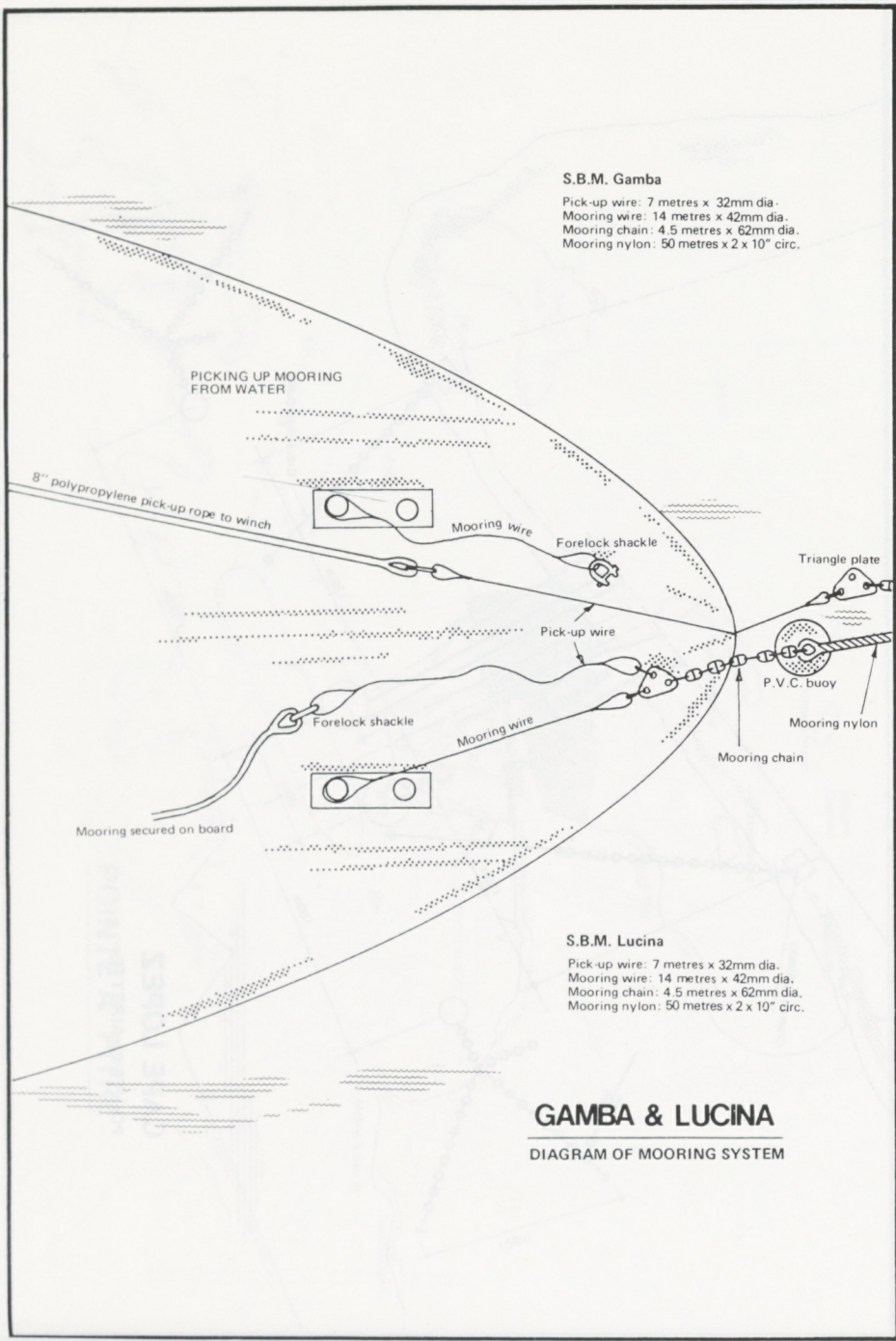
Pick-up wire: 7 metres x 32mm dia.
Mooring wire: 14 metres x 42mm dia.
Mooring chain: 4.5 metres x 62mm dia.
Mooring nylon: 50 metres x 2 x 10" circ.

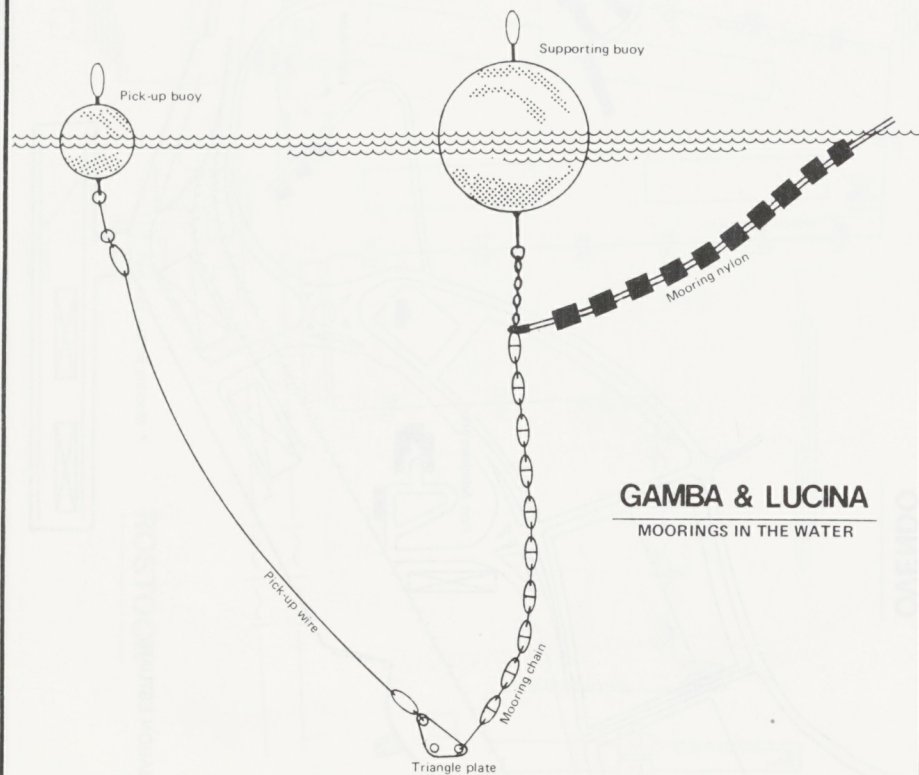
S.B.M. Lucina

Pick-up wire: 7 metres x 32mm dia.
Mooring wire: 14 metres x 42mm dia.
Mooring chain: 4.5 metres x 62mm dia.
Mooring nylon: 50 metres x 2 x 10" circ.

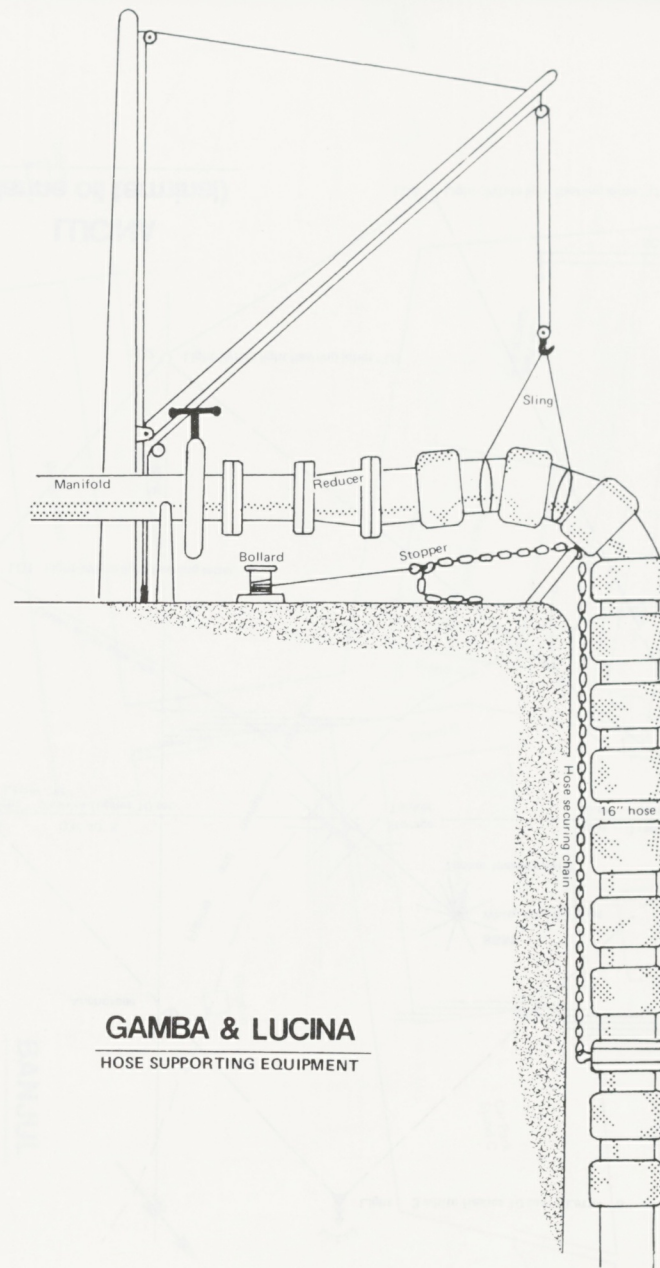
GAMBA & LUCINA

DIAGRAM OF MOORING SYSTEM

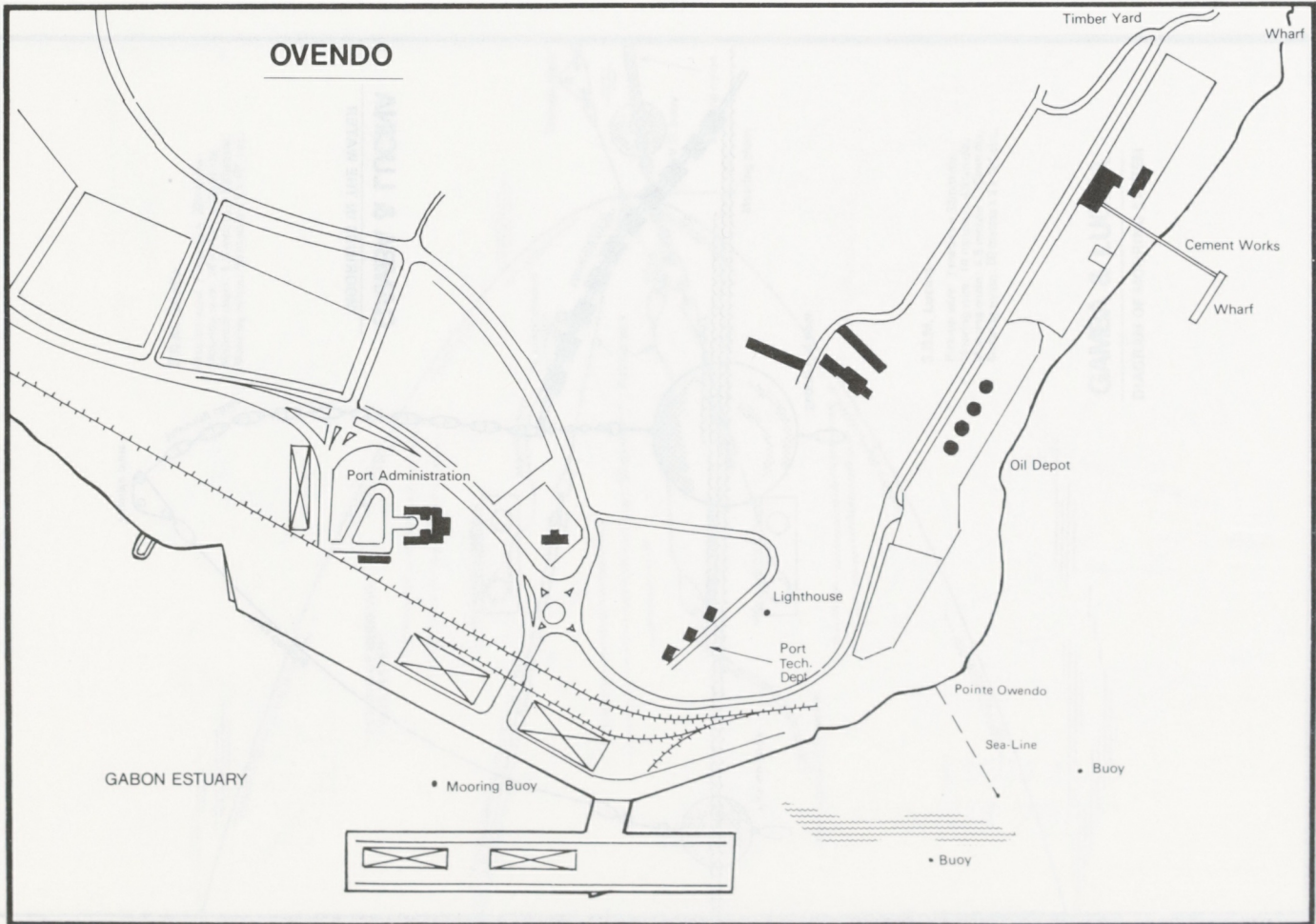
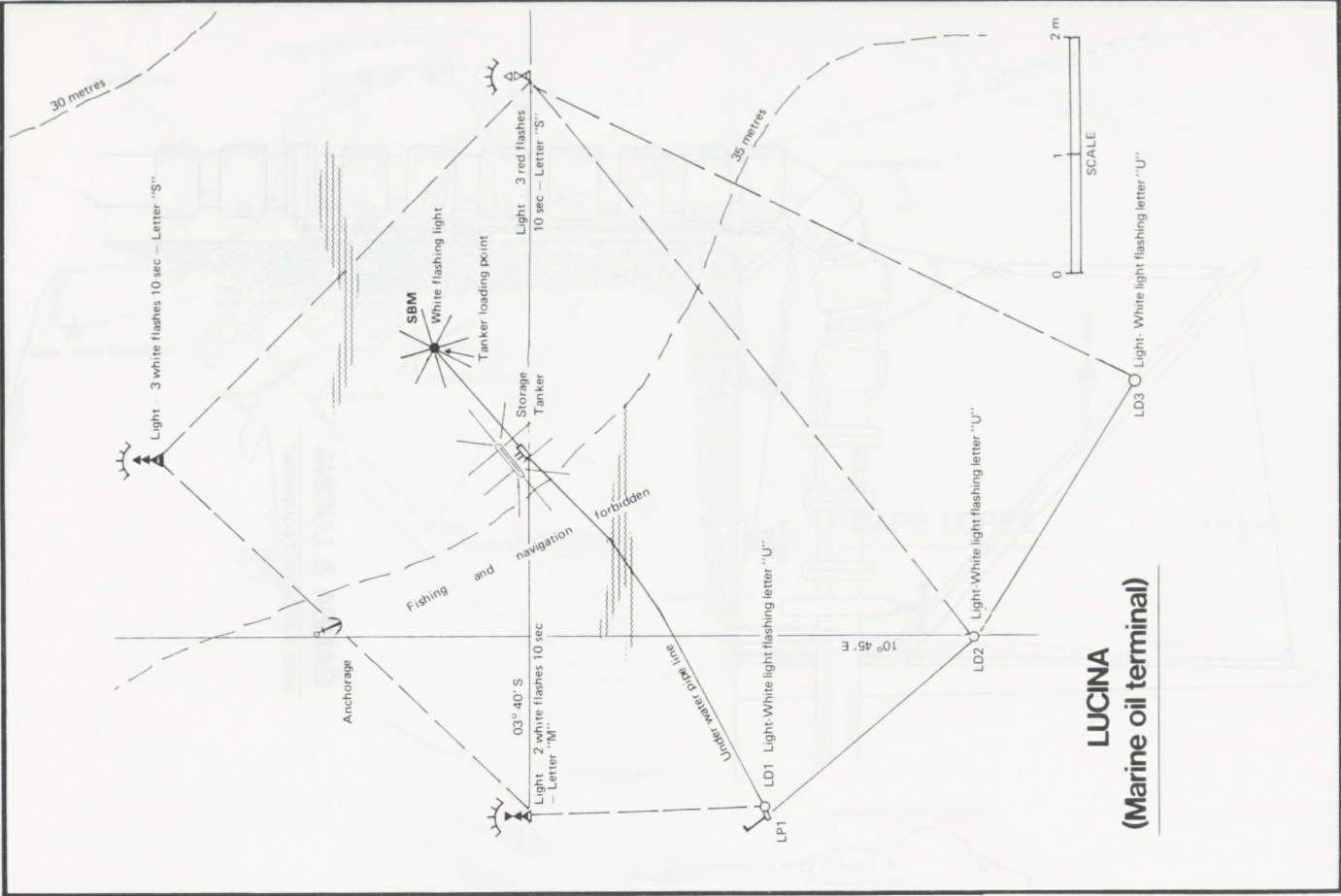


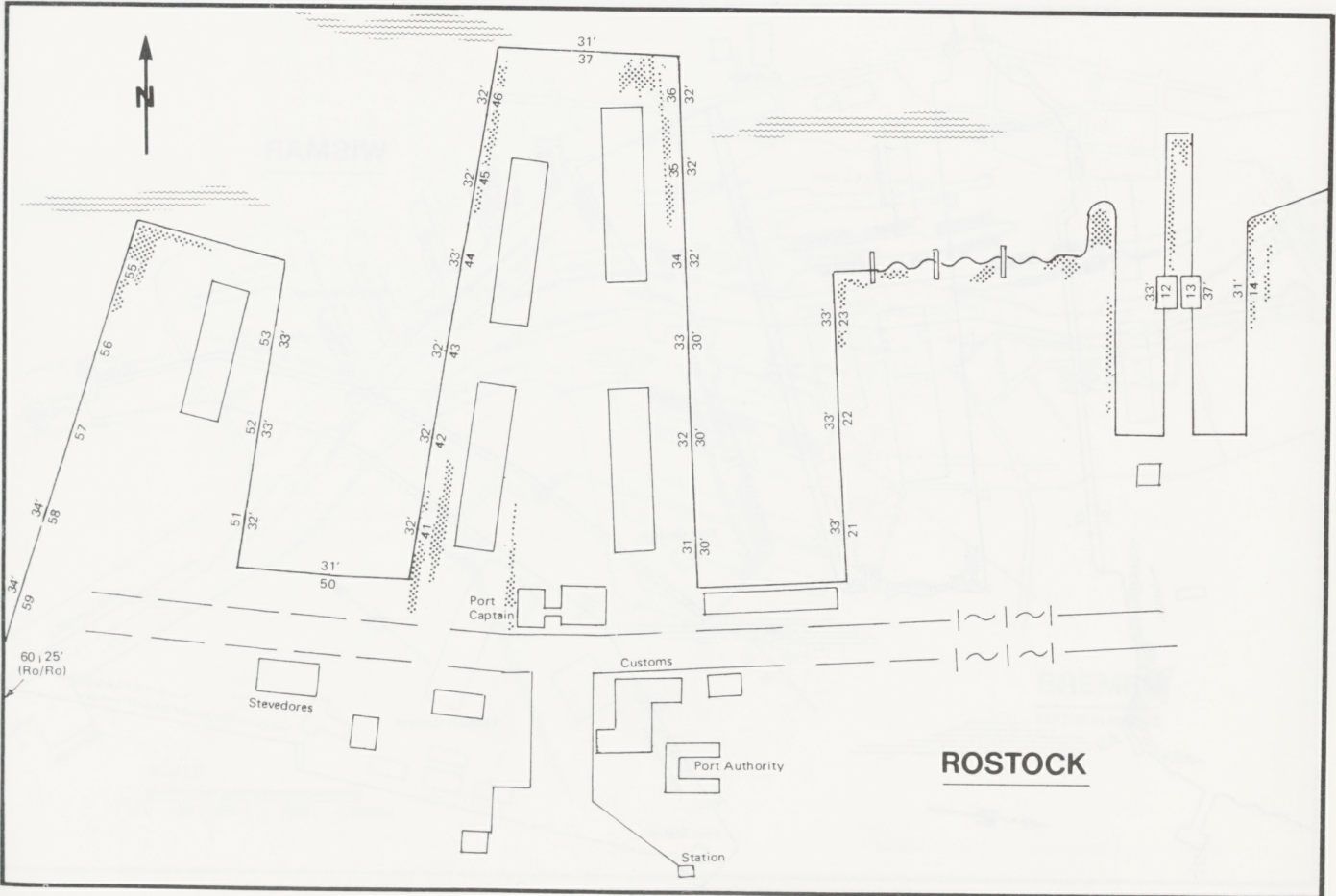
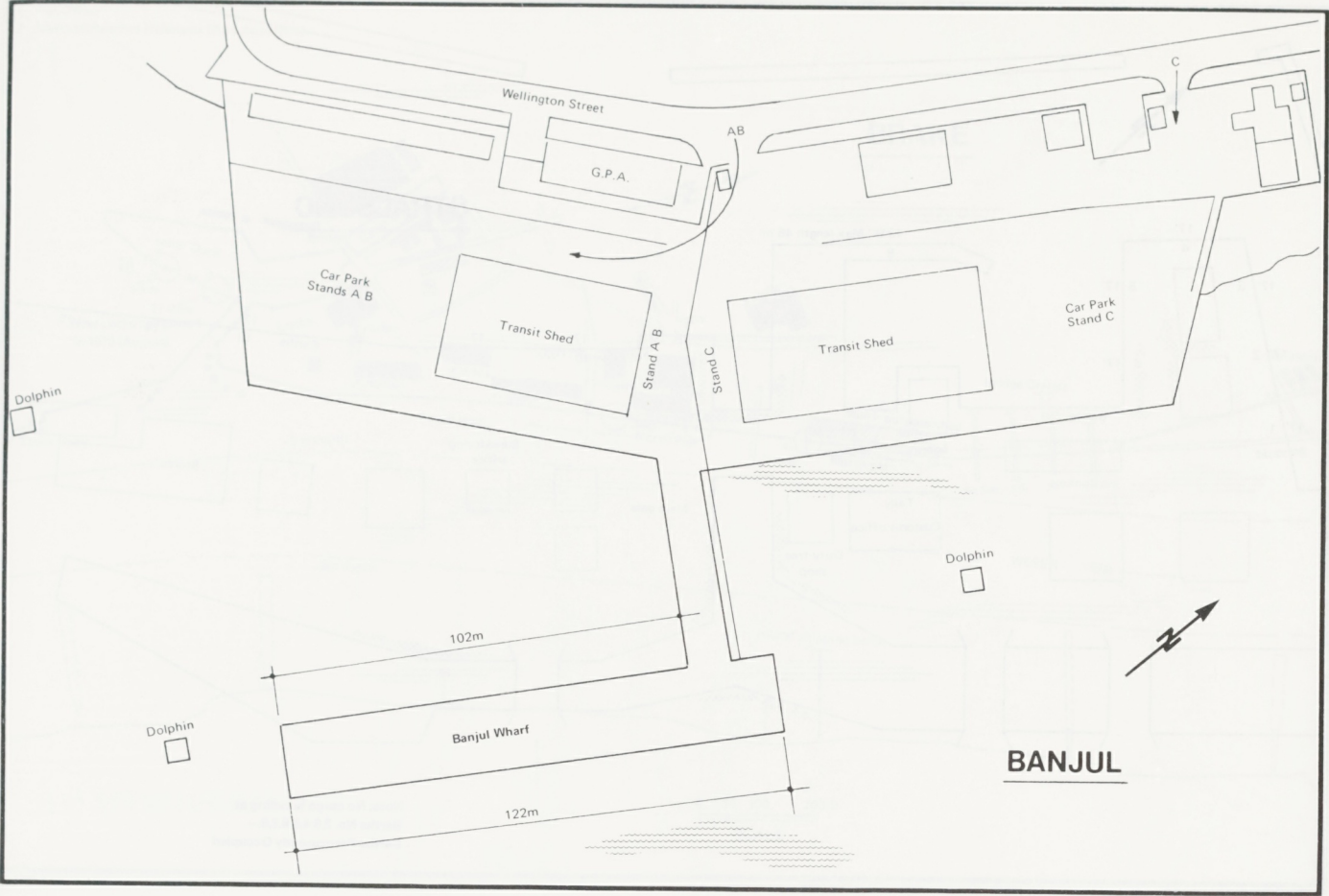


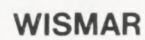
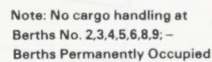
GAMBA & LUCINA
MOORINGS IN THE WATER

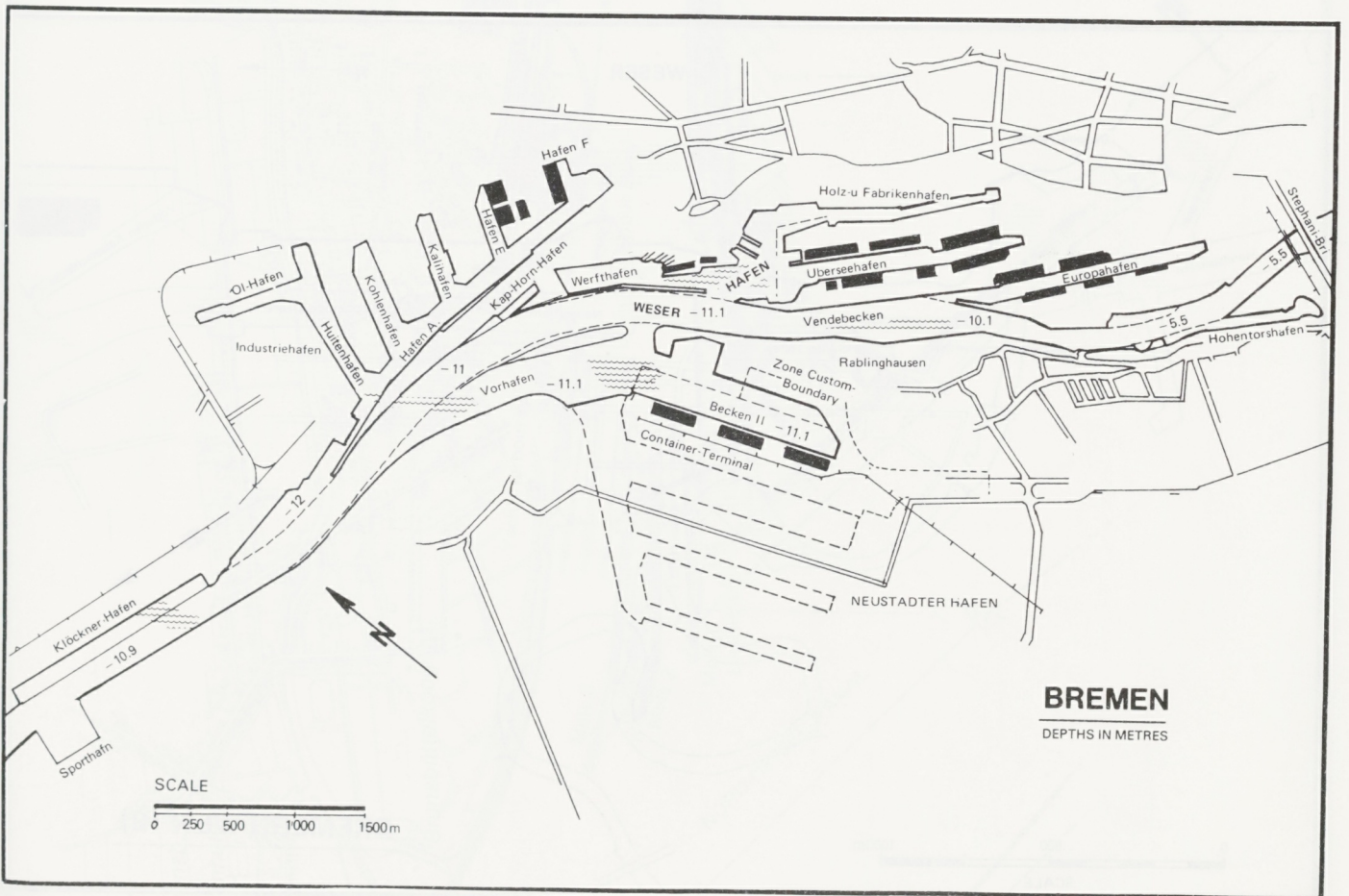


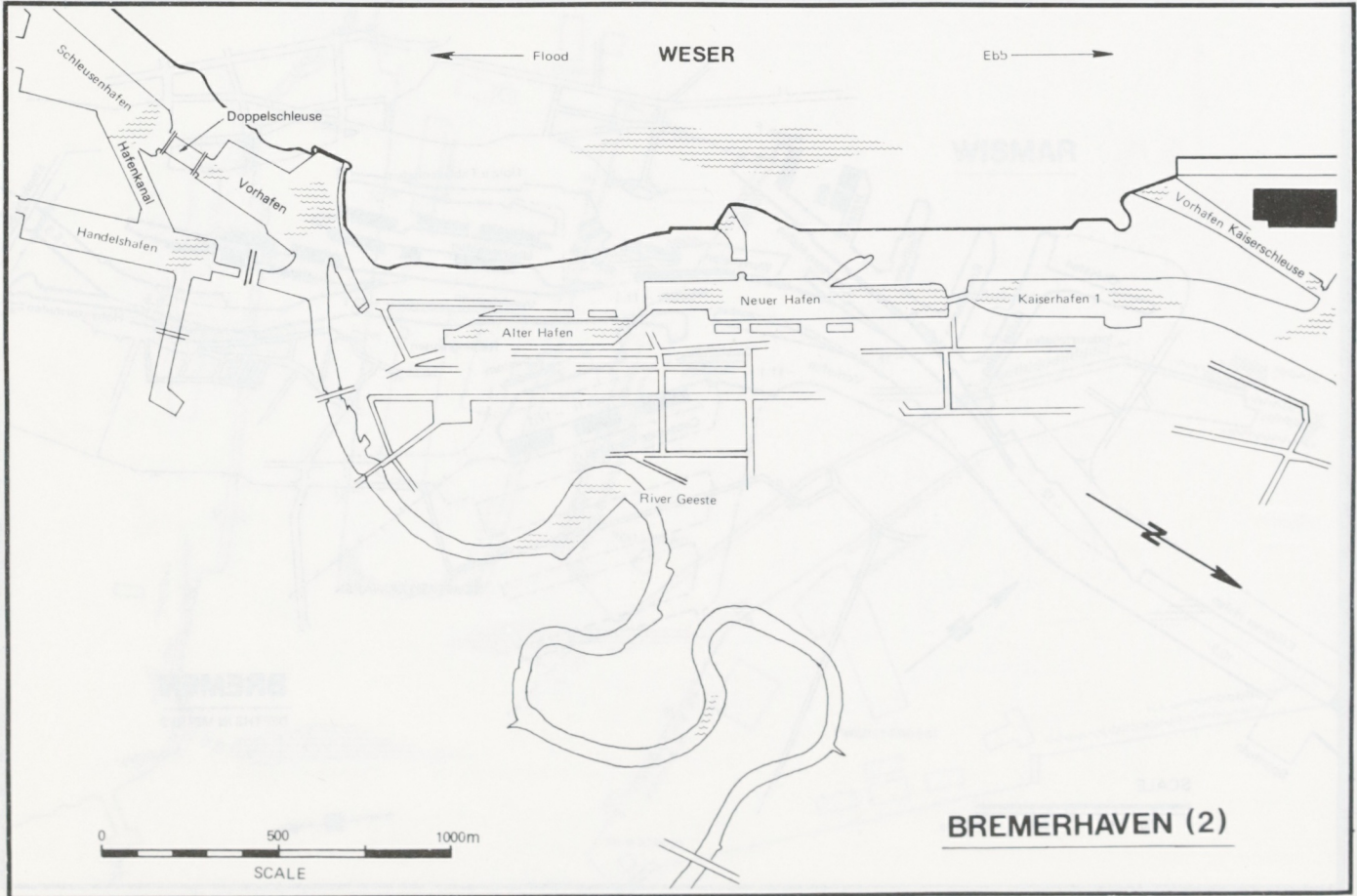
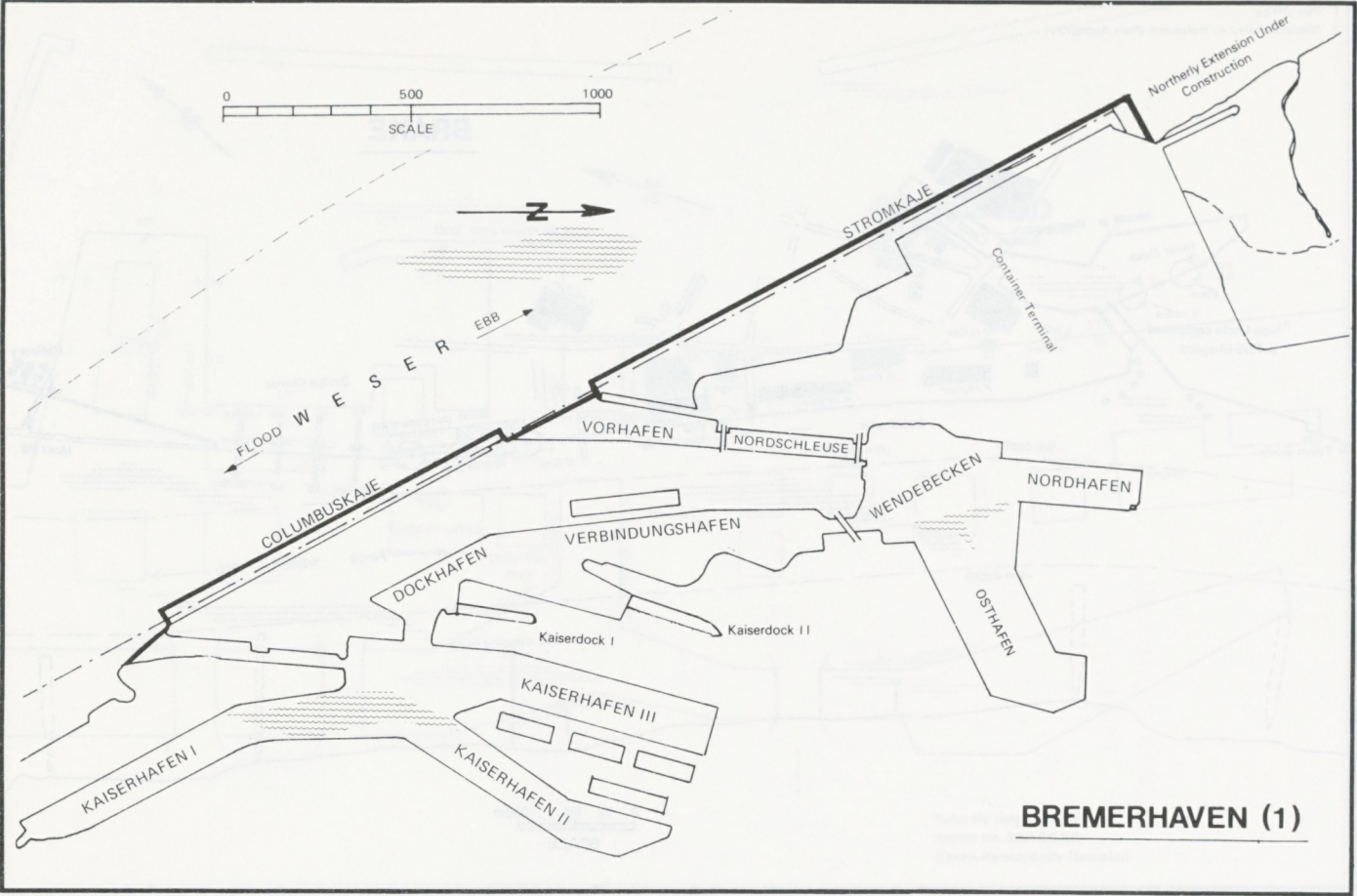
GAMBA & LUCINA
HOSE SUPPORTING EQUIPMENT

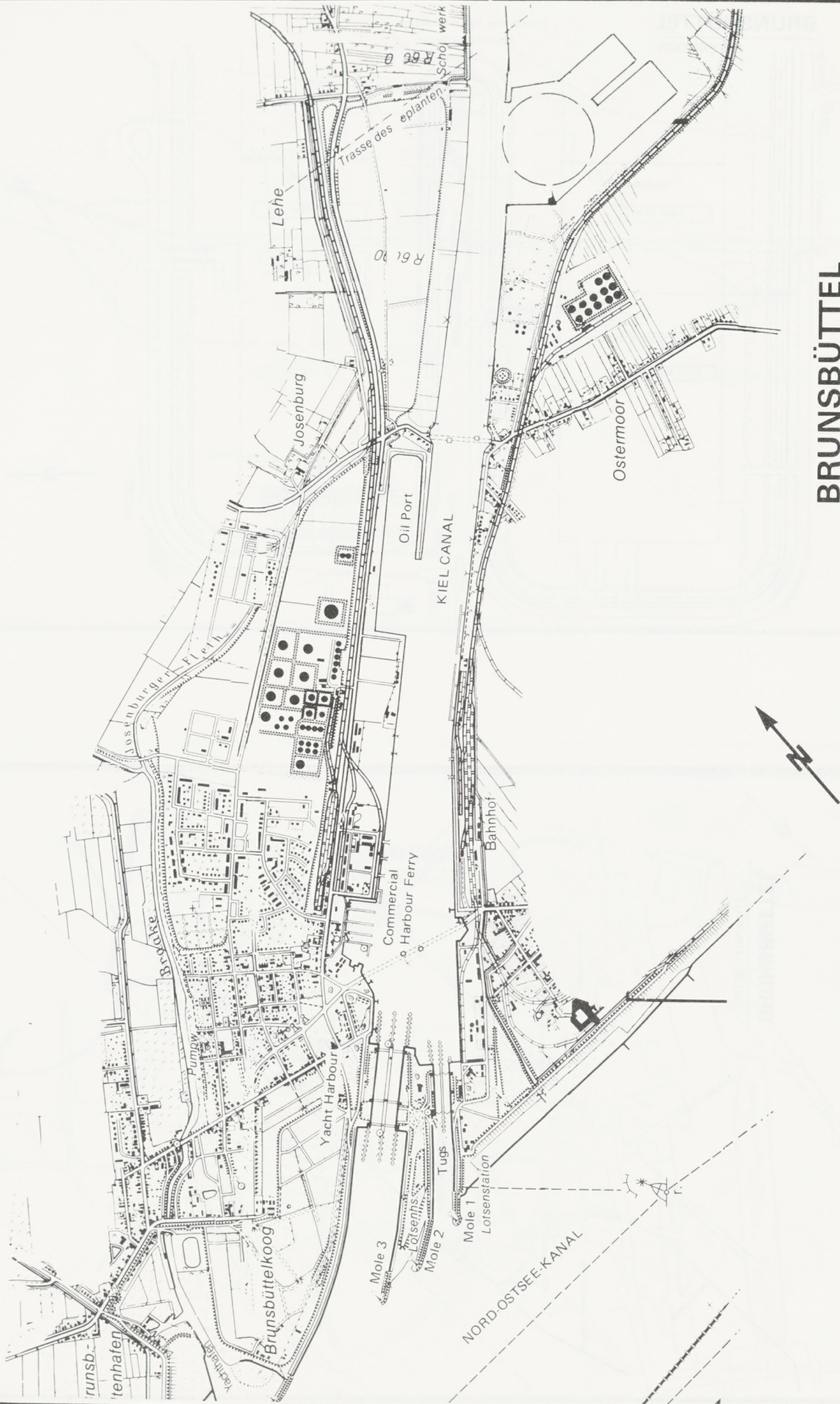




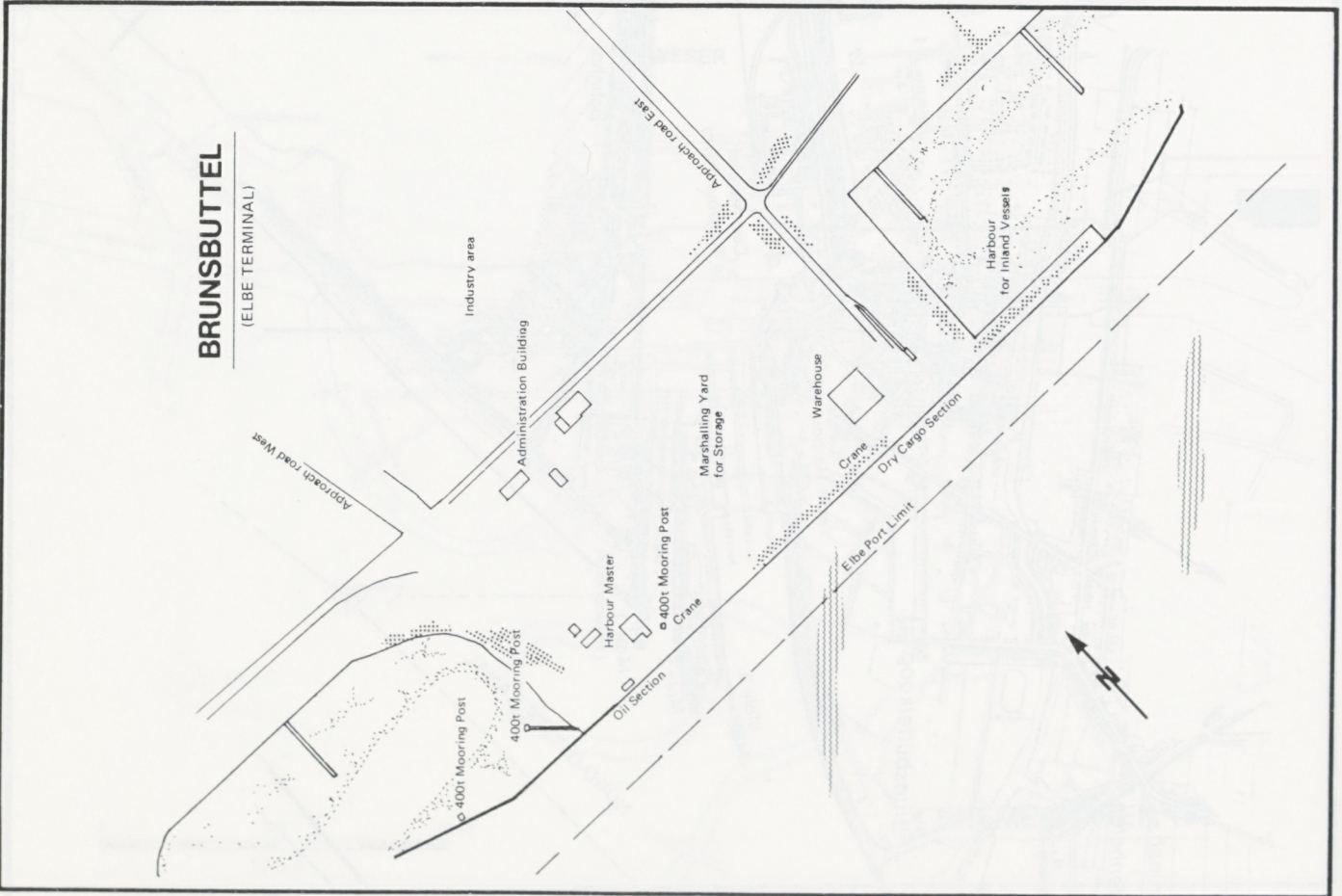
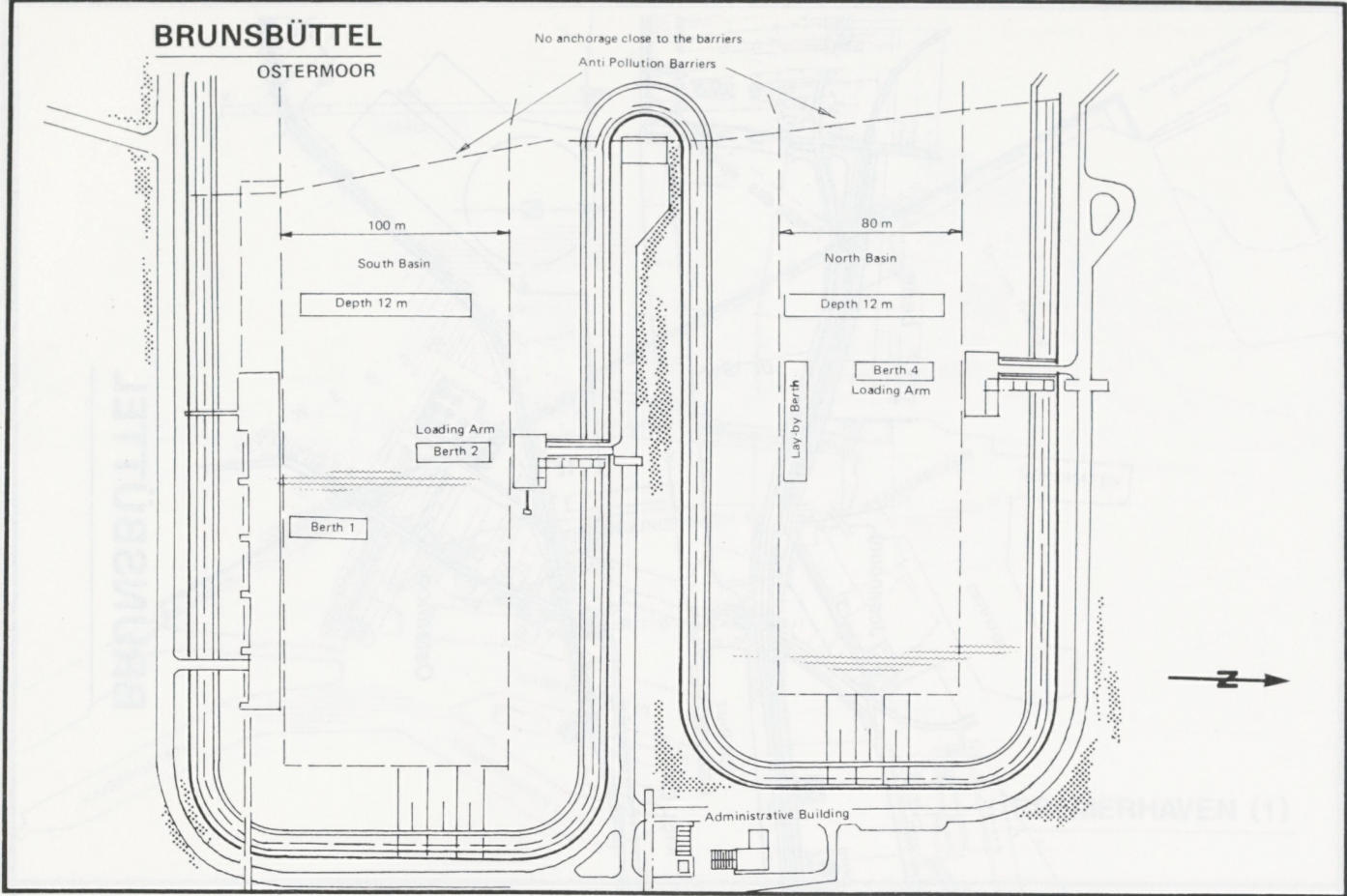


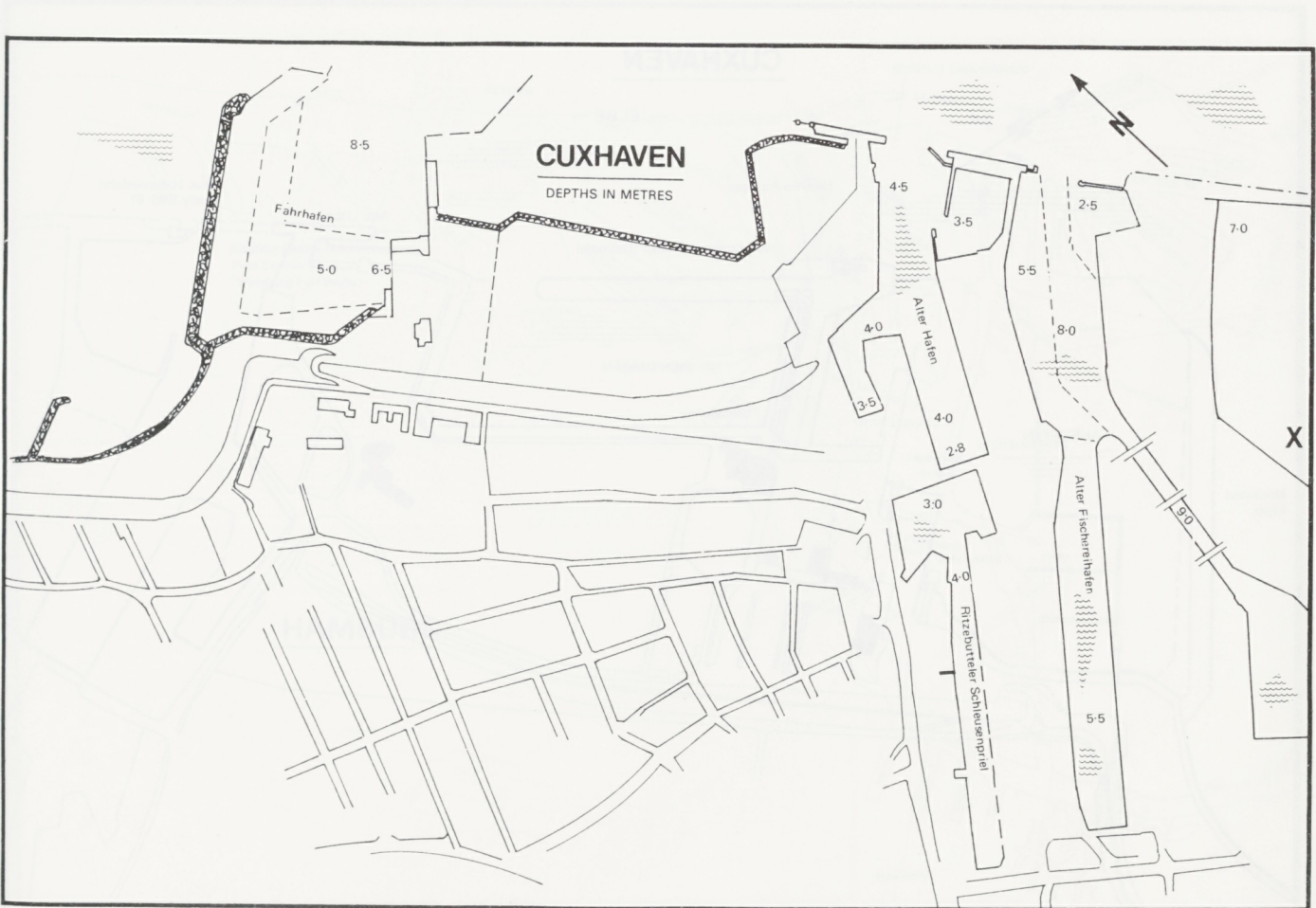
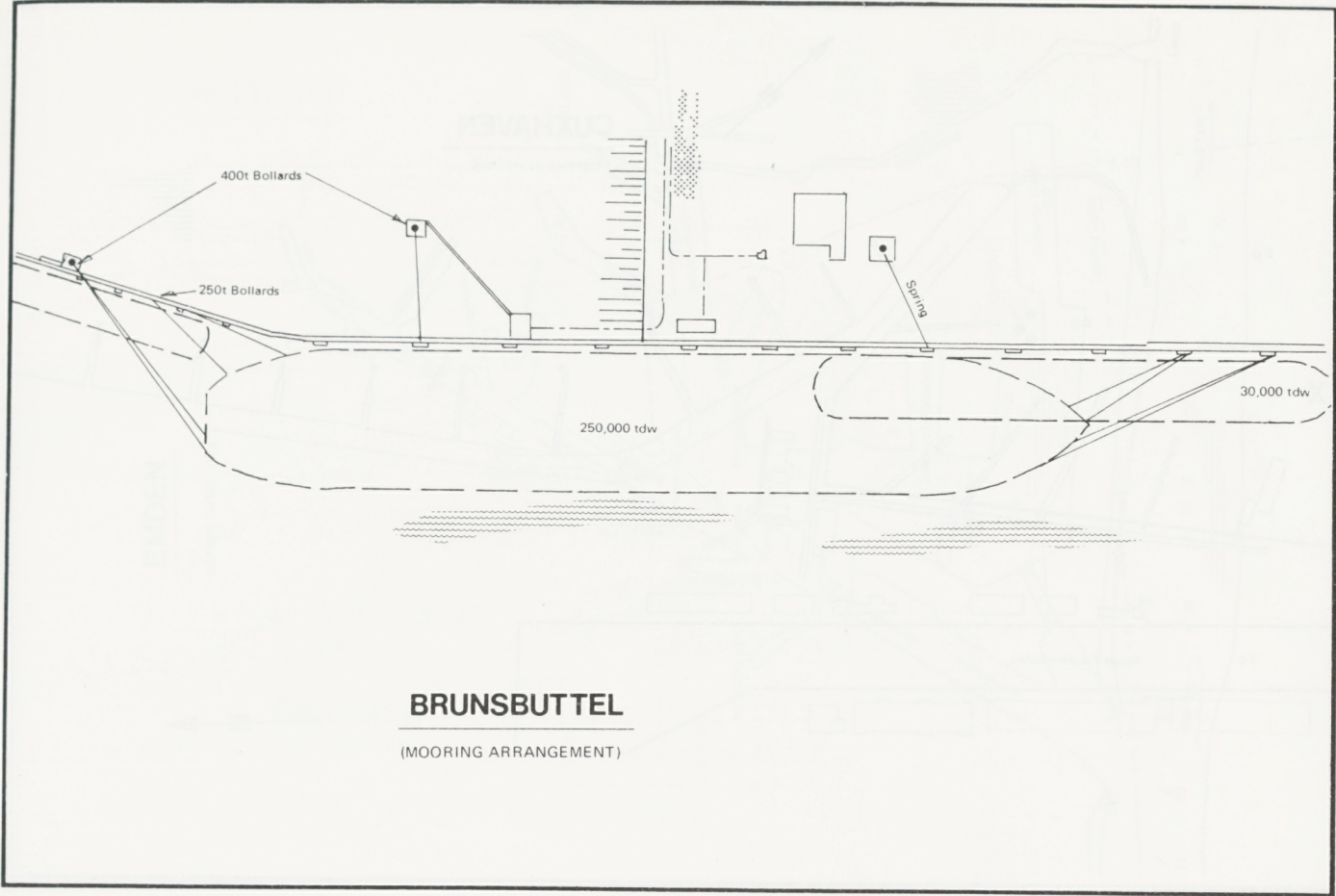


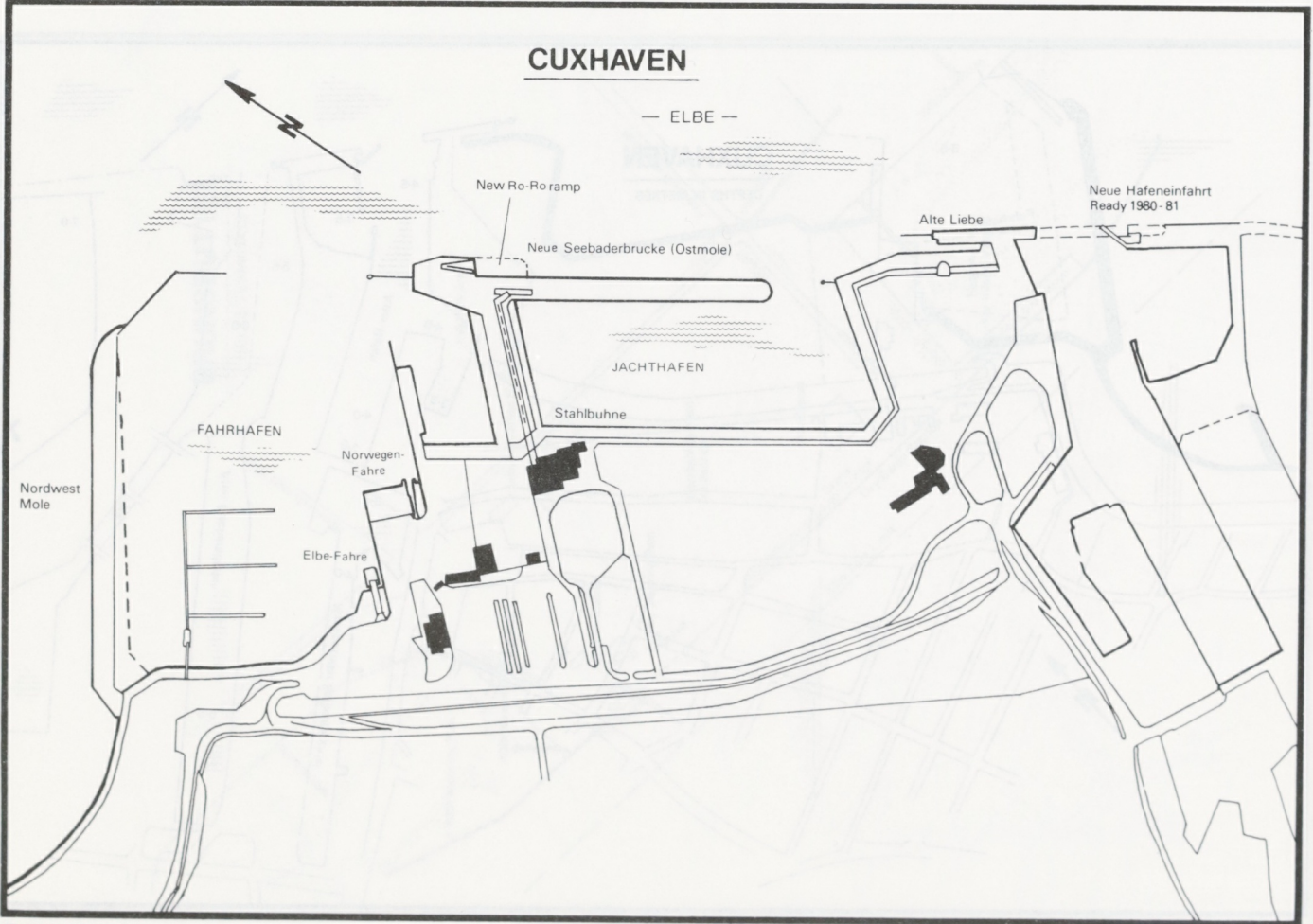
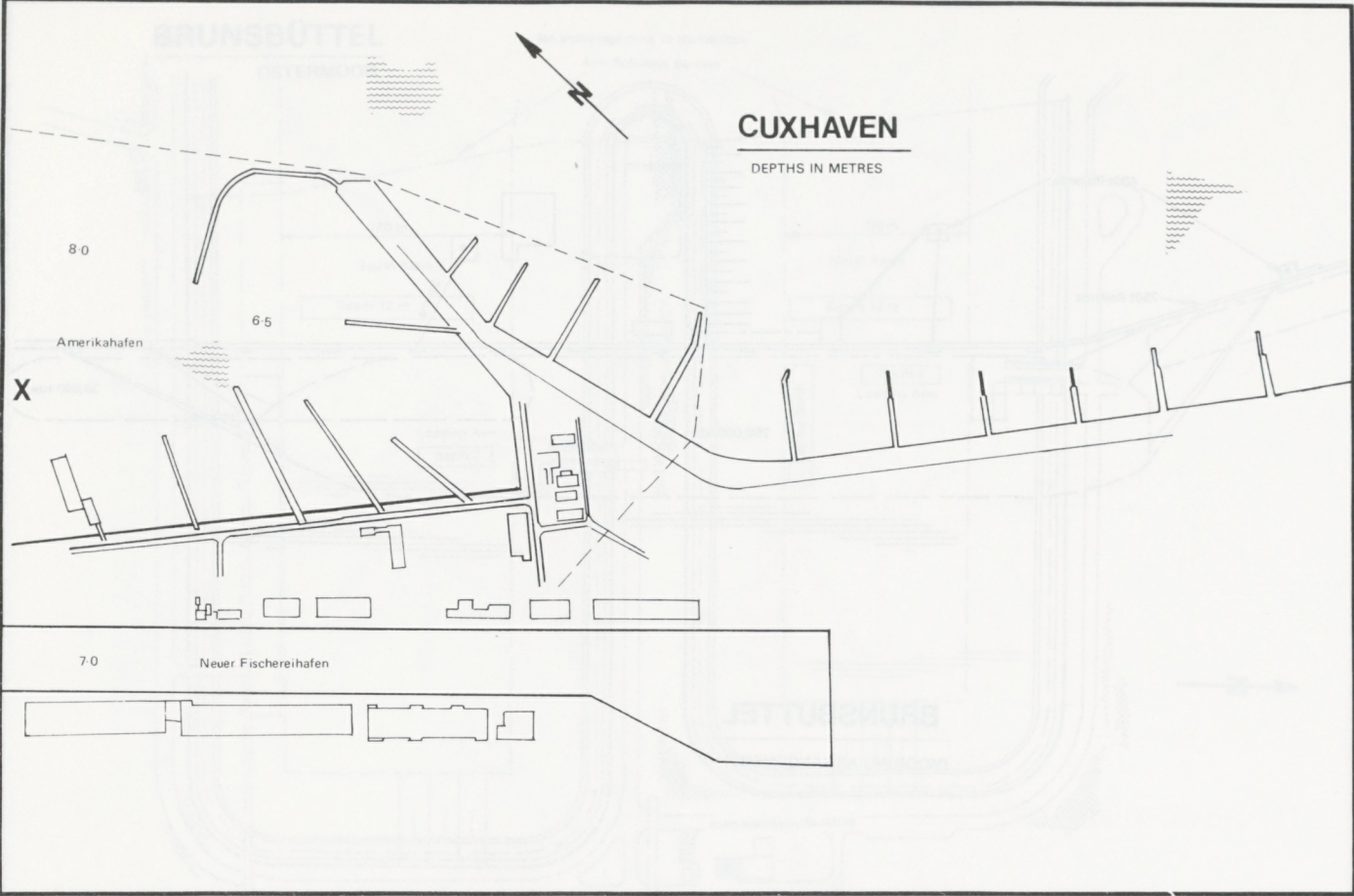


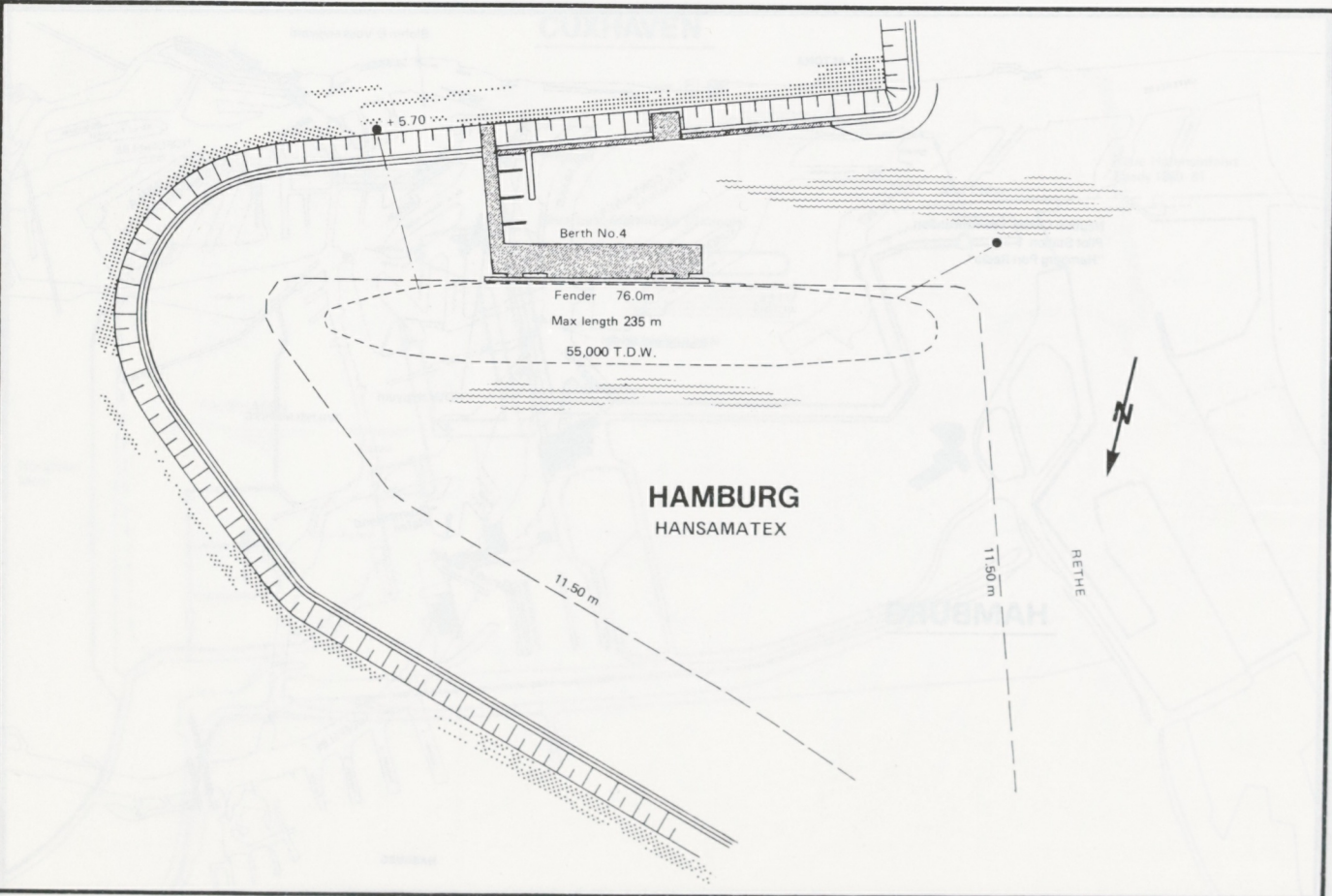
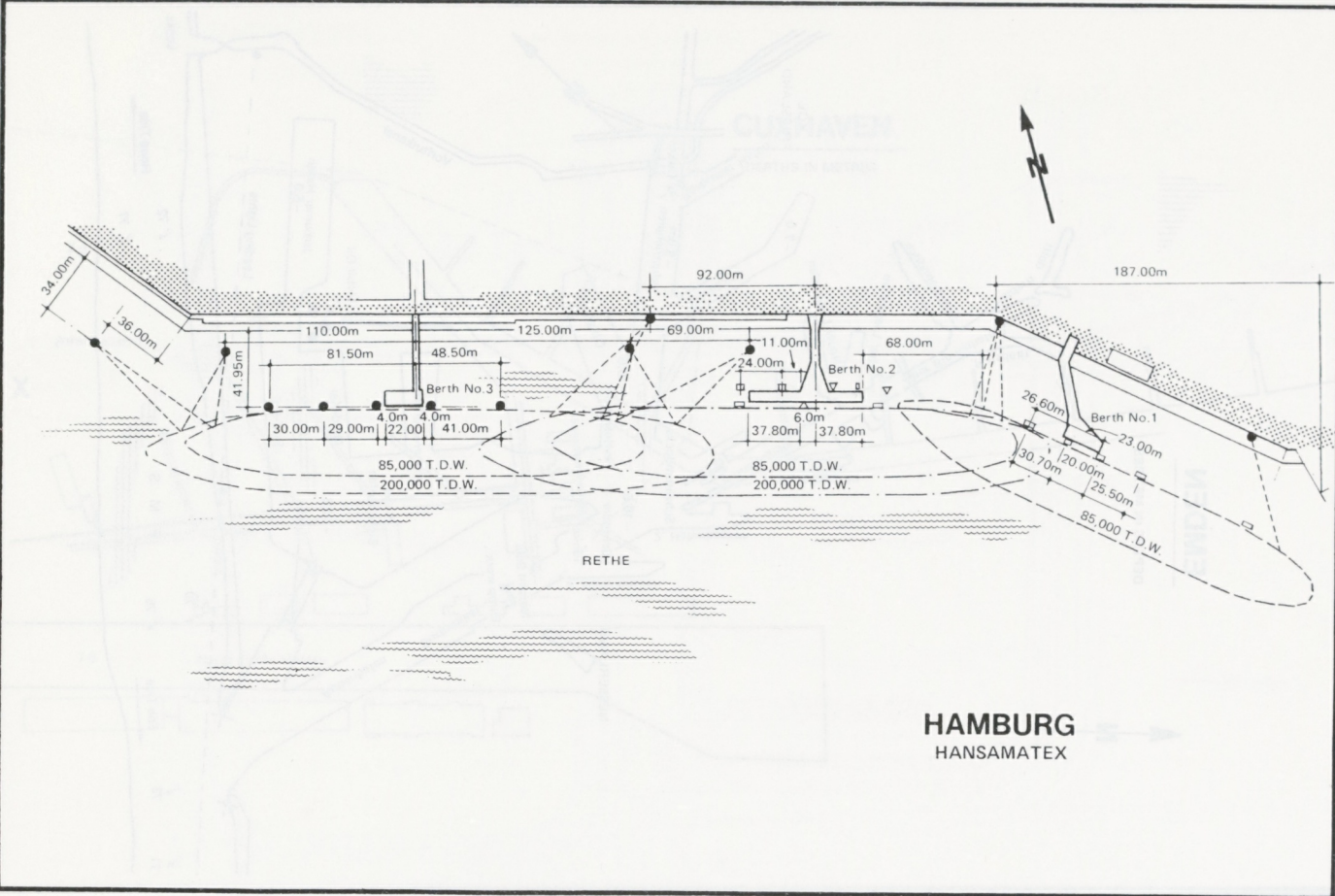


BRUNSBÜTTEL











SCHEERHAFEN

Alte Schlieuse
Kiel-Canal
Neue Schleuse

Nordmole

8m
Tankerloschbrücke

Scheerhafen

OSLO-KAI

Ans

7m

10m

13m

Anleger 4.

Knooper Landstr.

NORDHAFEN

Nordhafen 2

Kiel-Canal

Nordhafen :

9.5m

LOCKS AND PORT INSTALLATIONS

INNER HARBOUR

Limit of Lock Area

Old Locks

Yacht Harbour

Bathing Area
FORE PORT

1

KIEL CANAL

HOLTENAU ROADS

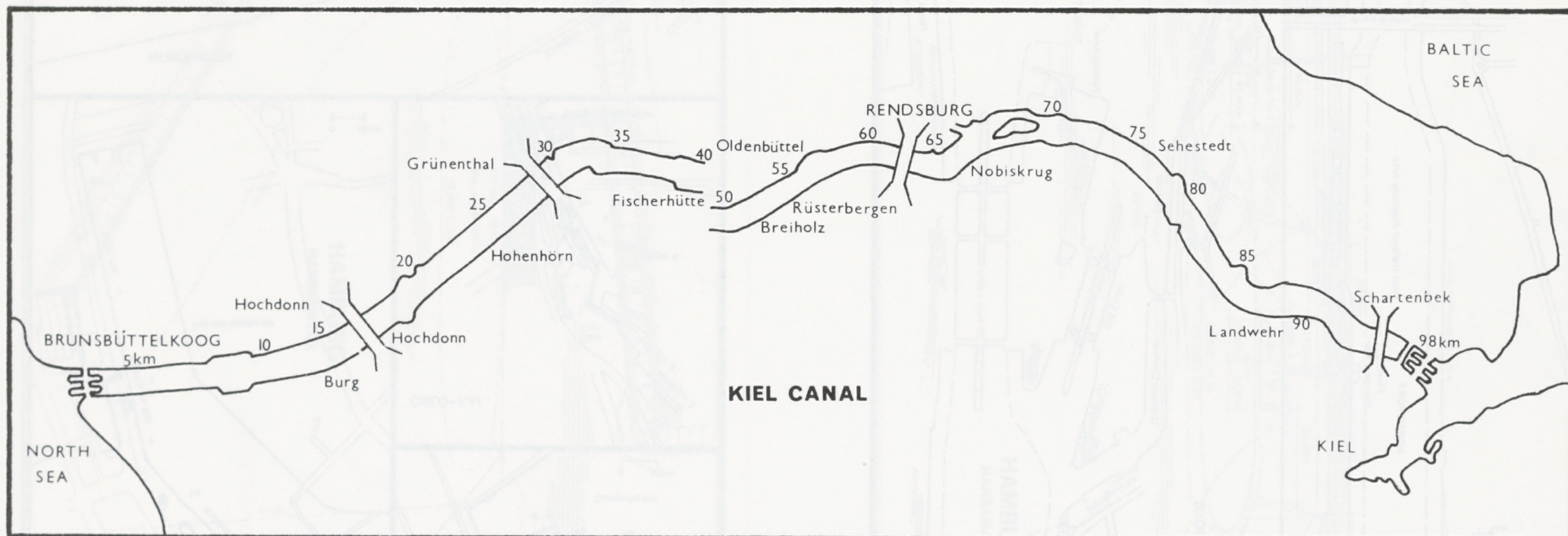
NORTH PORT

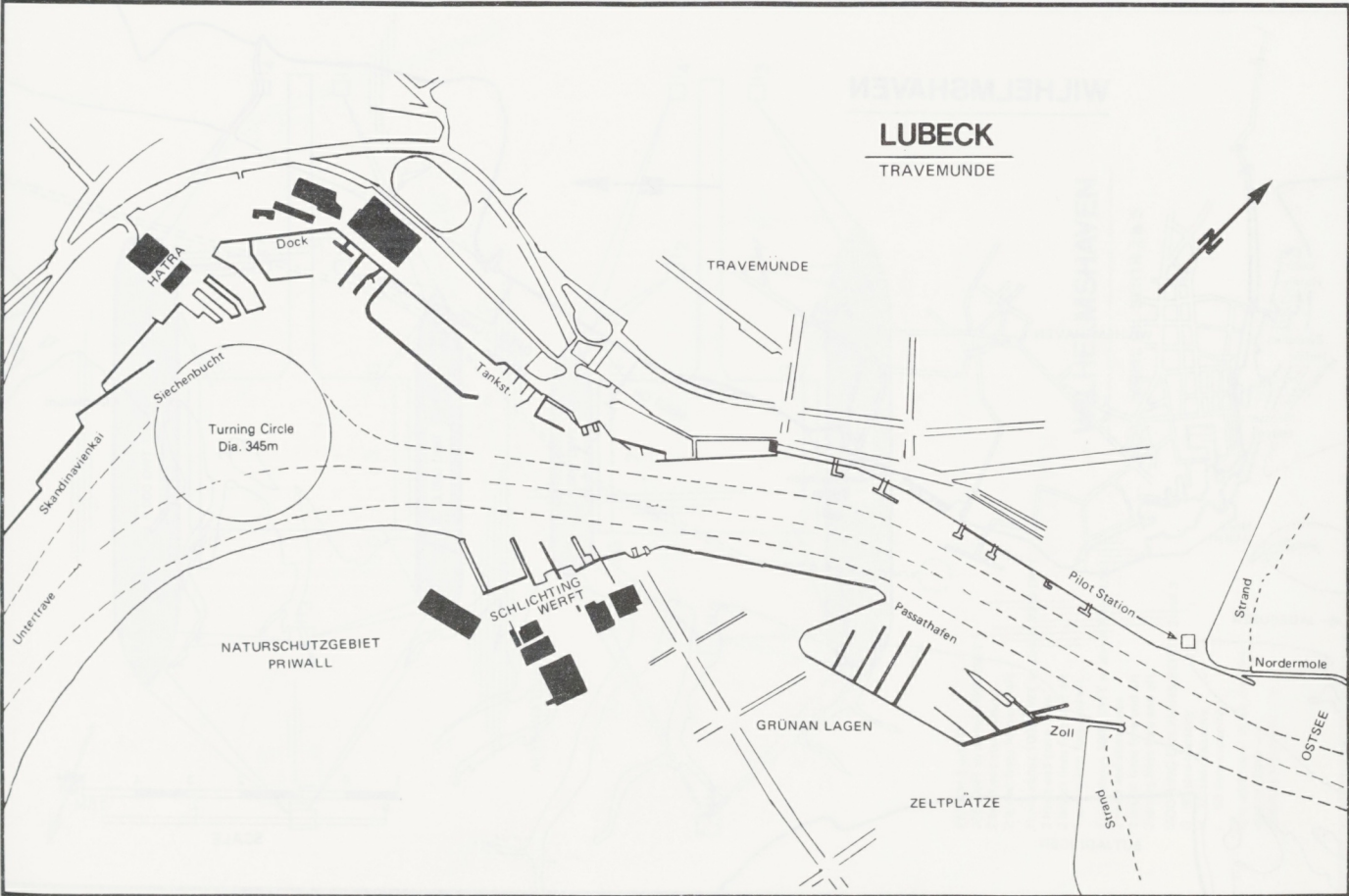
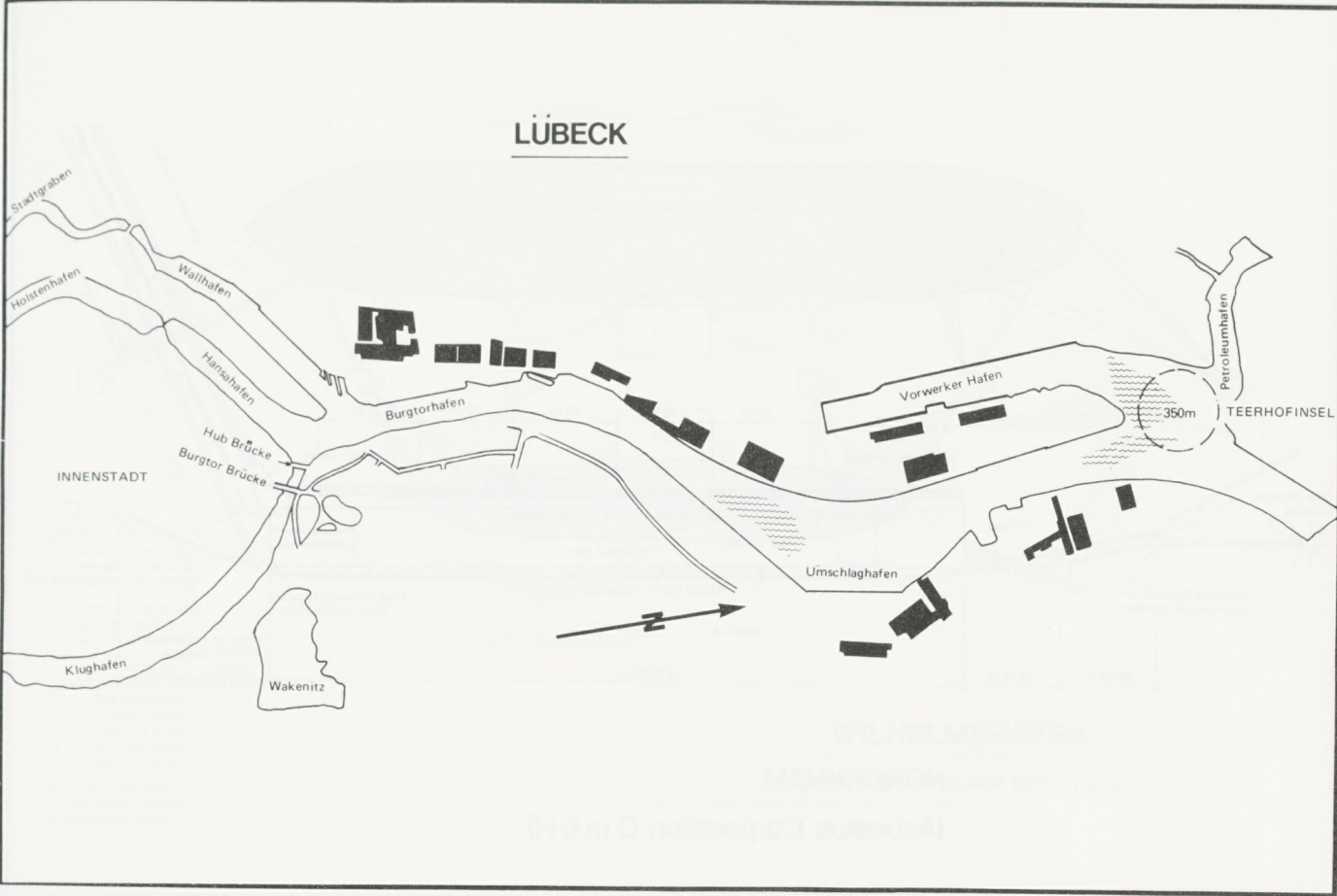
Floating

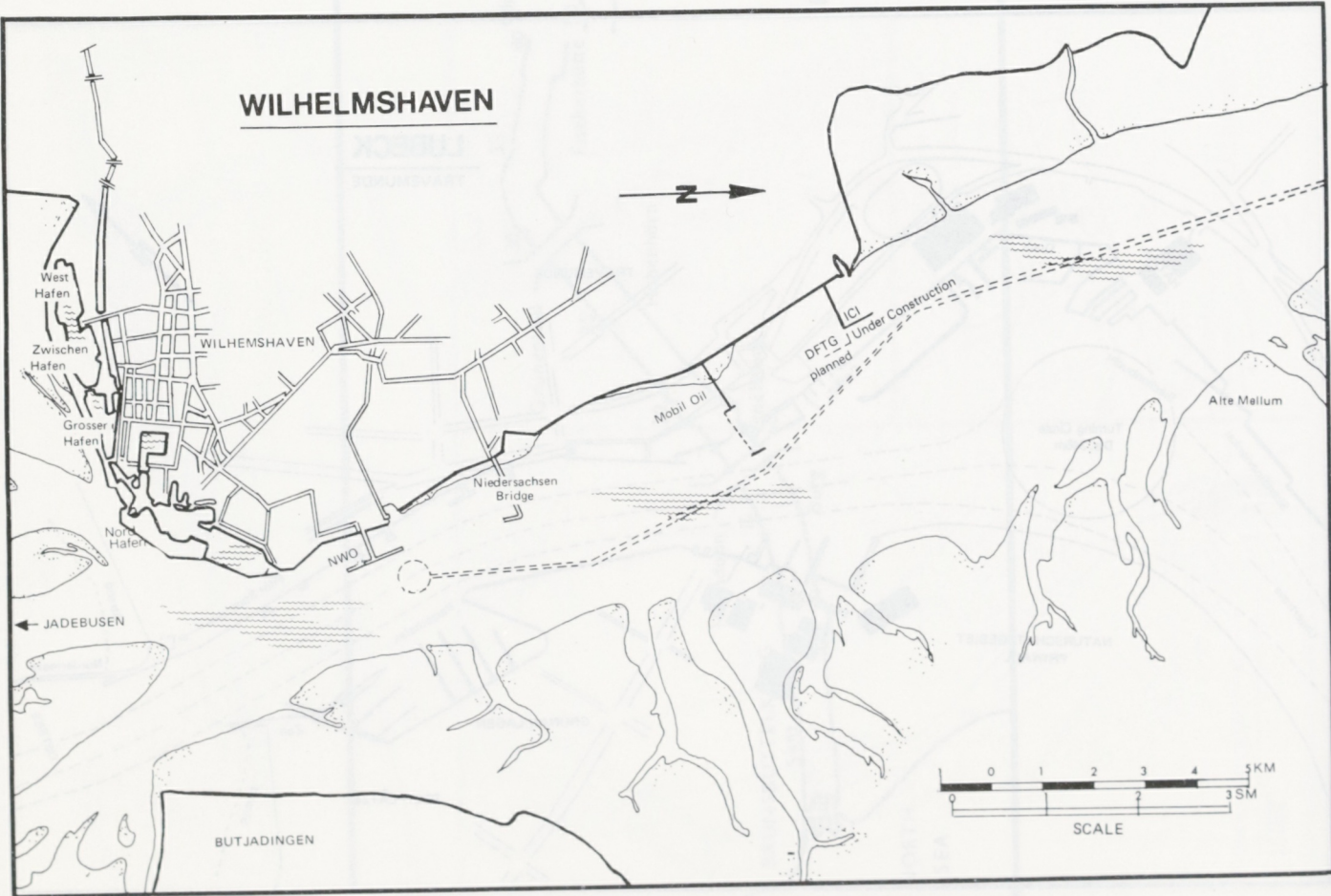
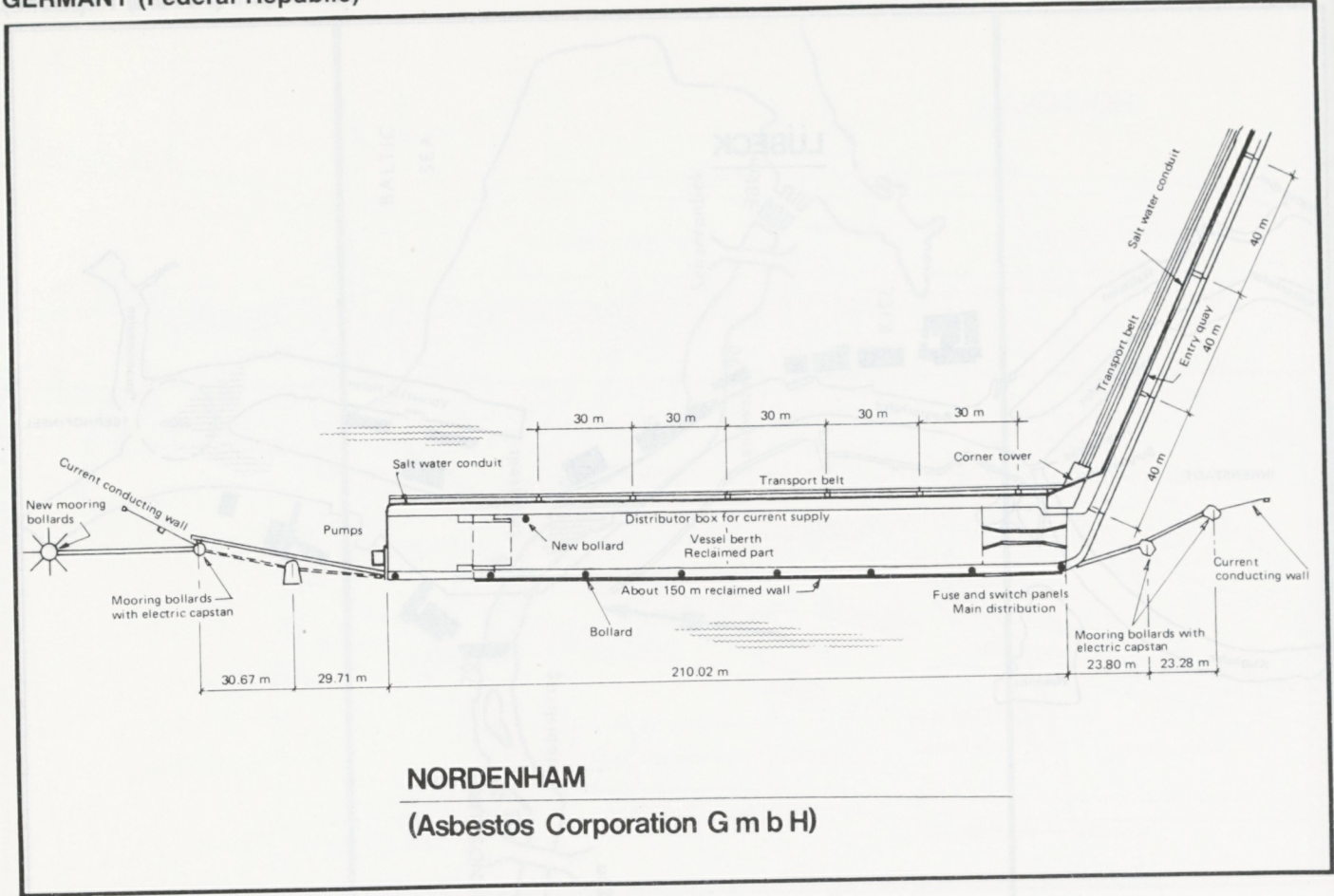
Inner Harbour Assembly Area

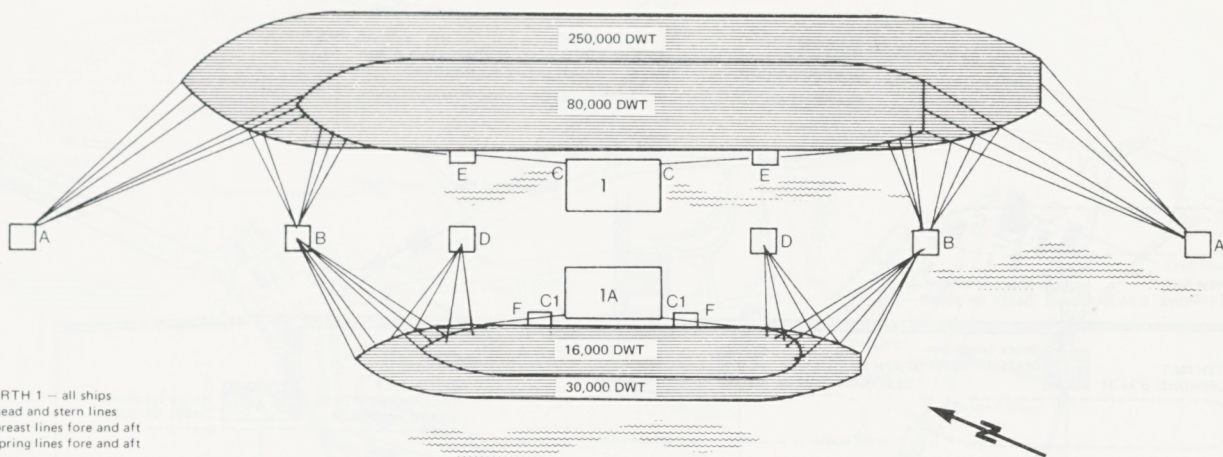
Road Bridge

GERMANY (Federal Republic)









BERTH 1 — all ships
3 head and stern lines
3 breast lines fore and aft
2 spring lines fore and aft

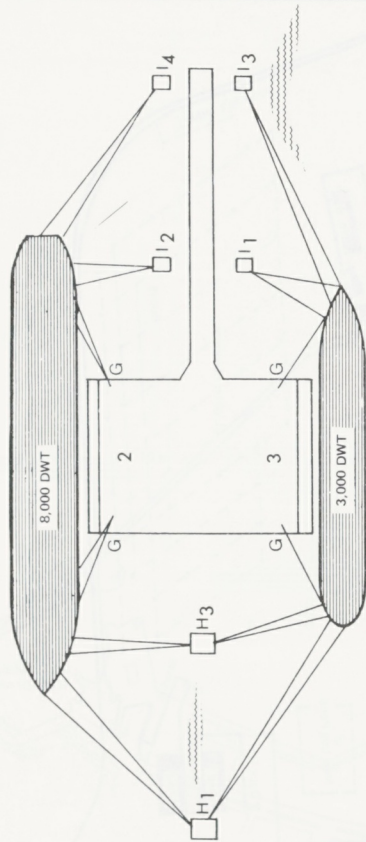
BERTH 1A — all ships
3 head and stern lines
2 breast lines fore and aft
2 spring lines fore and aft

MOORING DOLPHINS BERTHS 1 & 1A
A 3 x 125 tons hooks
B 3 x 125 tons hooks
C 2 x 100 tons hooks
D 2 x 50 tons hooks
E 2 x 75 tons hooks

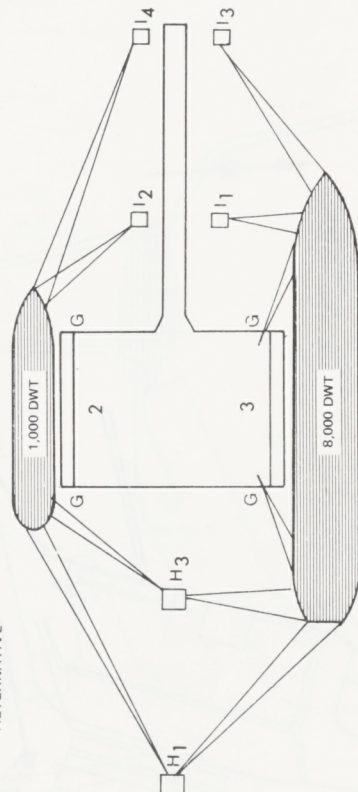
One additional shore mooring wire available at dolphins B and D

WILHELMSHAVEN

MOBIL OIL, SEA ISLAND, BERTH 1 & 1A



ALTERNATIVE



WILHELMSHAVEN

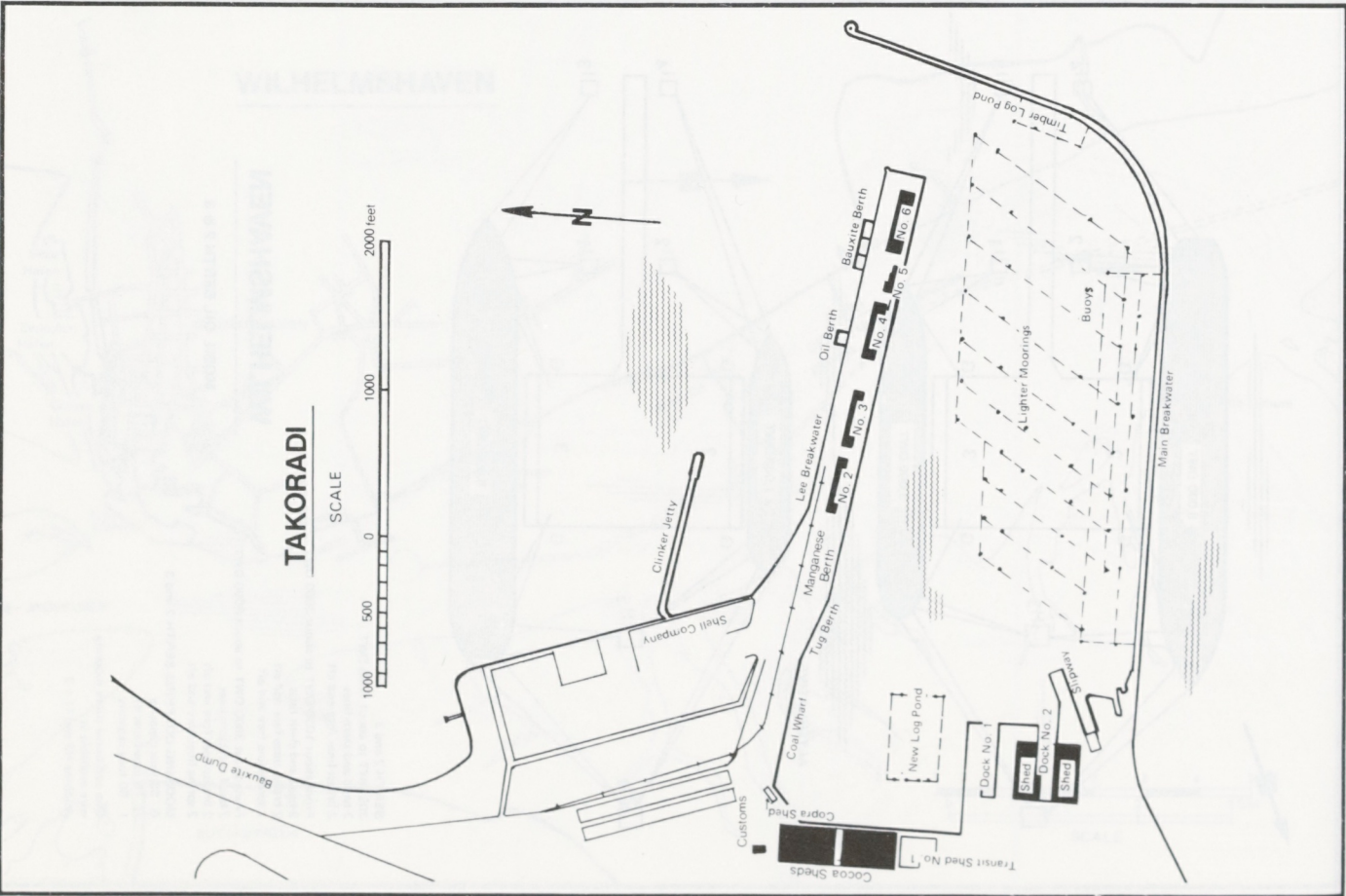
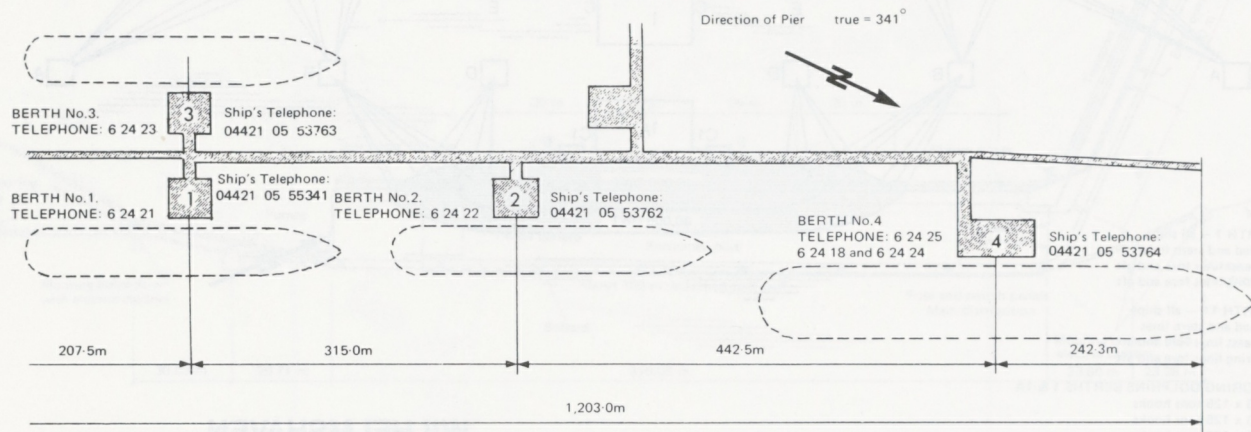
MOBIL OIL BERTH 2 & 3

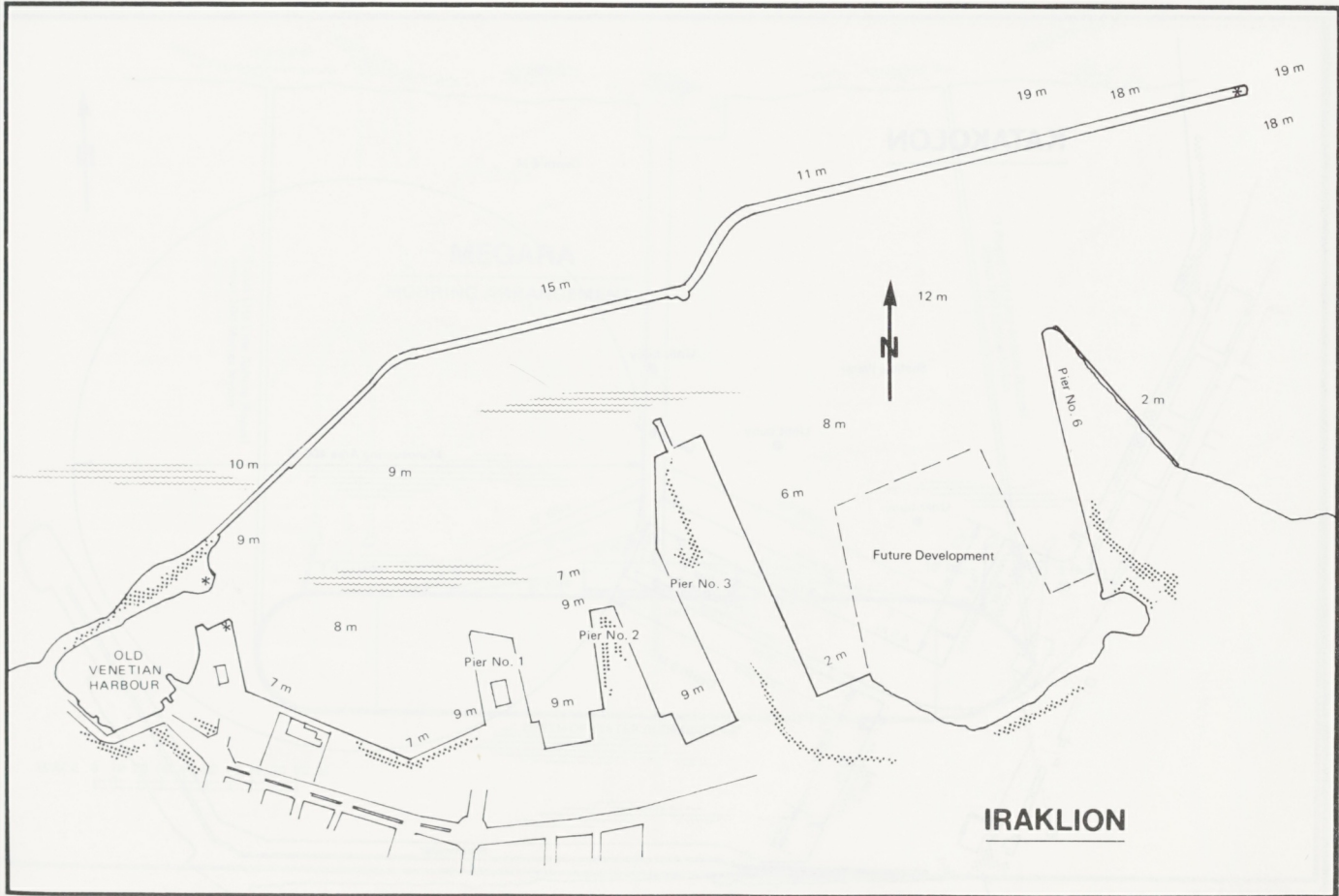
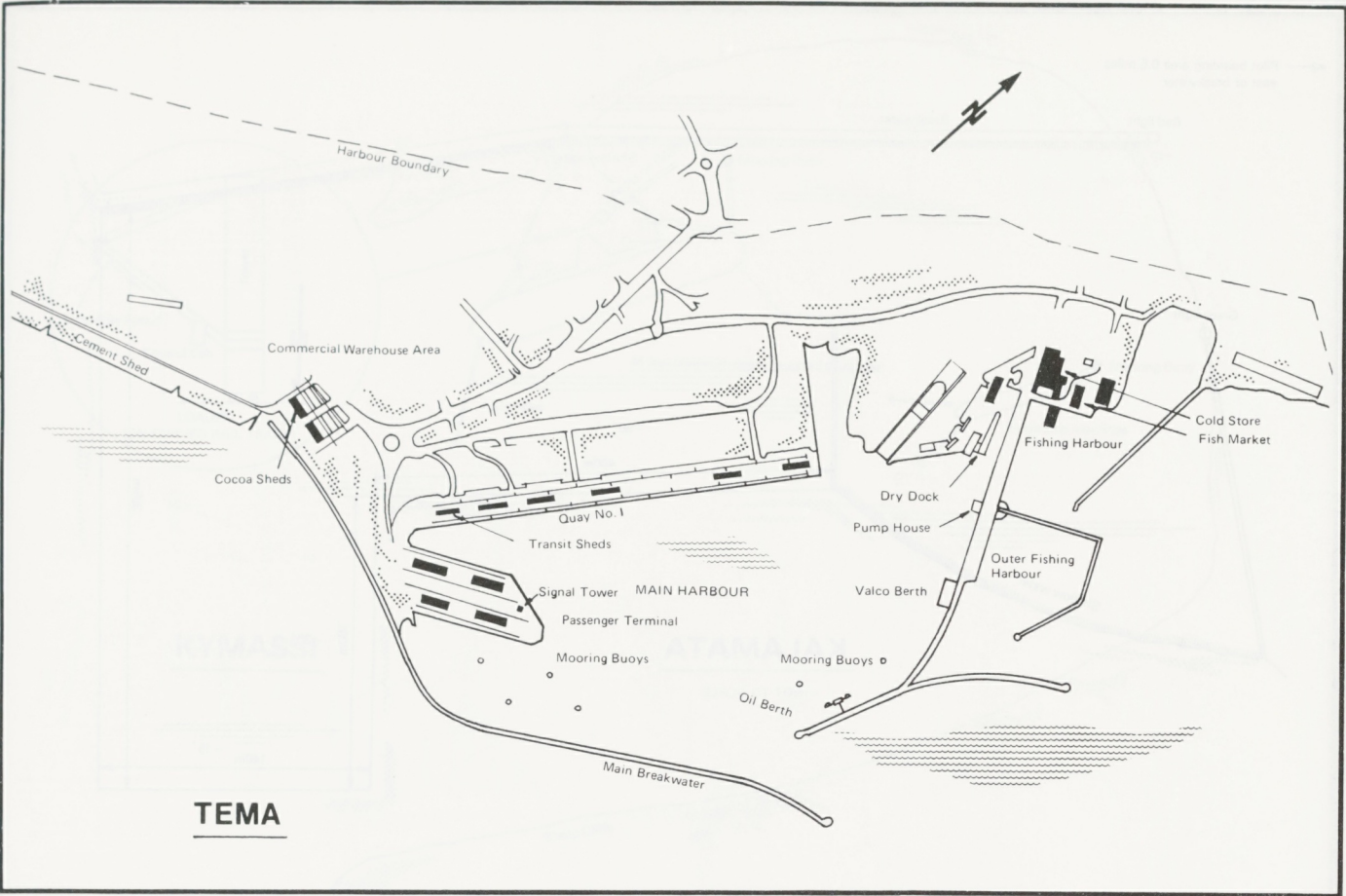
BERTH 2 and 3
300 DWT to about 1000 DWT
2 head and stern lines
2 breast lines fore and aft
From about 1000 DWT to about 3000 DWT
2 head and stern lines
2 breast lines fore and aft
1 spring line fore and aft
From about 3000 DWT to about 8000 DWT
2 head and stern lines
2 breast lines fore and aft
2 spring lines fore and aft
MOORING DOLPHINS BERTH 2 and 3
G 50 tons capacity
H 75 tons capacity
I 50 tons capacity
One additional shore mooring wire available at dolphins H3 and I1 + 2

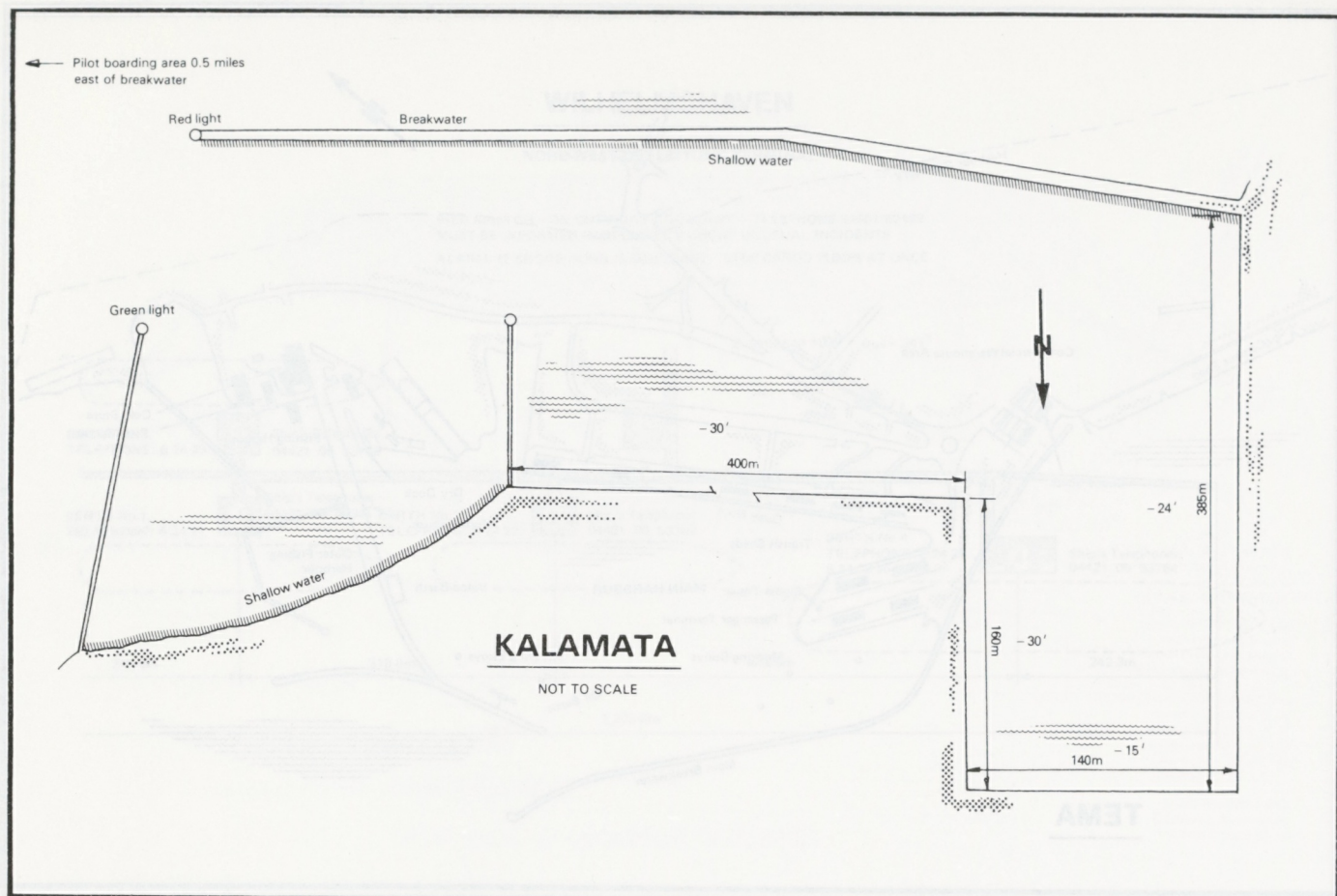
WILHELMSHAVEN

NORD-WEST OELLEITUNG TERMINAL

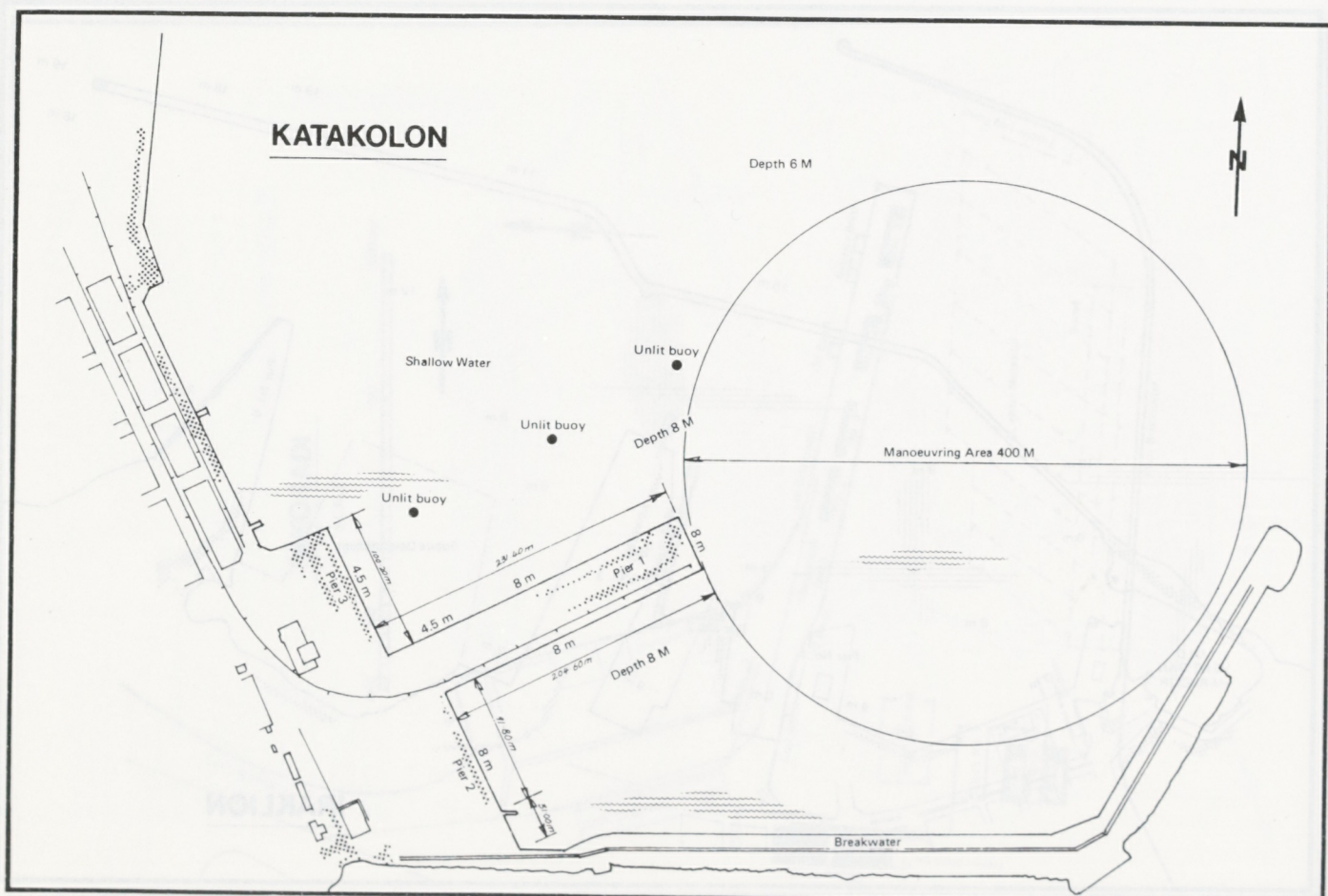
PIER MASTER— ON DUTY DAY AND NIGHT — TELEPHONE 62461/62462
MUST BE INFORMED IMMEDIATELY ABOUT UNUSUAL INCIDENTS
ALARM: IF SHORE HORN IS SOUNDING — STOP CARGO PUMPS AT ONCE

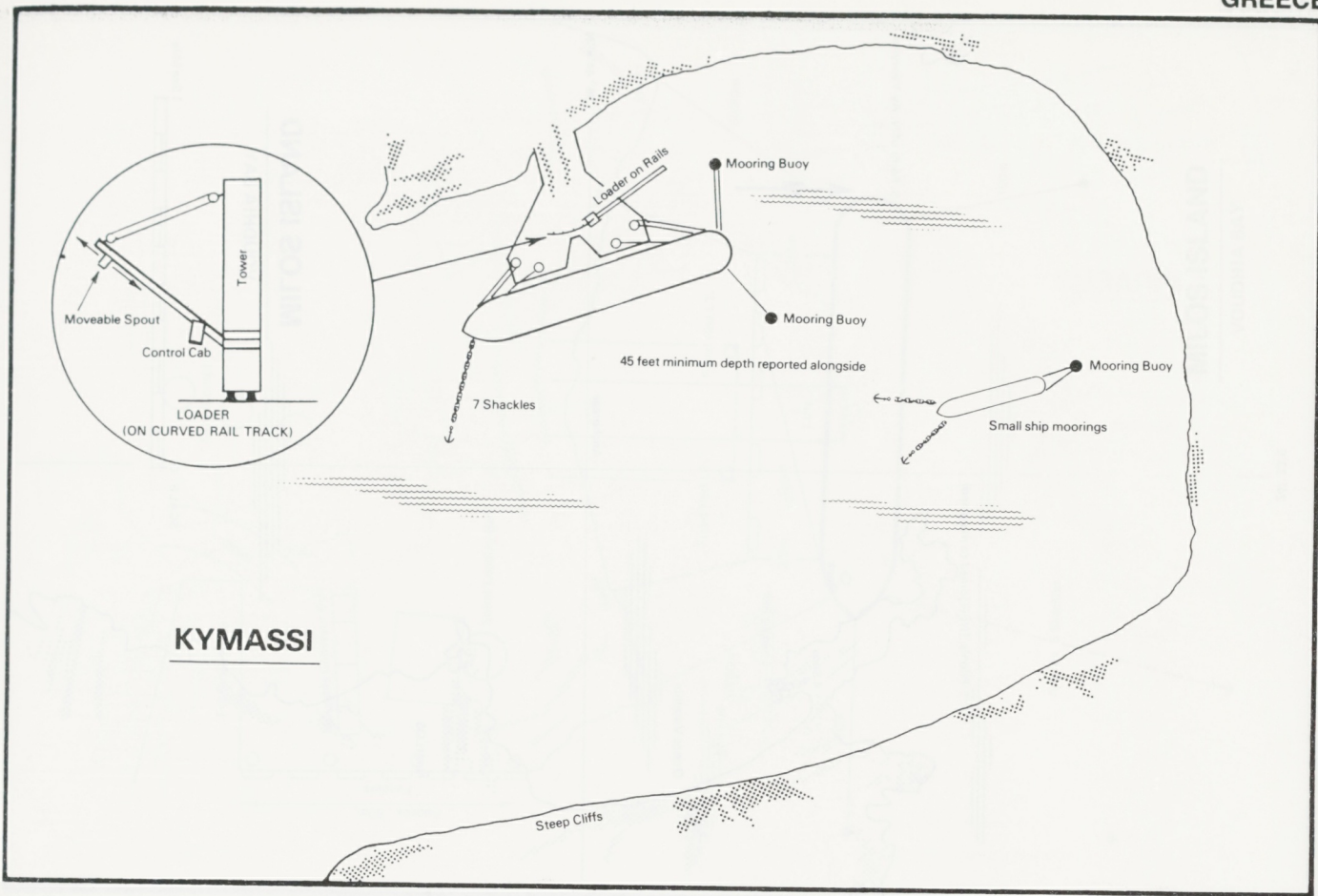




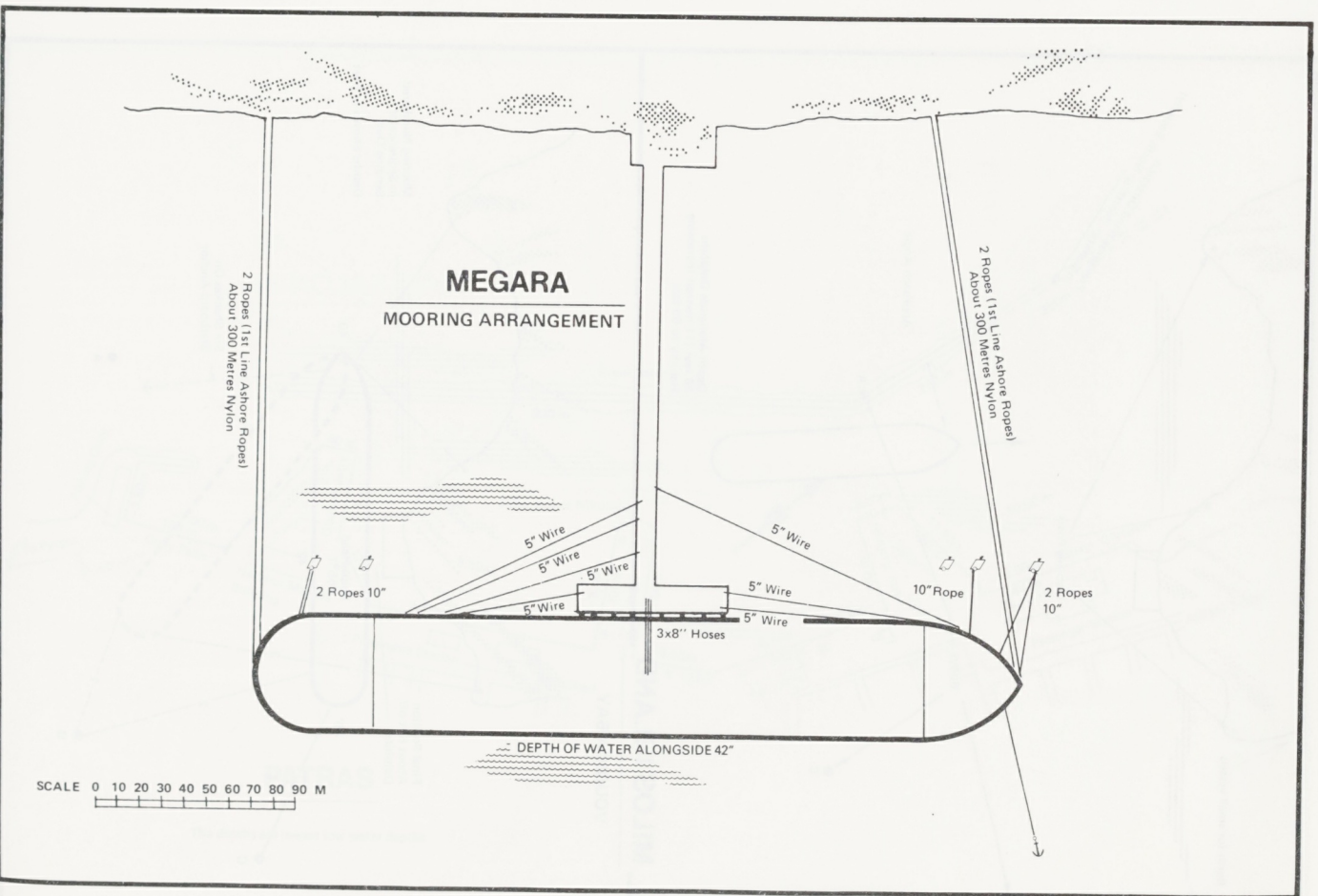


"Plan supplied by Ship's Master"

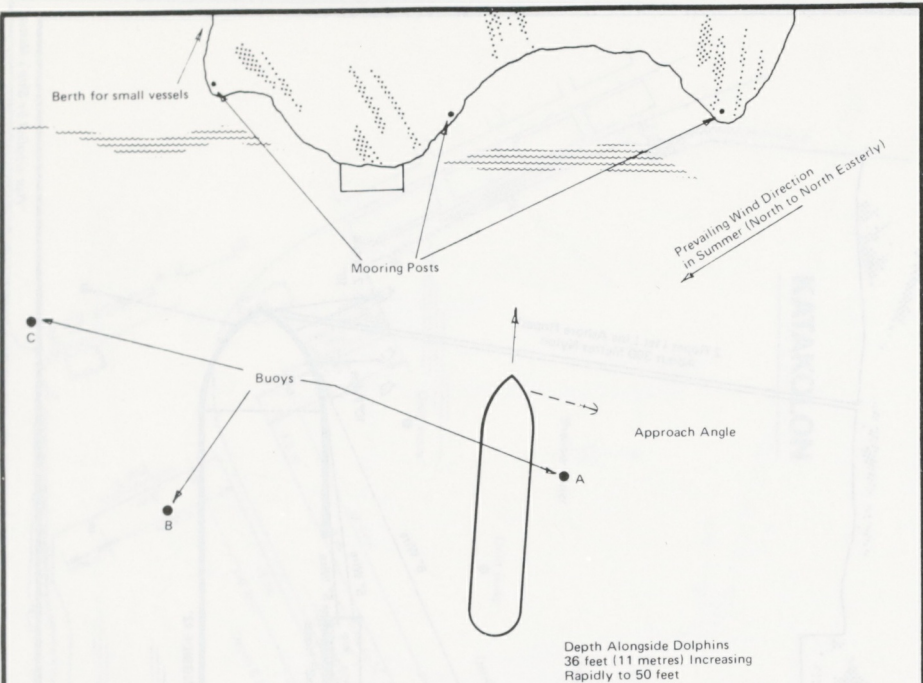




"Plan supplied by Ship's Master"

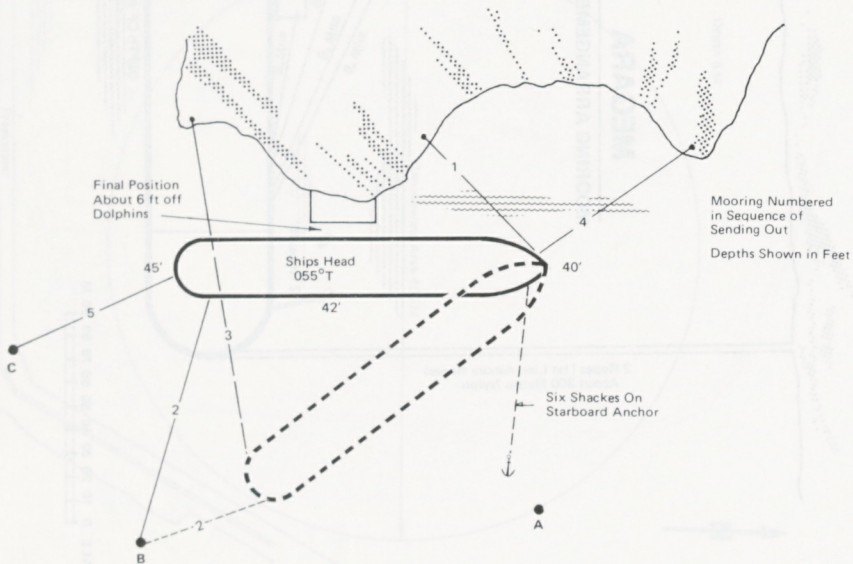


"Plan supplied by Ship's Master"

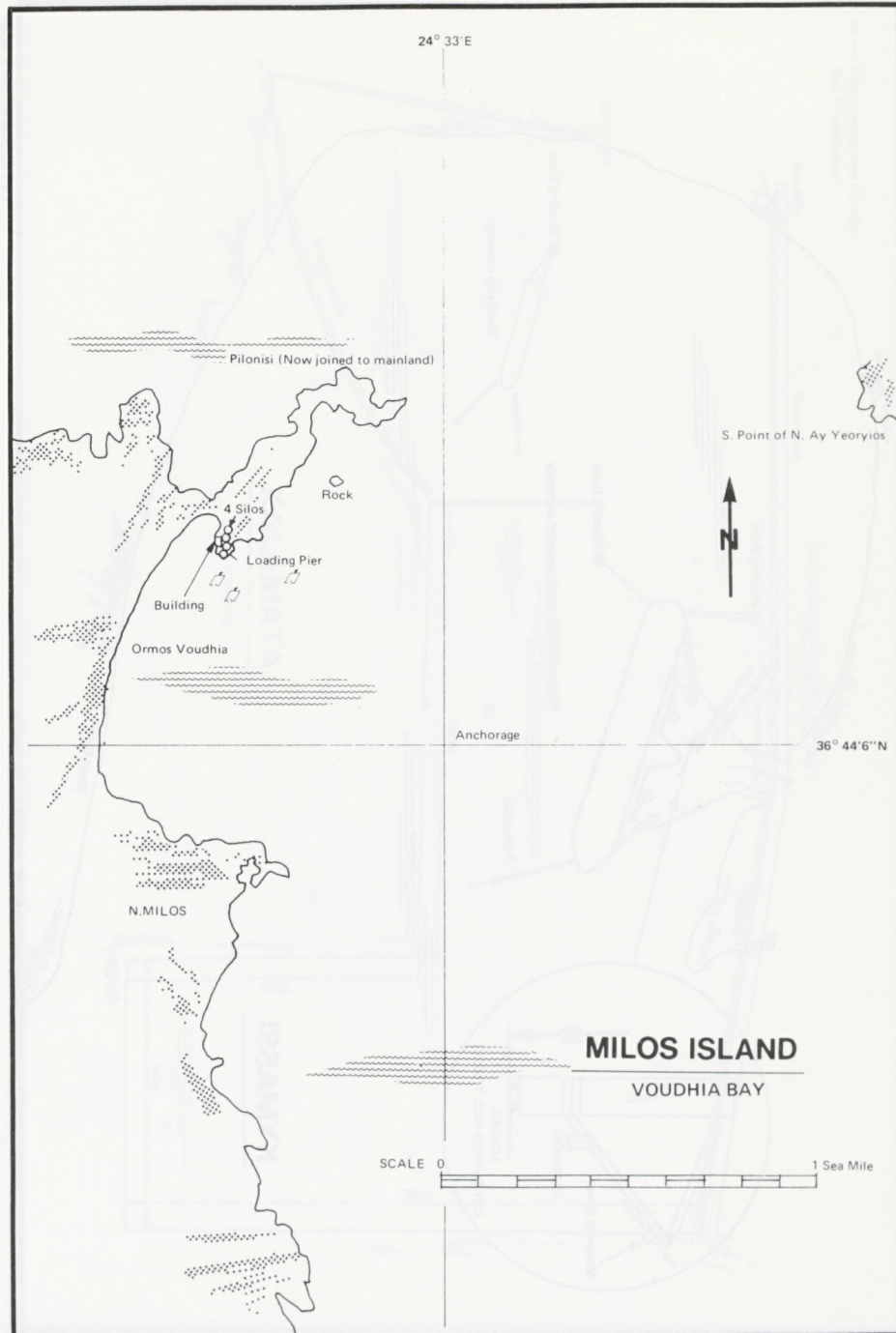


MILOS ISLAND

VOUDHIA BAY



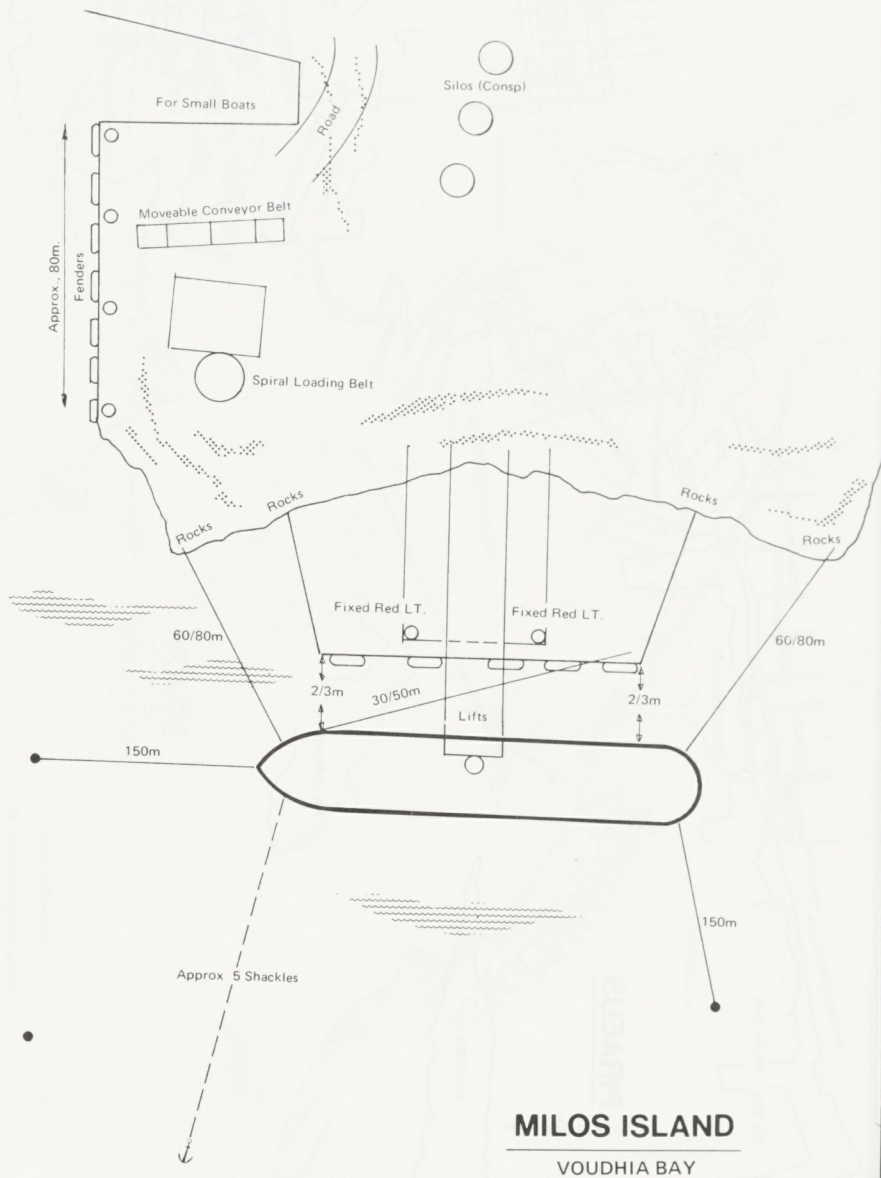
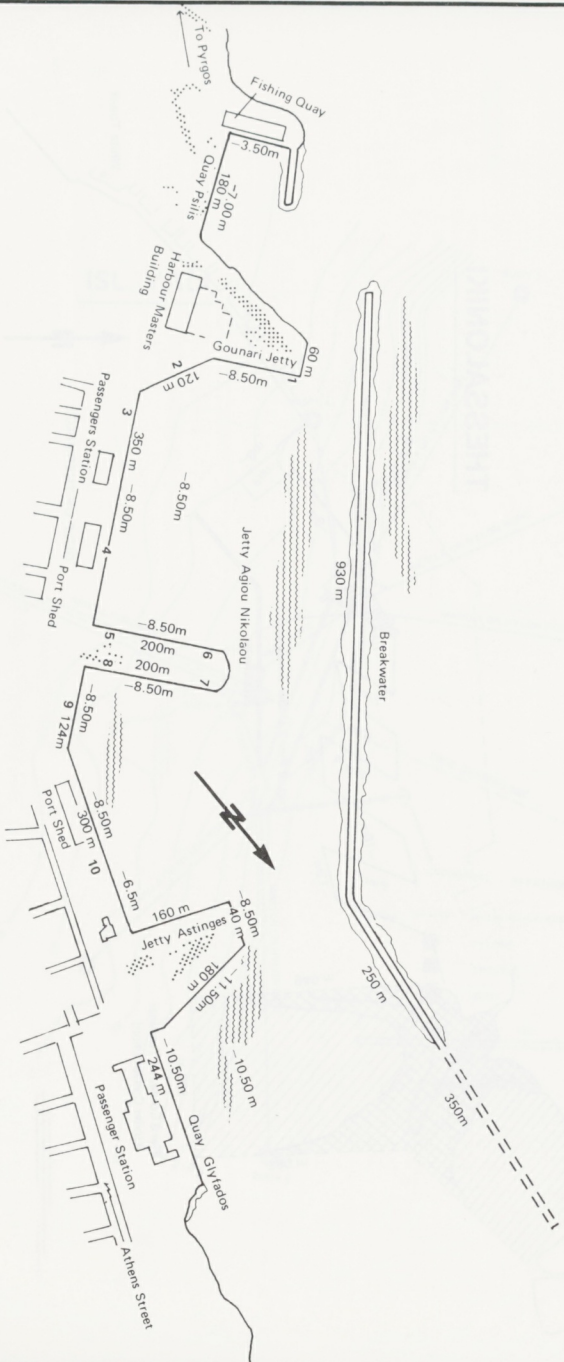
"Plan supplied by Ship's Master"



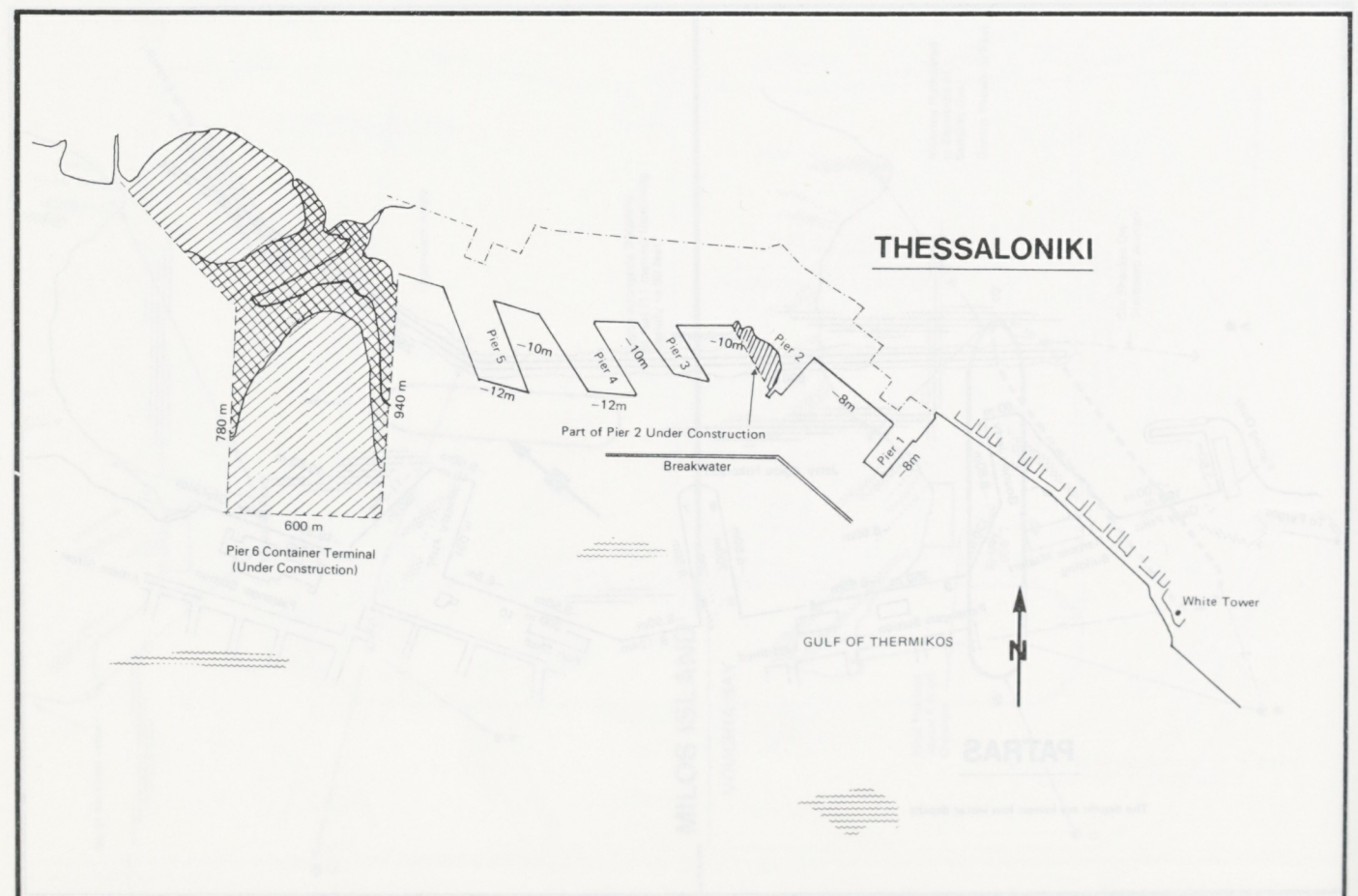
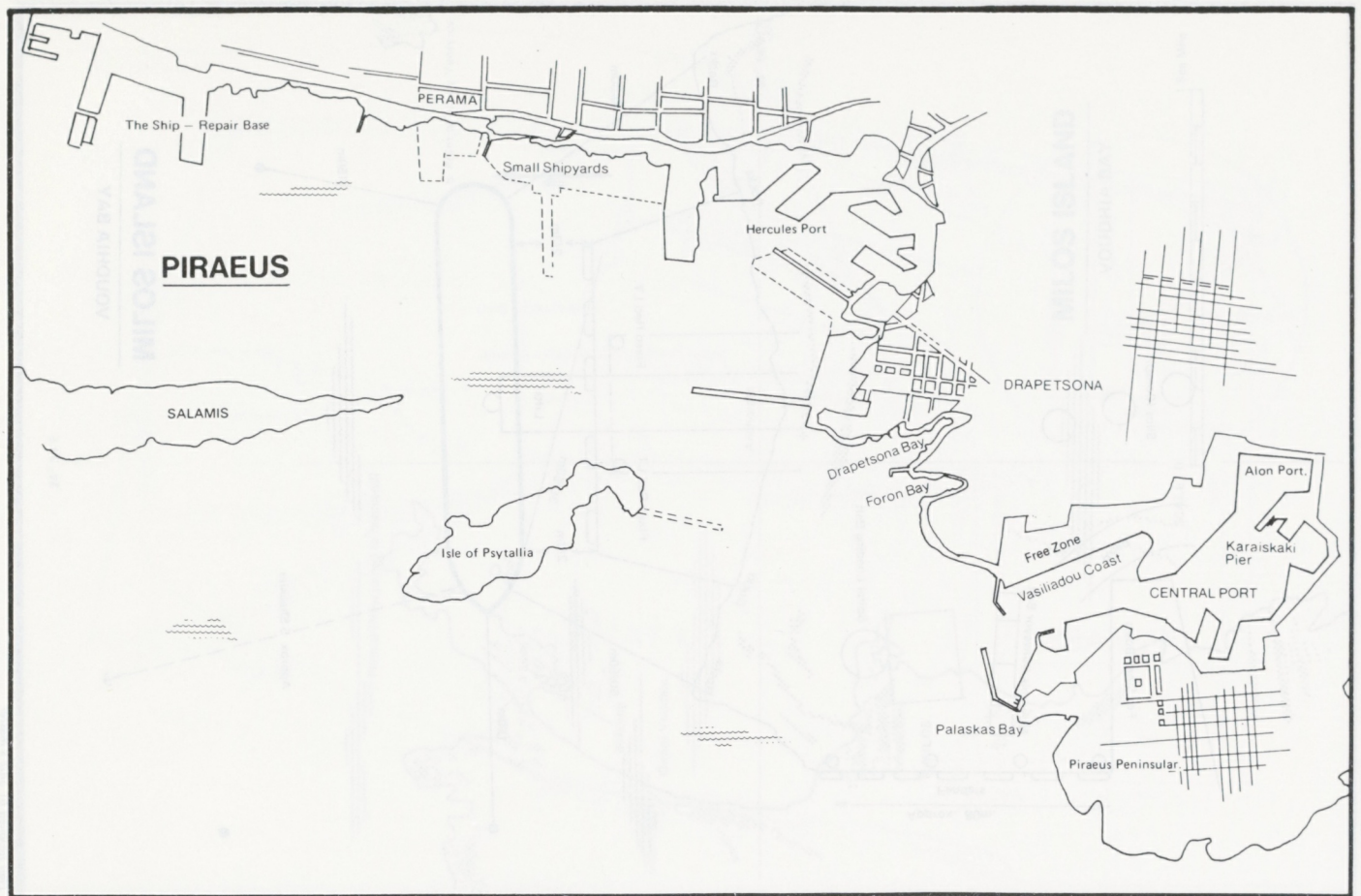
"Plan supplied by Ship's Cadet"

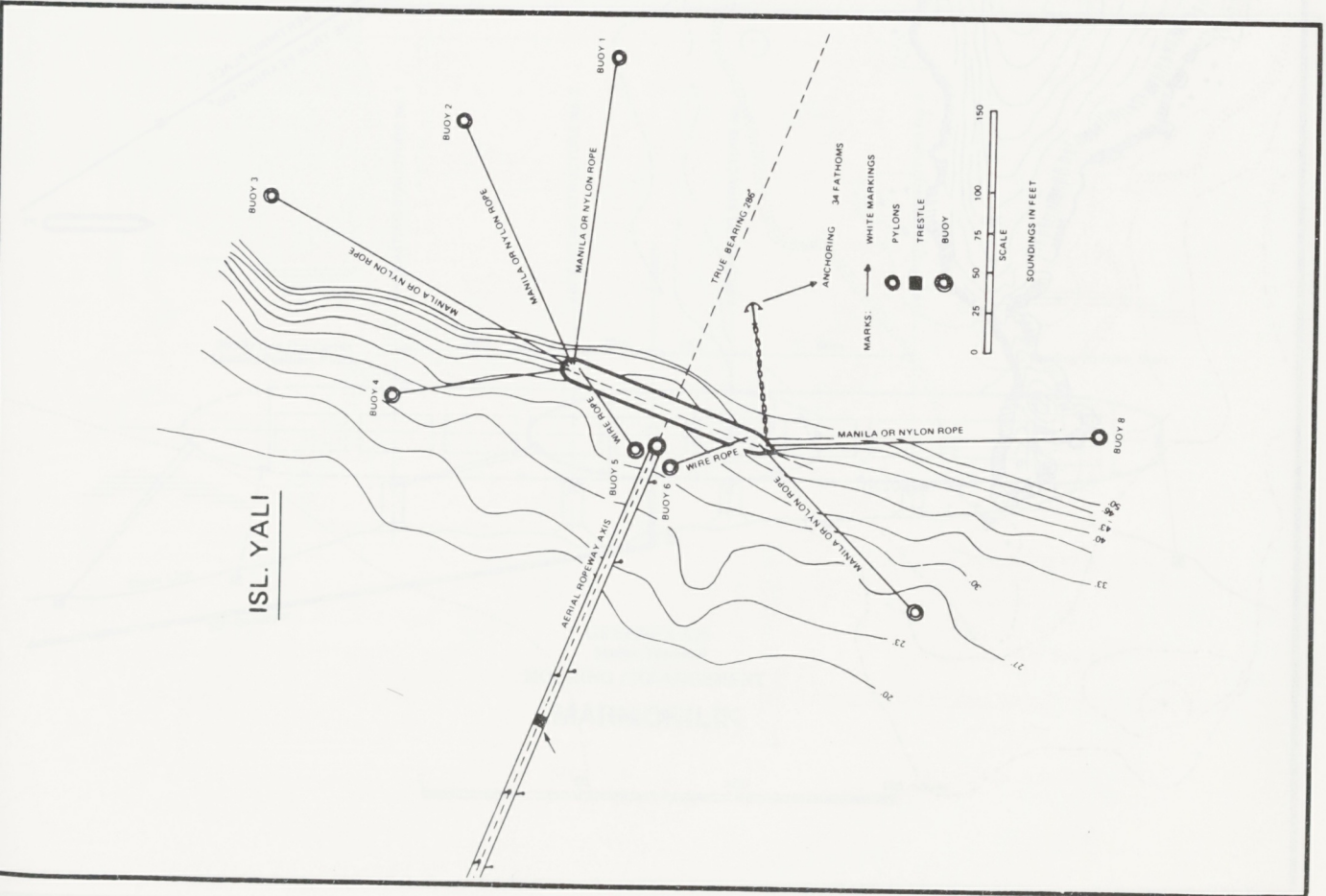
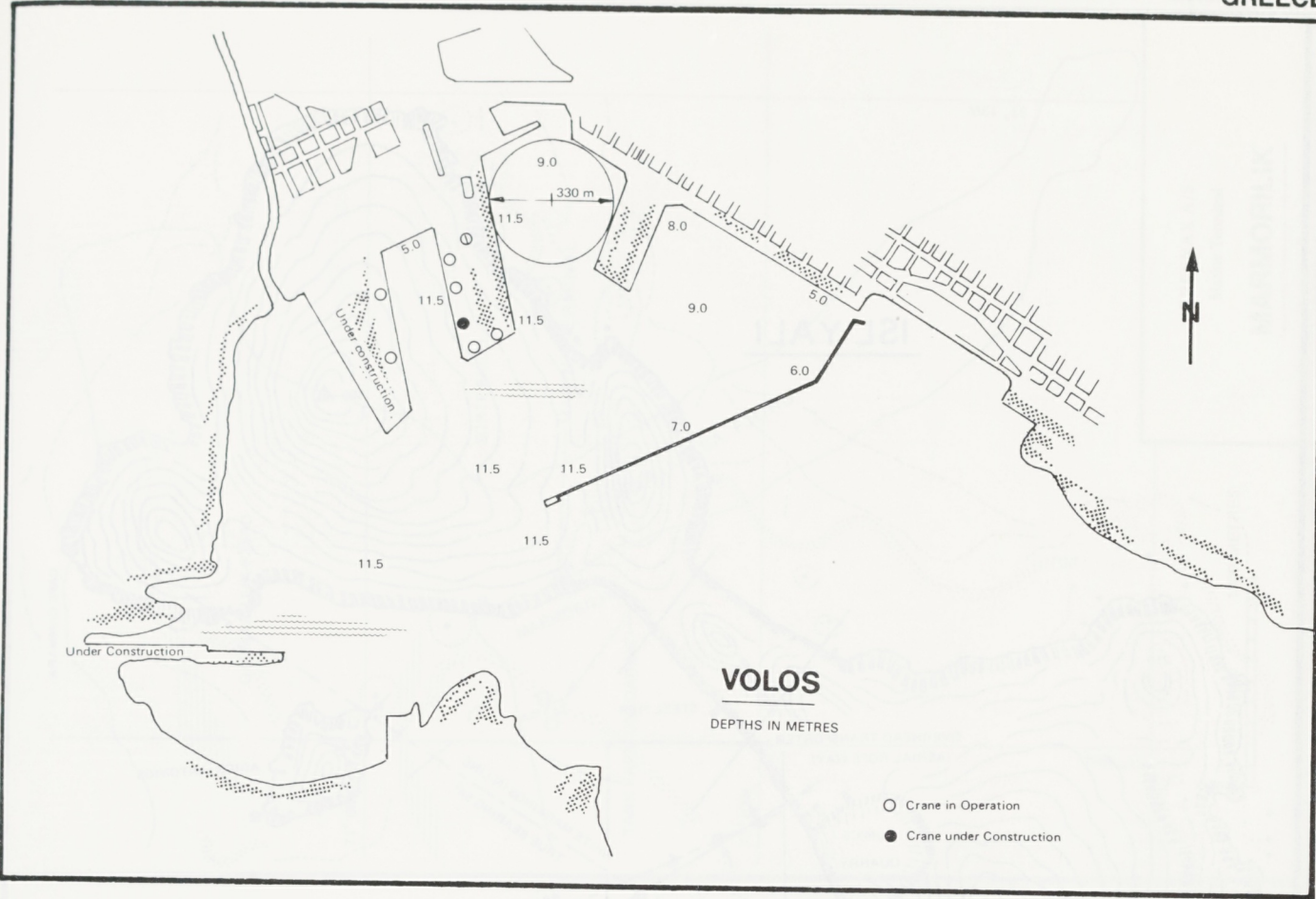
PATRAS

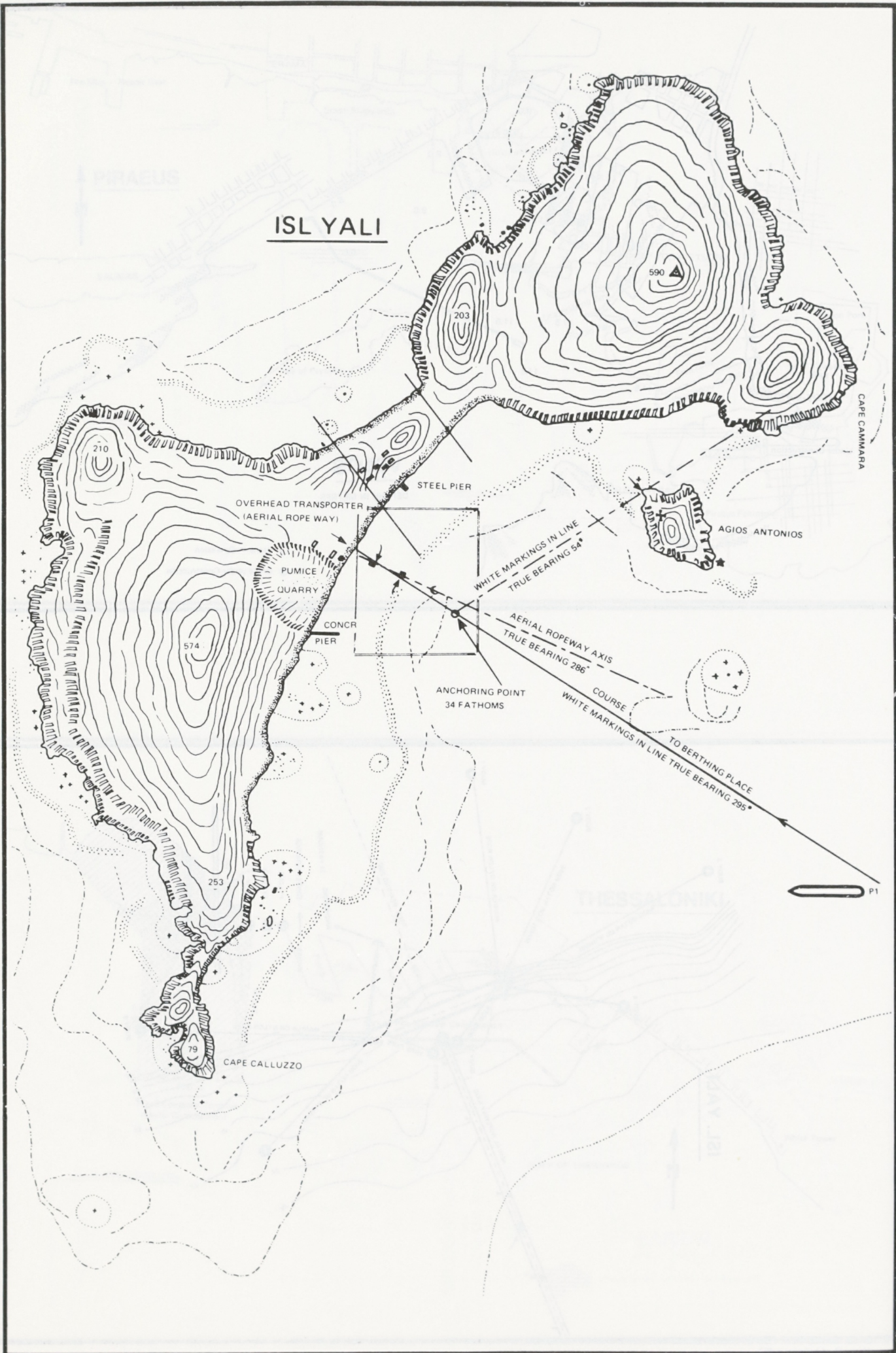
The depths are lowest low water depths

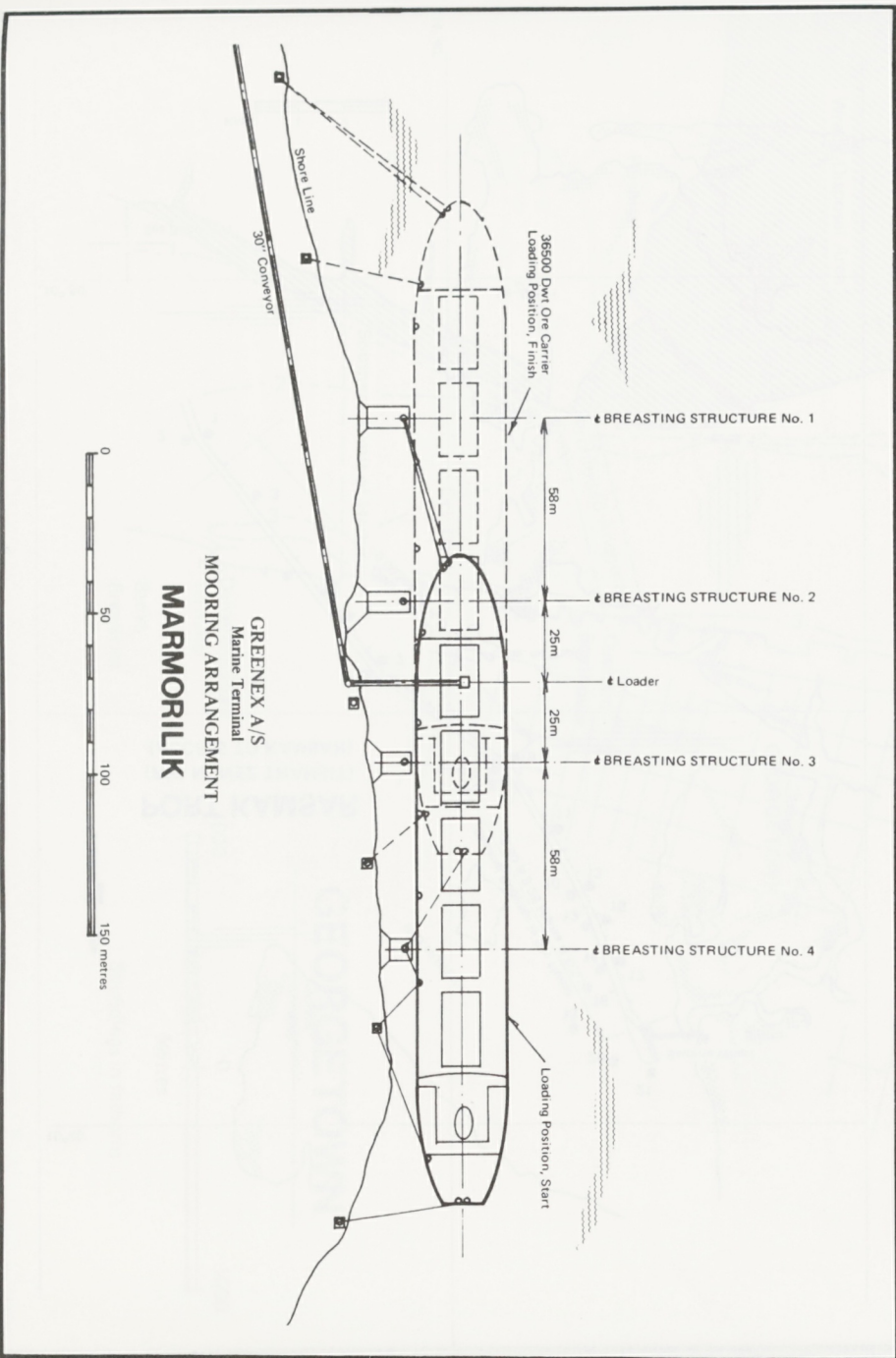
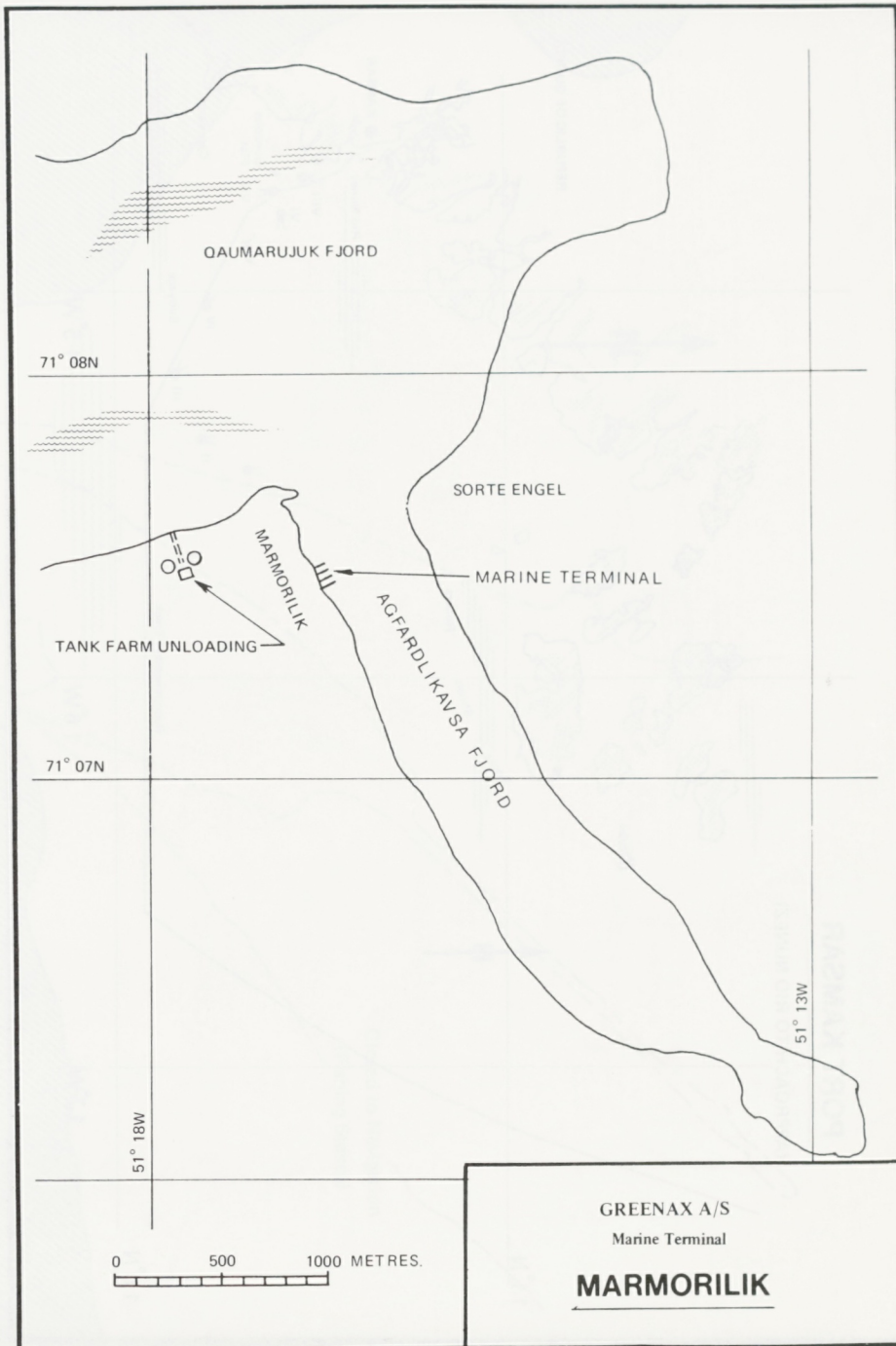


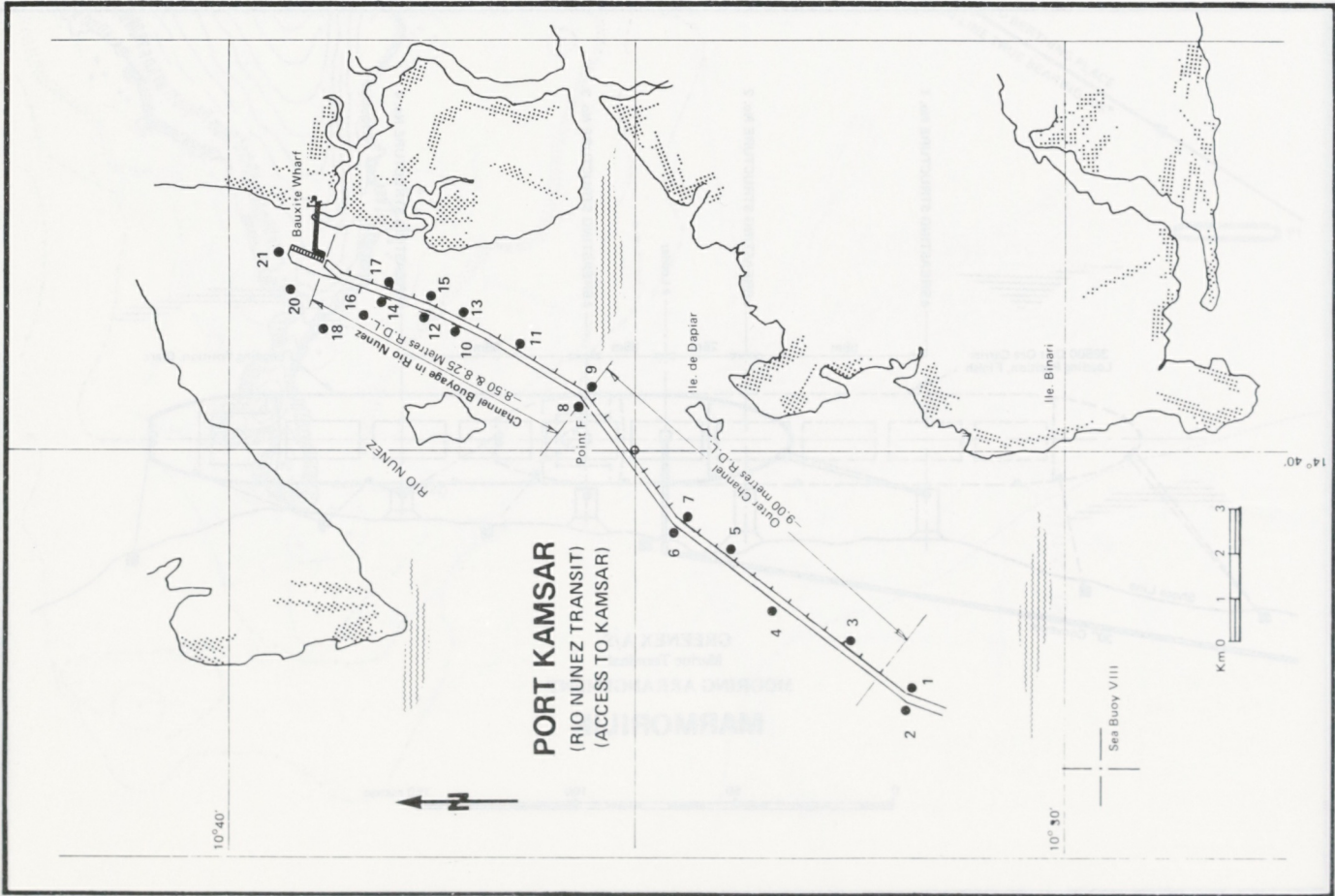
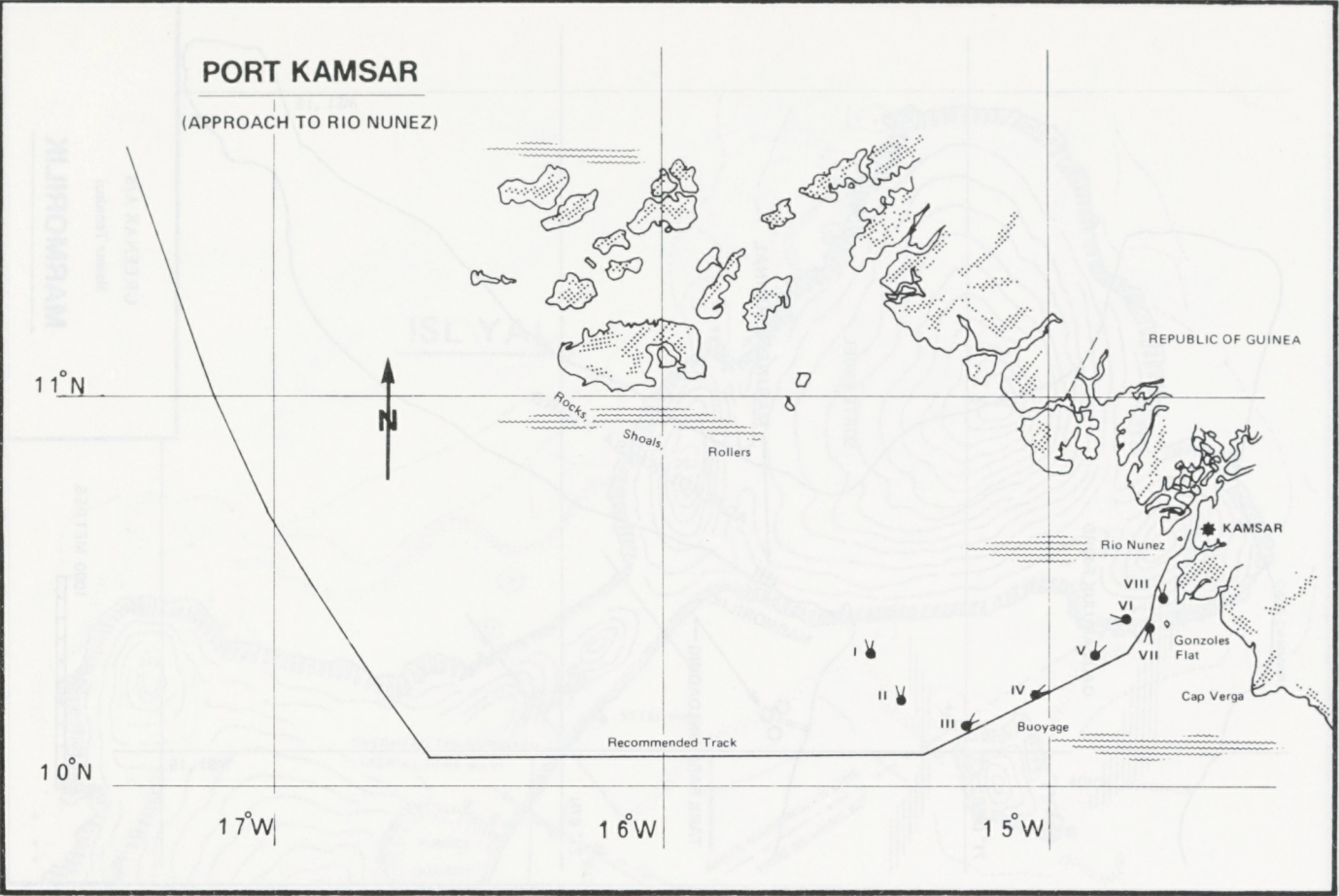
"Plan supplied by Ship's Master"

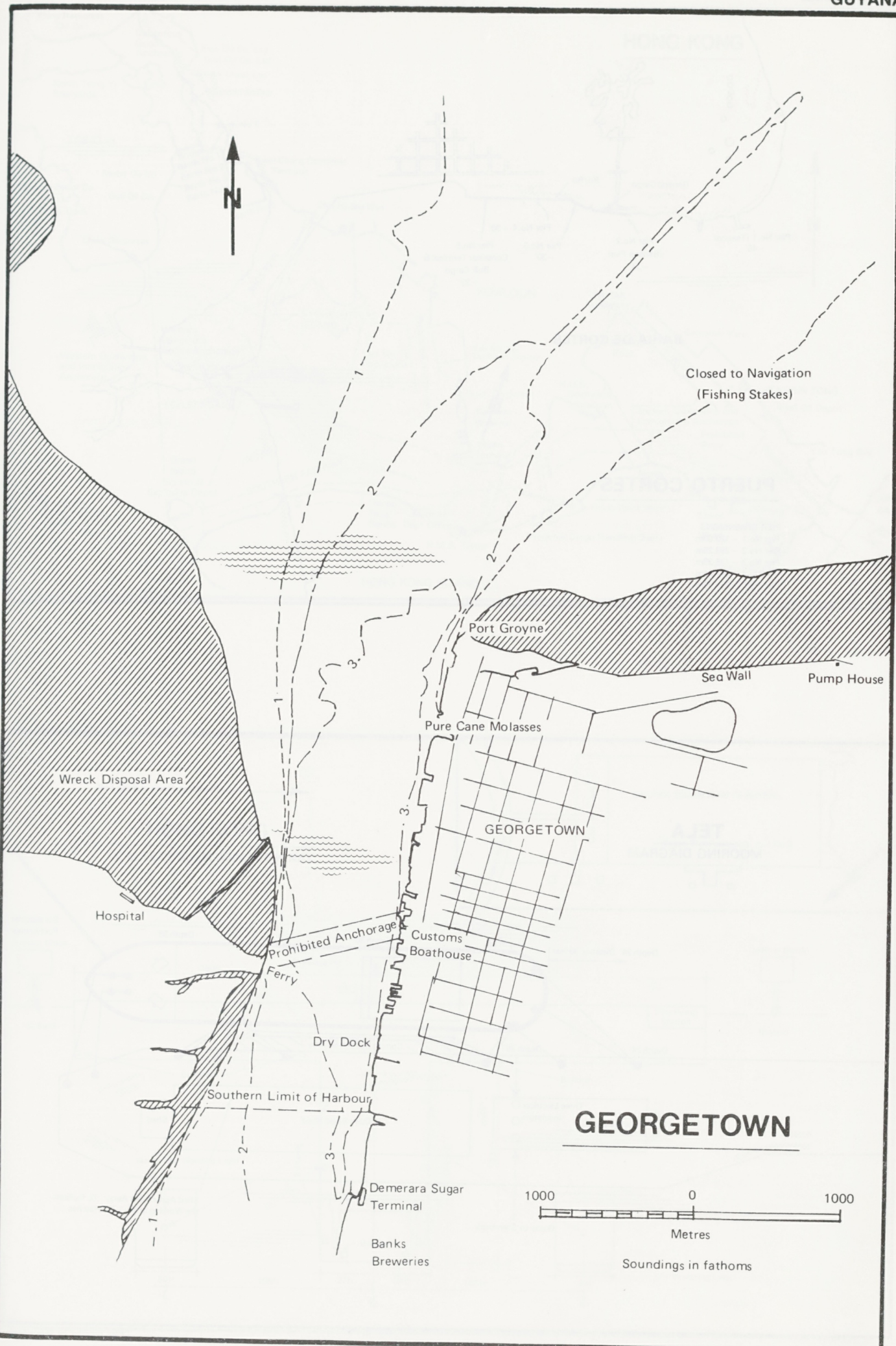




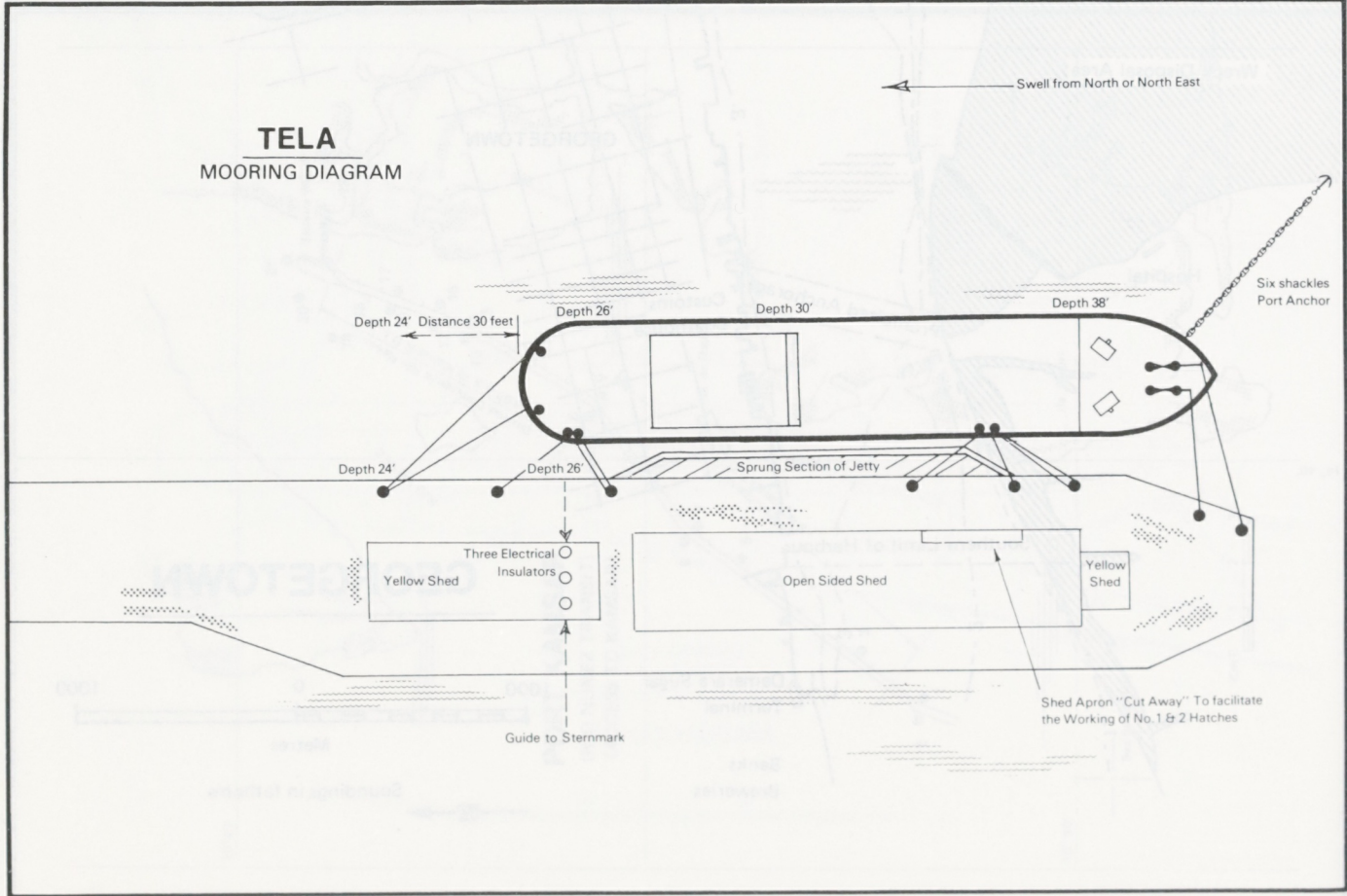
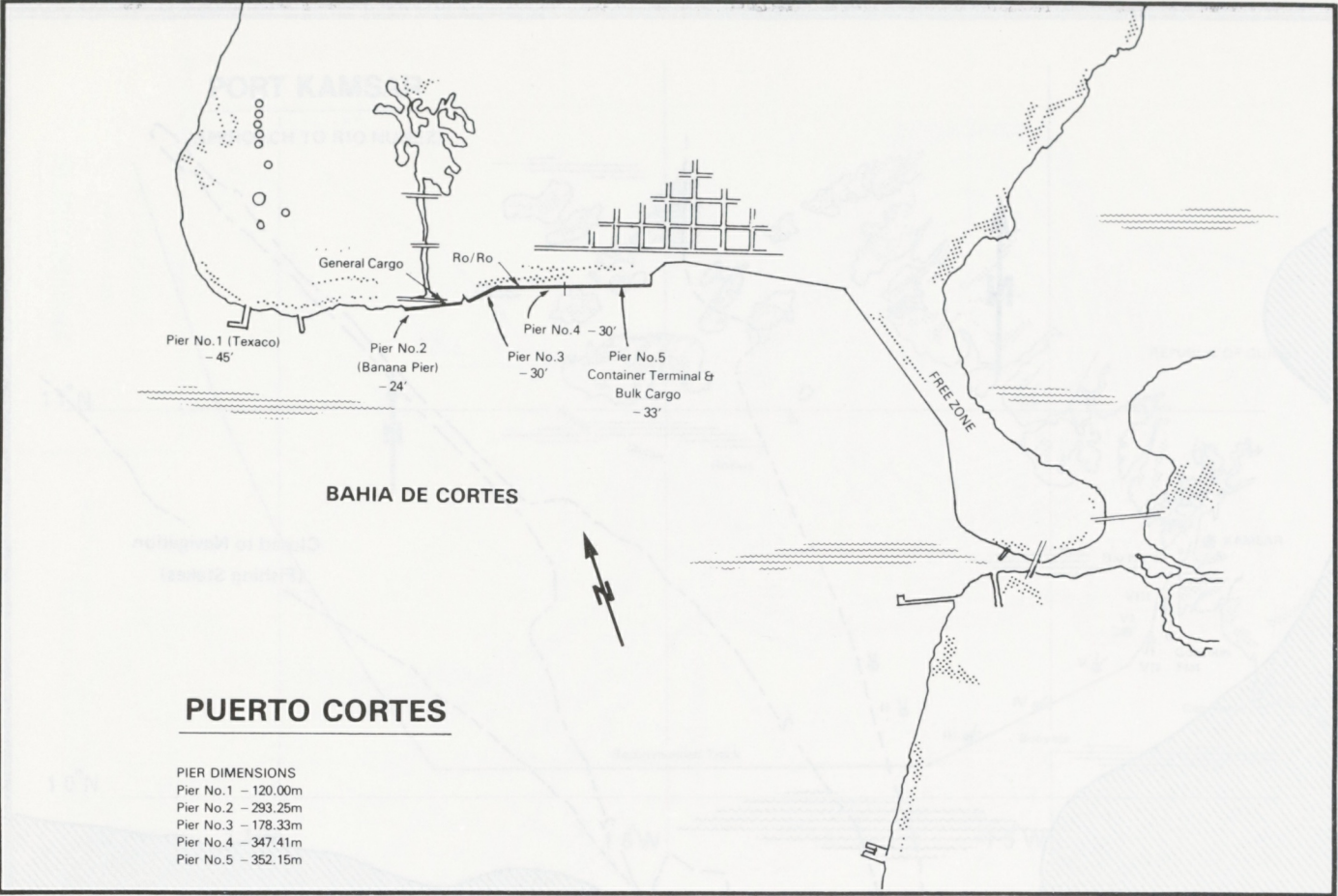


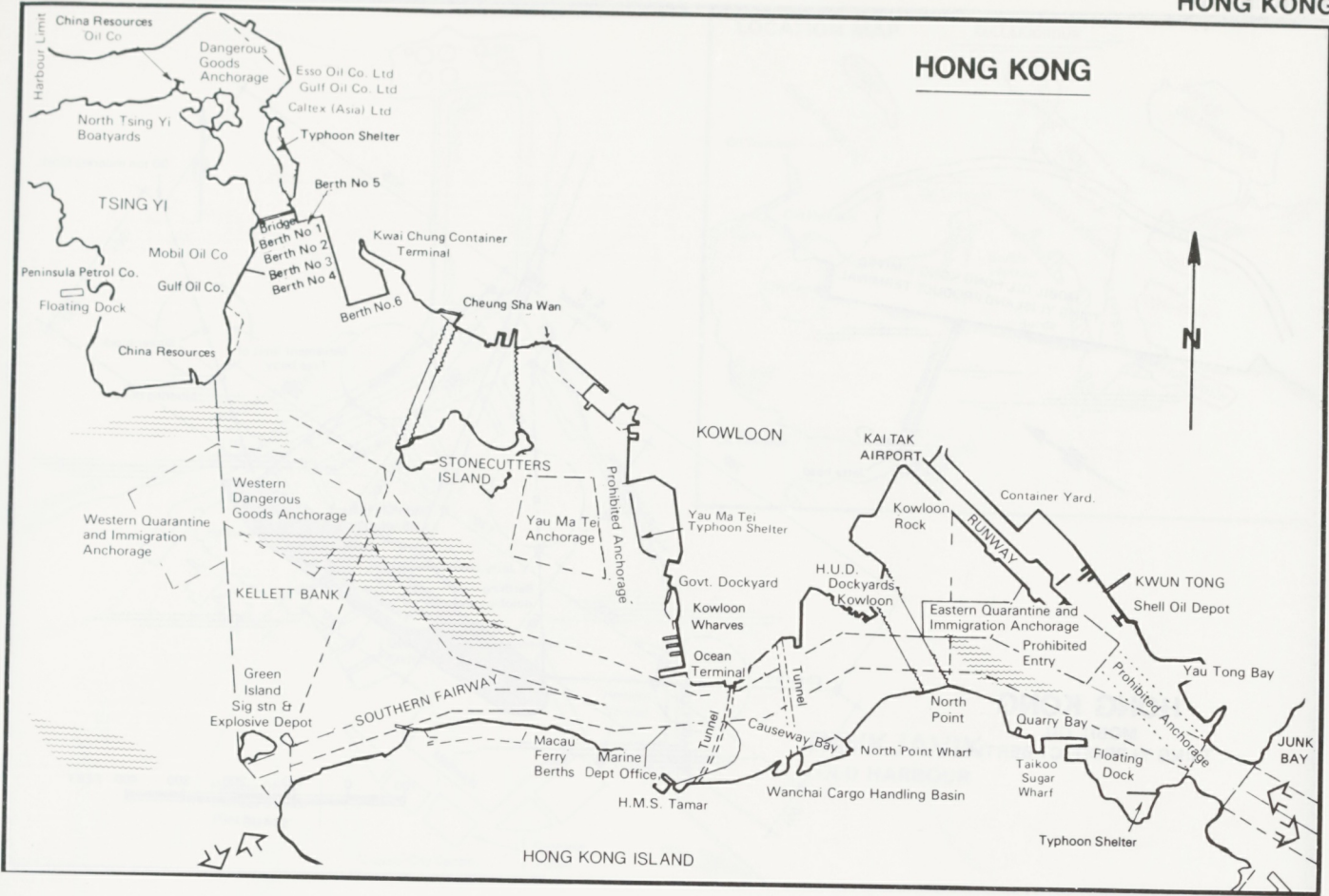




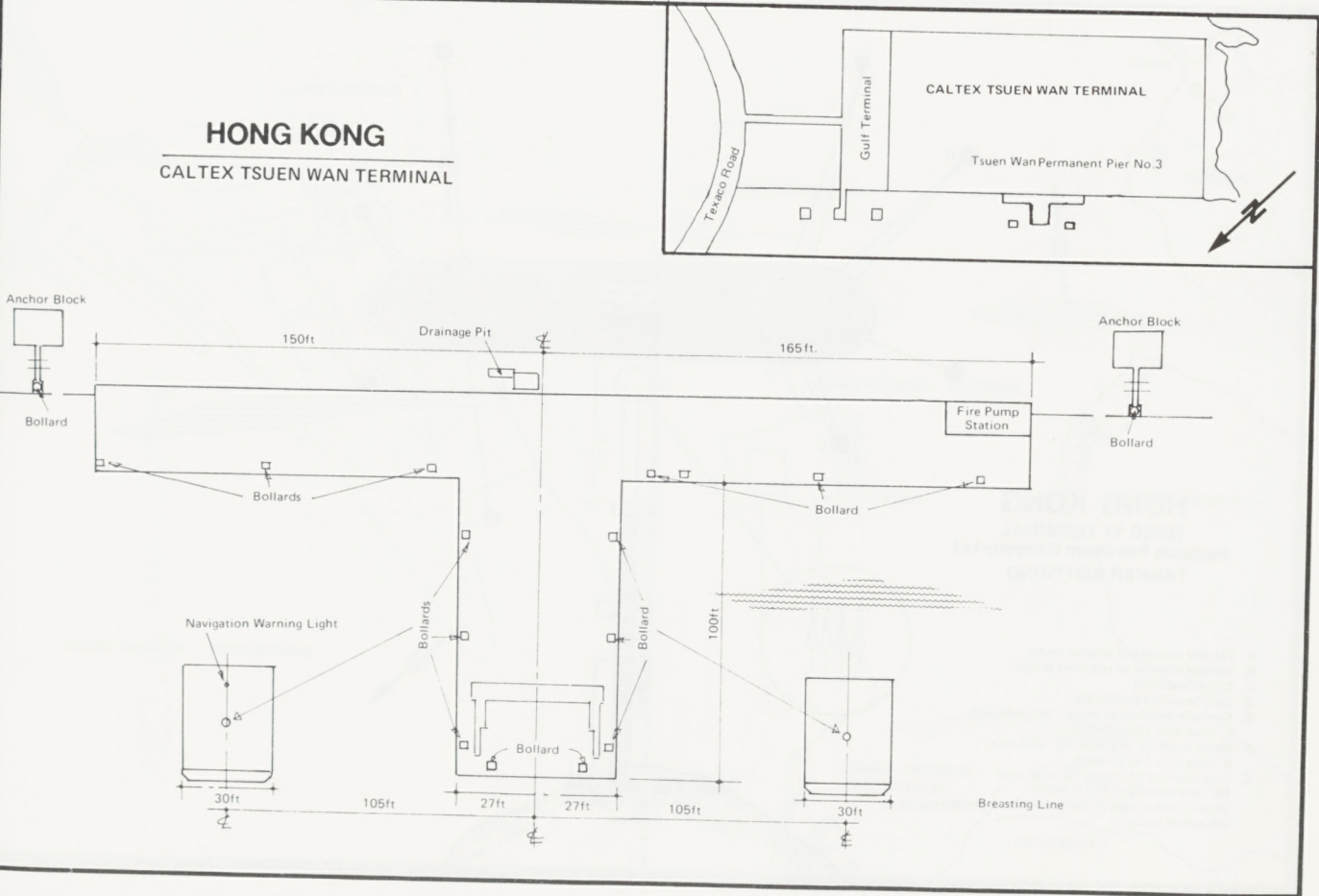


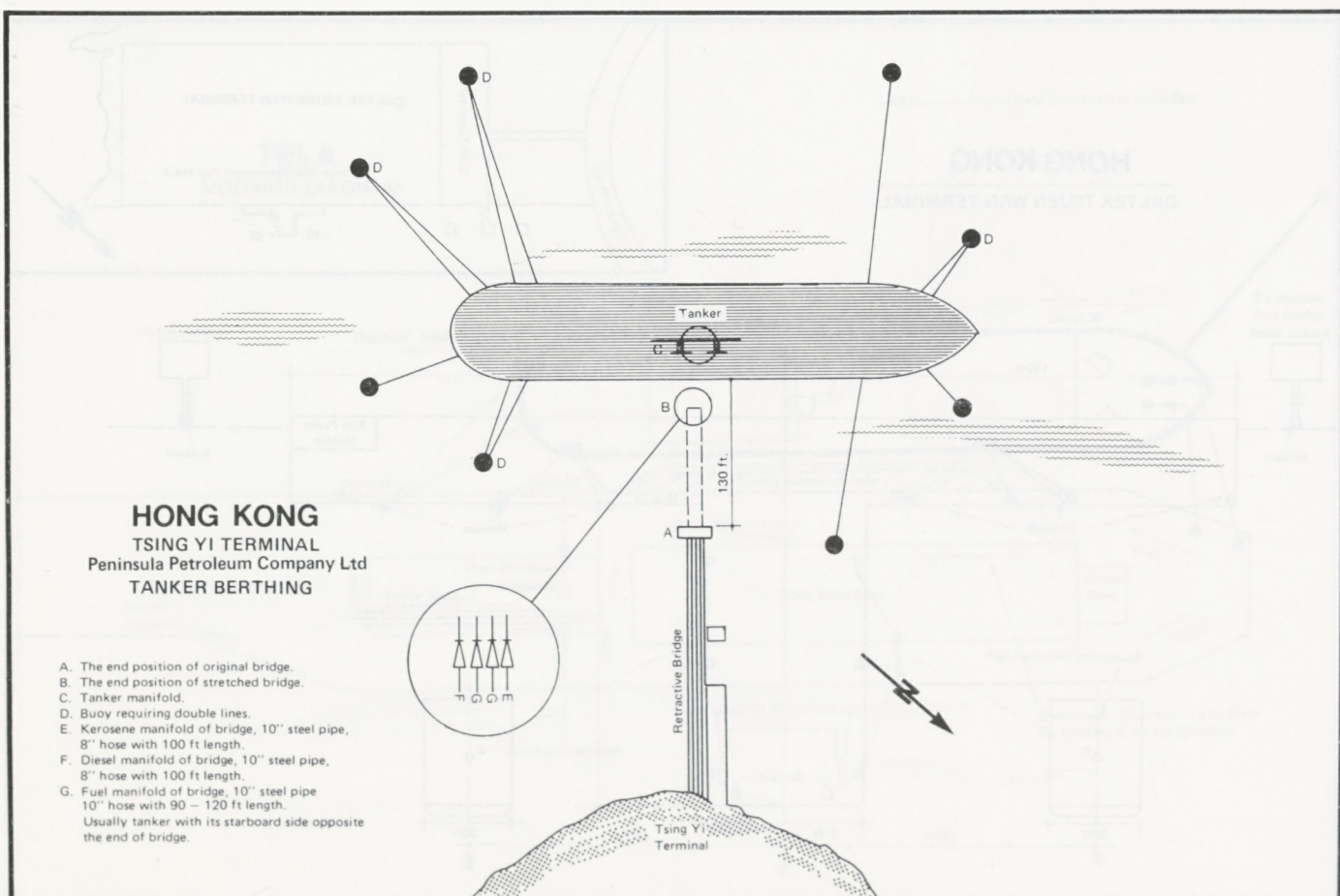
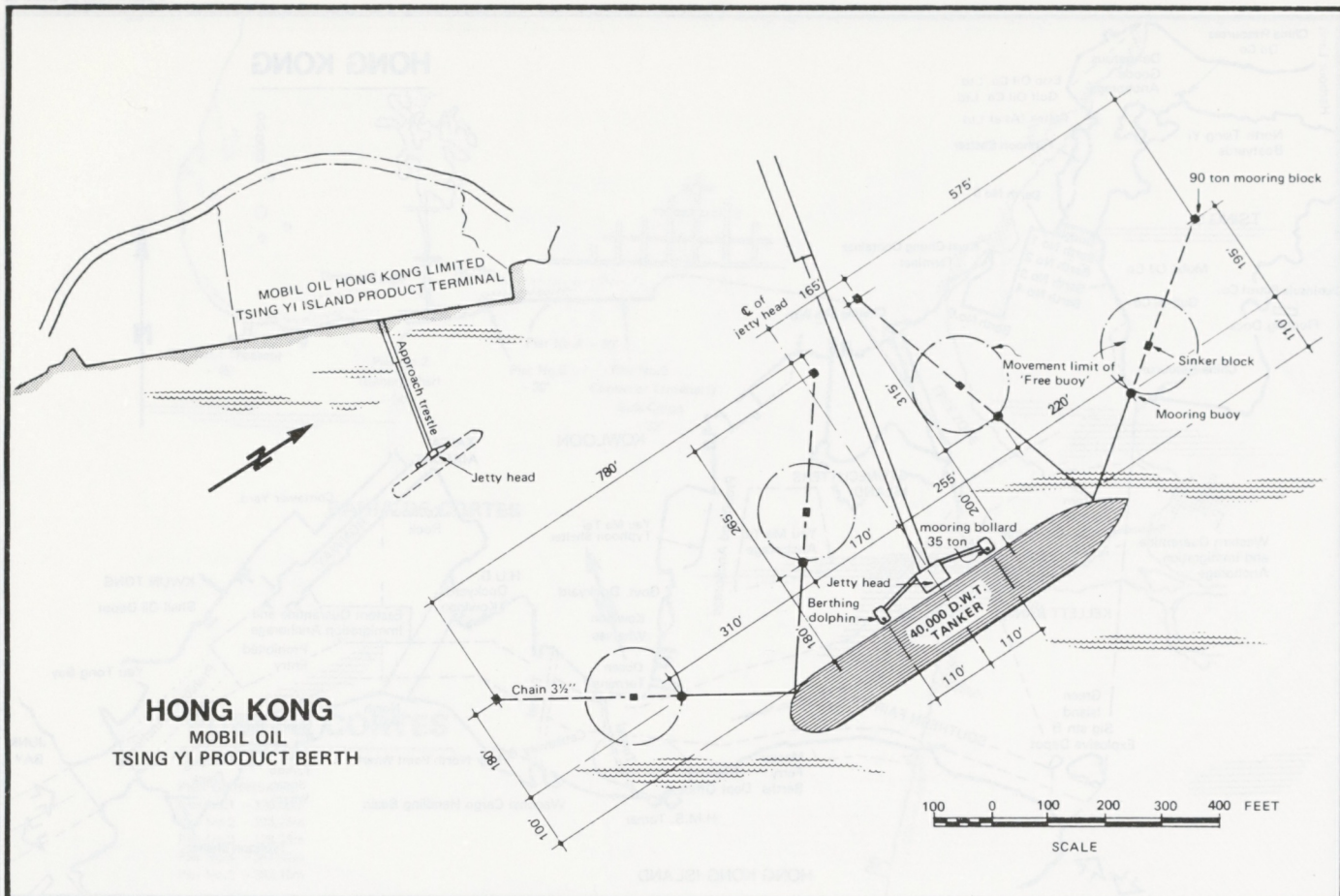
GEORGETOWN

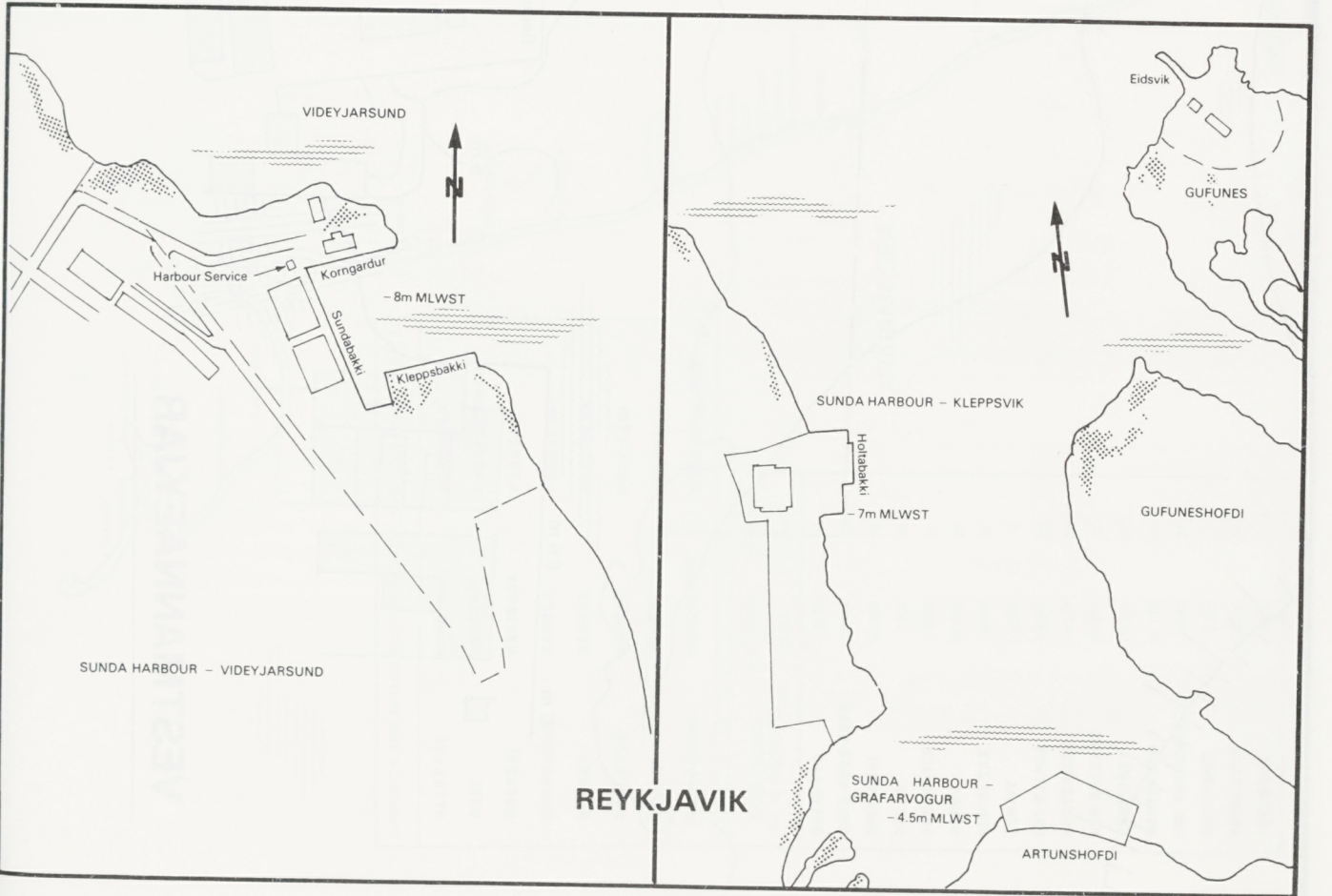
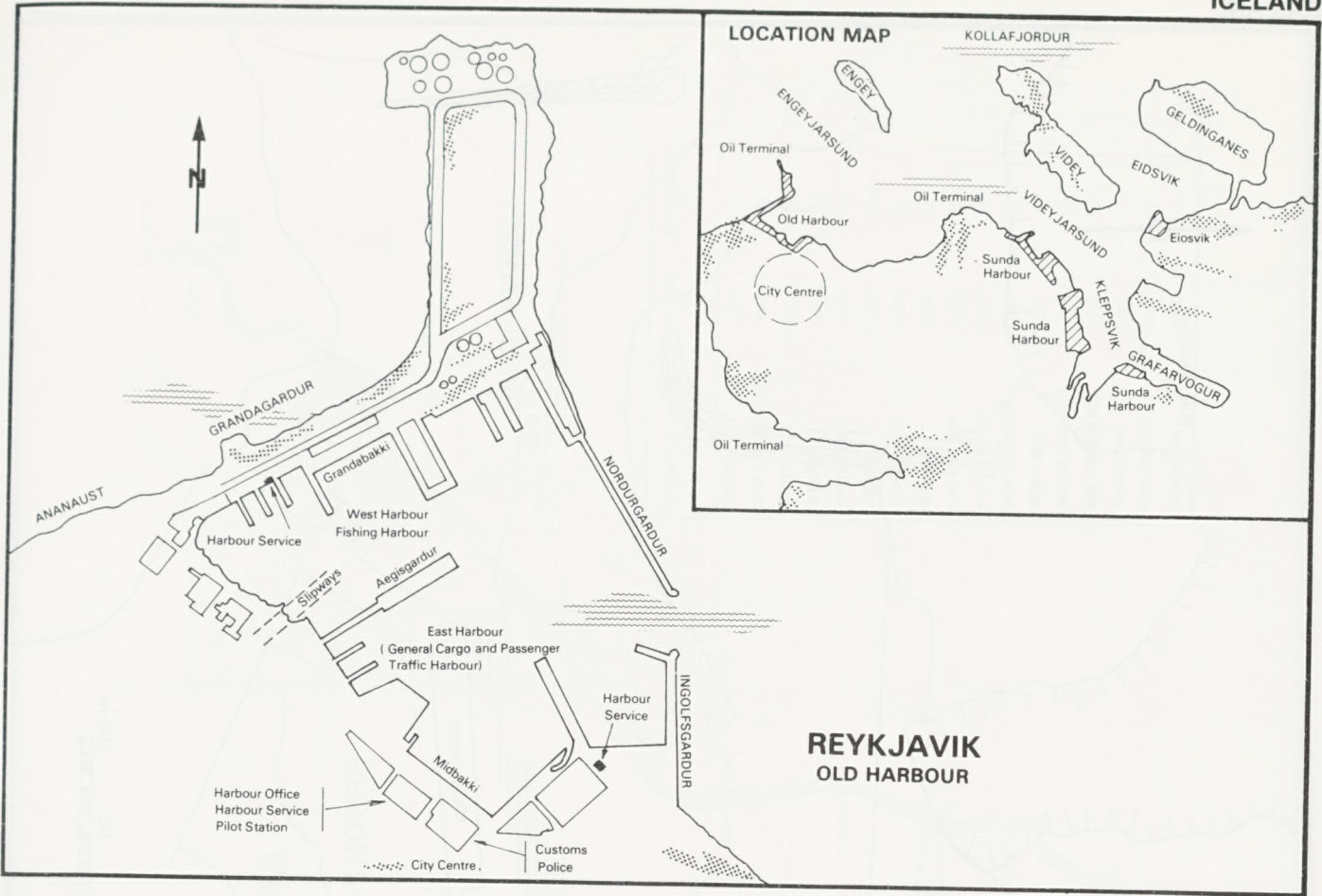


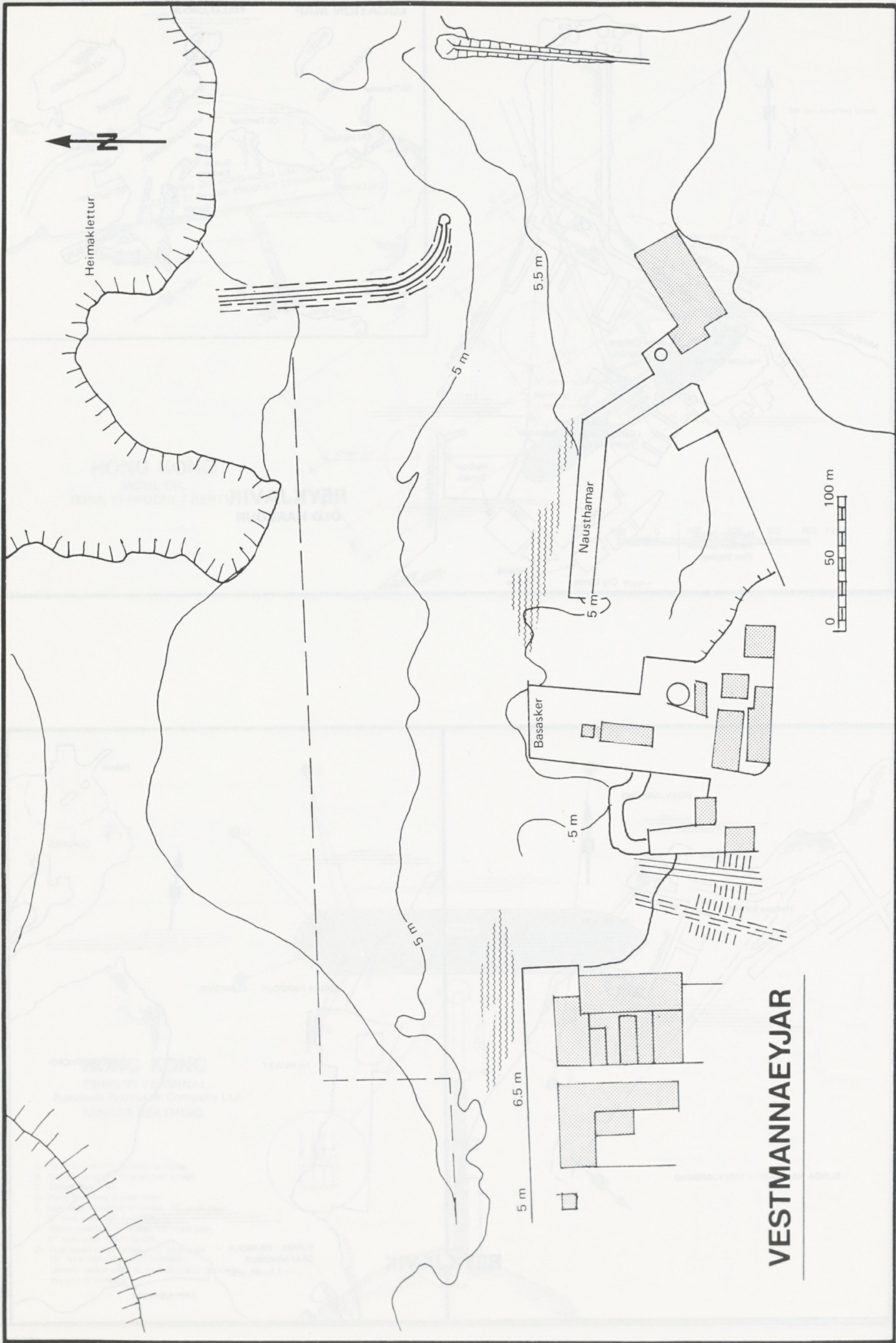


HONG KONG
CALTEX TSUEN WAN TERMINAL









INDIA

G. M. T. + 5.5 HOURS

AIRPORTS ARE WITHIN EASY REACH OF THE FOLLOWING PORTS		
ALLEPPEY	HALDIA	MORMUGAO
BEDI	HONAVAR	NAGAPATTINAM
BELKERI	KAKINADA	PARADIP
BHAVNAGAR	KANDLA	PORBANDAR
BOMBAY	KARWAR	PORT OKHA
CALCUTTA	MADRAS	PORT REDI
COCHIN	MANDVI	VERAVAL
COONDAPORE	MANGALORE	VISAKHAPATNAM

FROM BOMBAY AT 15 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
CALCUTTA	2112	6
CAPE GOOD HOPE	4554	12½
CRISTOBAL	10,993	30½
DAKAR	8182	23
FREMANTLE	3982	11
GENOA	10,516	29
GIBRALTAR	9669	27
KUWAIT	1532	4
LAS PALMAS	9004	25
MONTEVIDEO	8148	23
NEW ORLEANS	11,851	33
NEW YORK	11,364	31½
ROTTERDAM	10,746	30
SAN FRANCISCO	9785	27
SINGAPORE	2435	7
VANCOUVER	9429	26
YOKOHAMA	5323	15

FROM CALCUTTA AT 15 KNOTS TO	DISTANCE IN MILES	DURATION IN DAYS
BOMBAY	2112	6
CAPE GOOD HOPE	5444	15
CRISTOBAL	11,893	33
DAKAR	9072	25
FREMANTLE	3684	10
GENOA	11,406	31½
GIBRALTAR	10,559	29
KUWAIT	3522	10
LAS PALMAS	9894	27½
MONTEVIDEO	9038	25
NEW ORLEANS	12,741	35
NEW YORK	12,254	34
ROTTERDAM	11,636	32
SAN FRANCISCO	9000	25
SINGAPORE	1650	4½
VANCOUVER	8644	24
YOKOHAMA	4538	12½

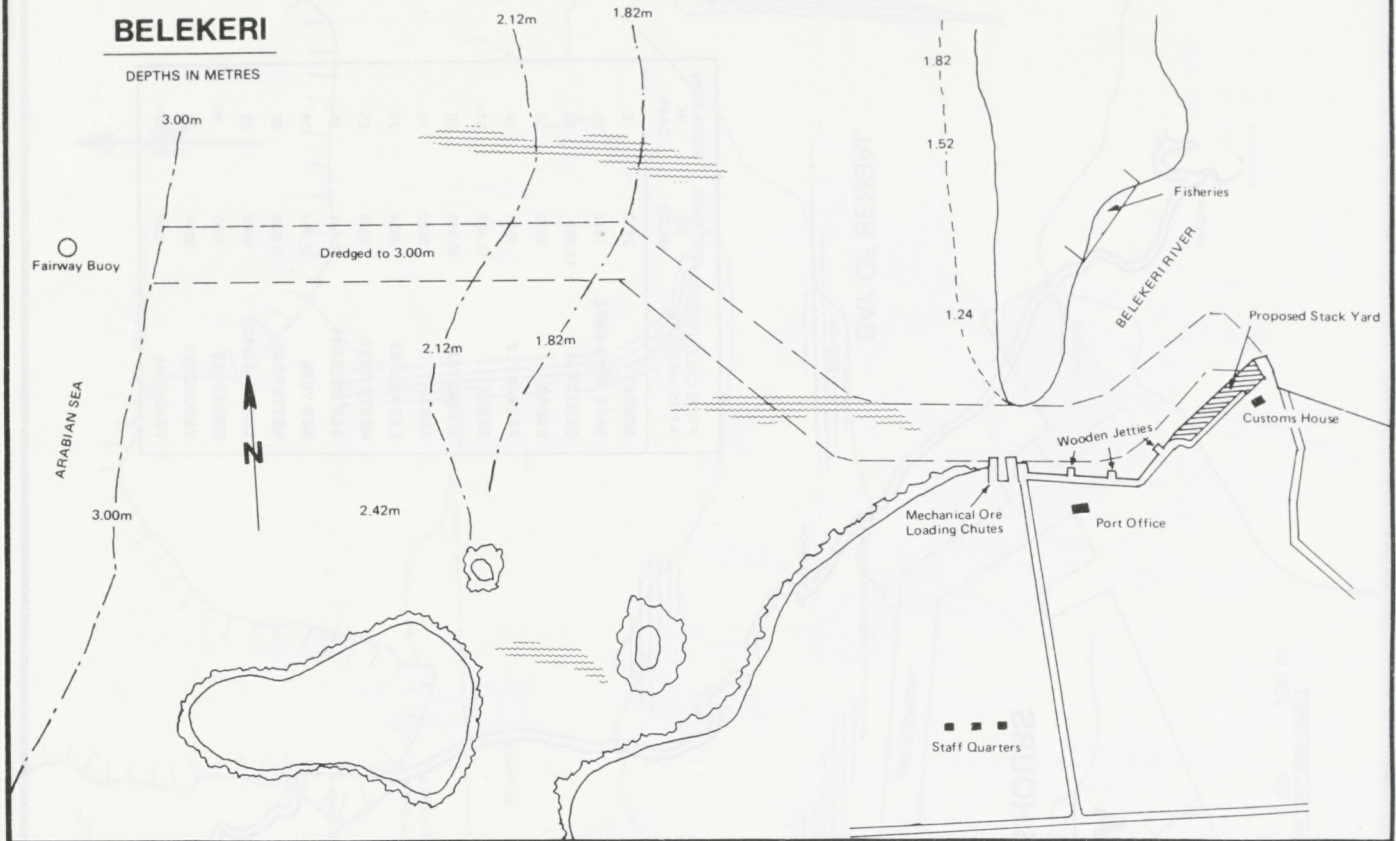
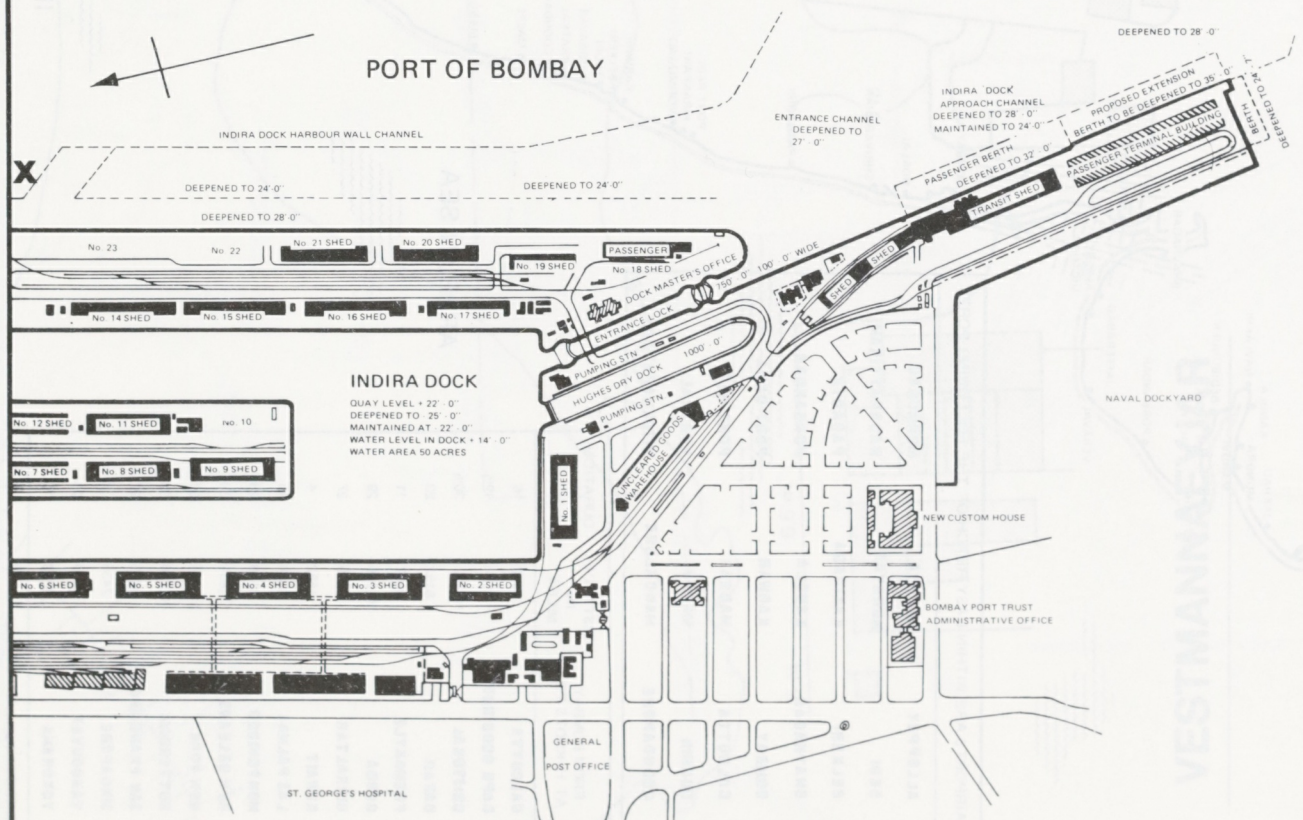
ARABIAN SEA

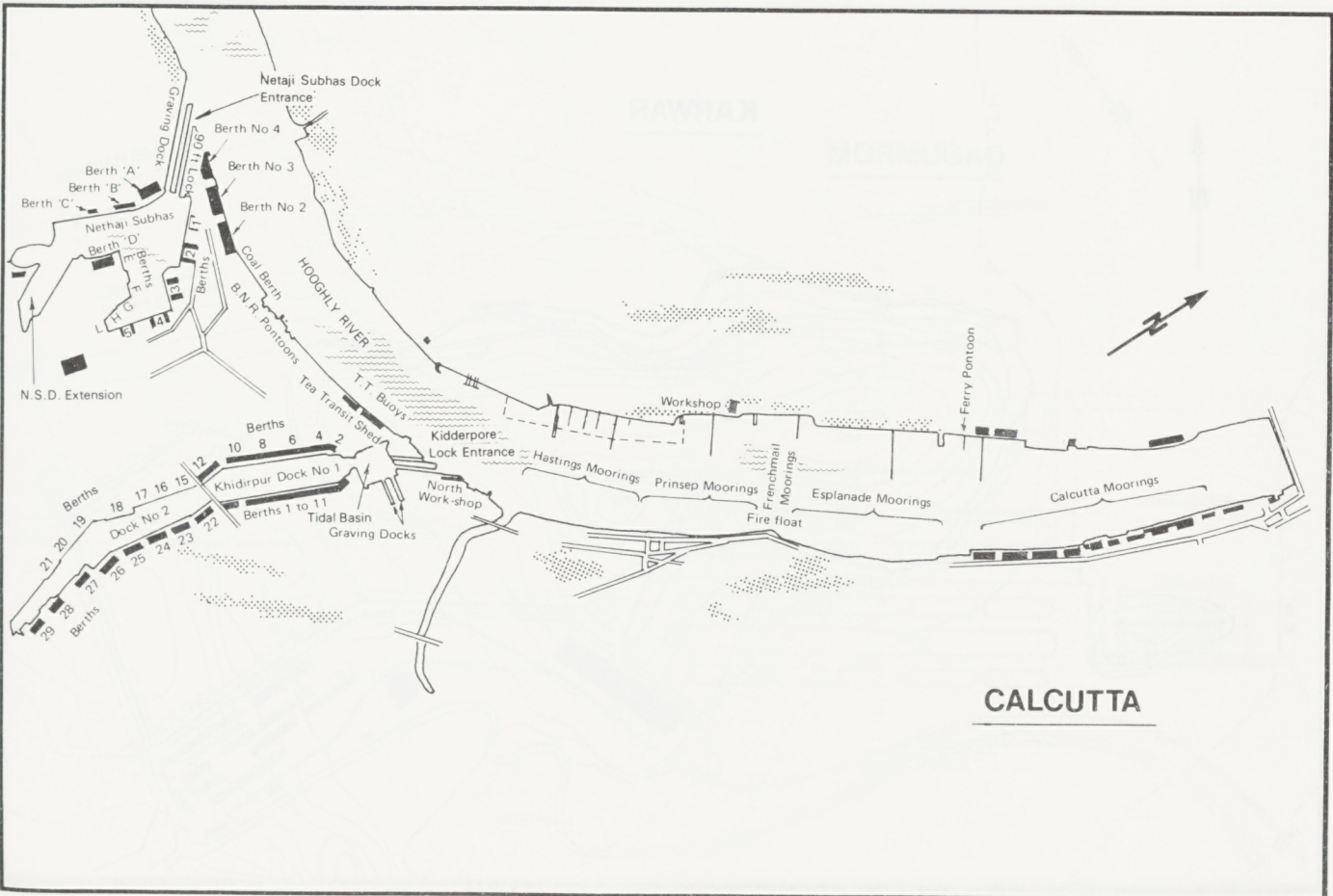
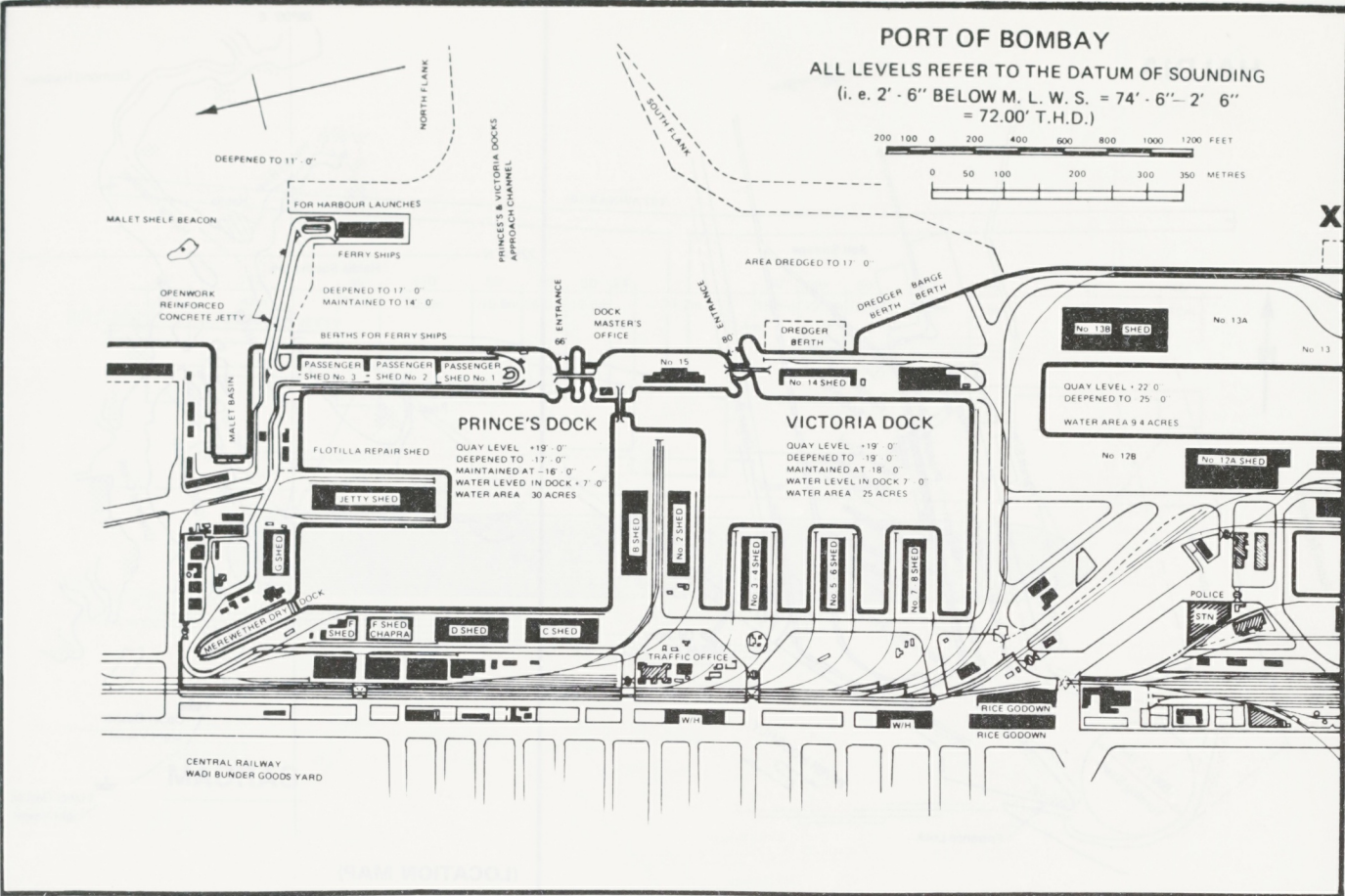
BAY OF BENGAL

INDIAN OCEAN

BELEKERI

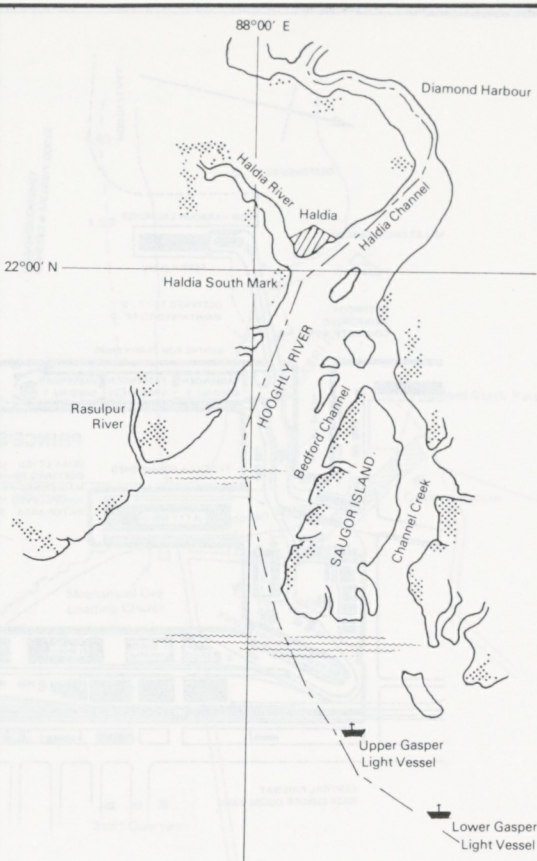
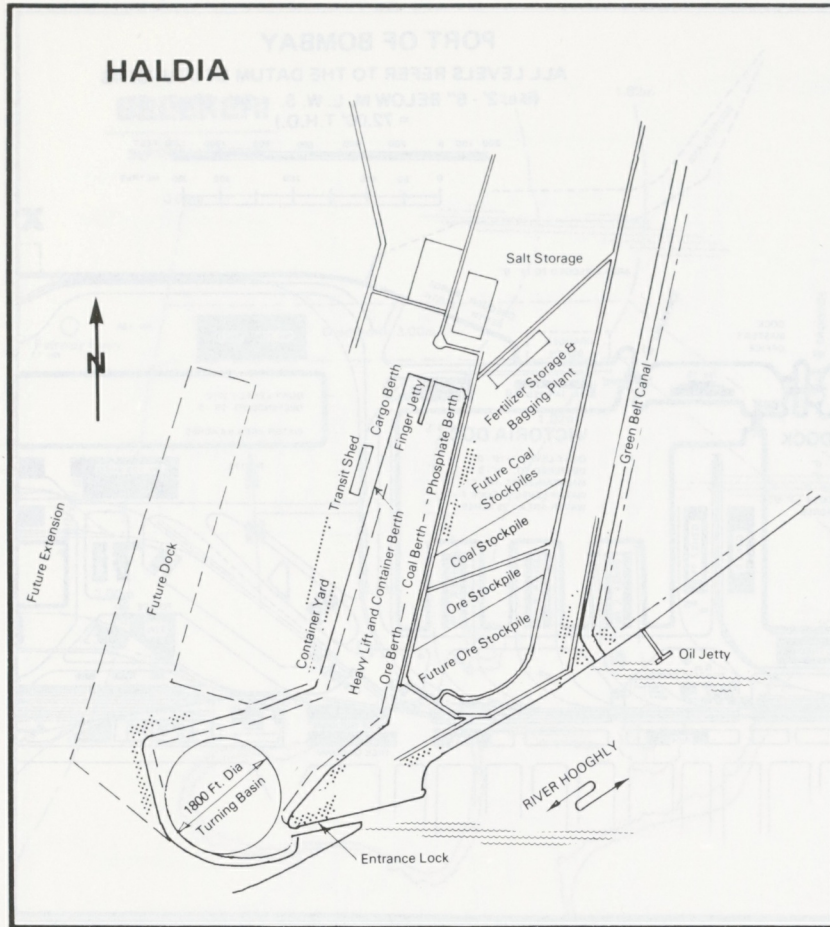
DEPTHS IN METRES

**PORT OF BOMBAY**



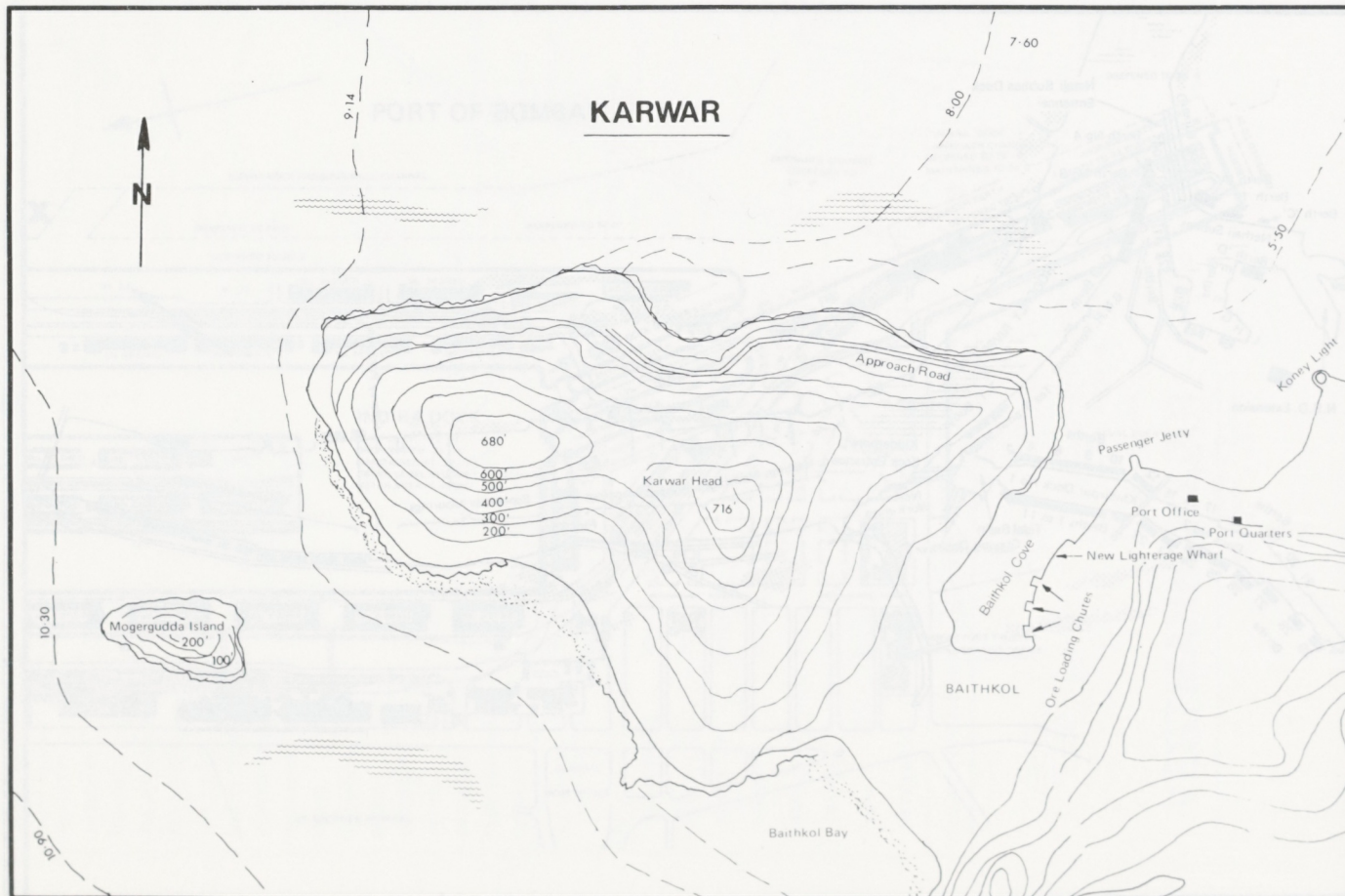
CALCUTTA

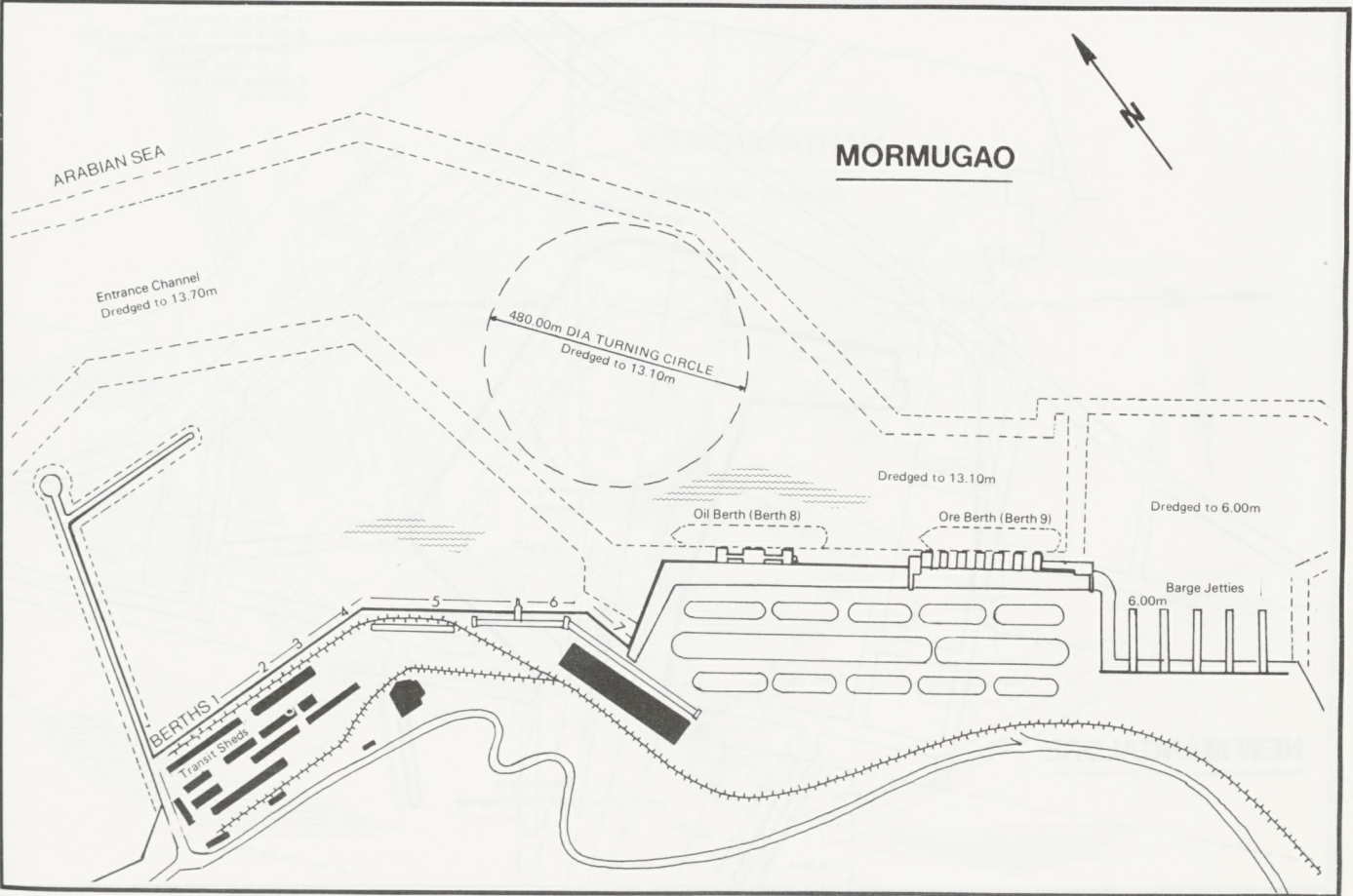
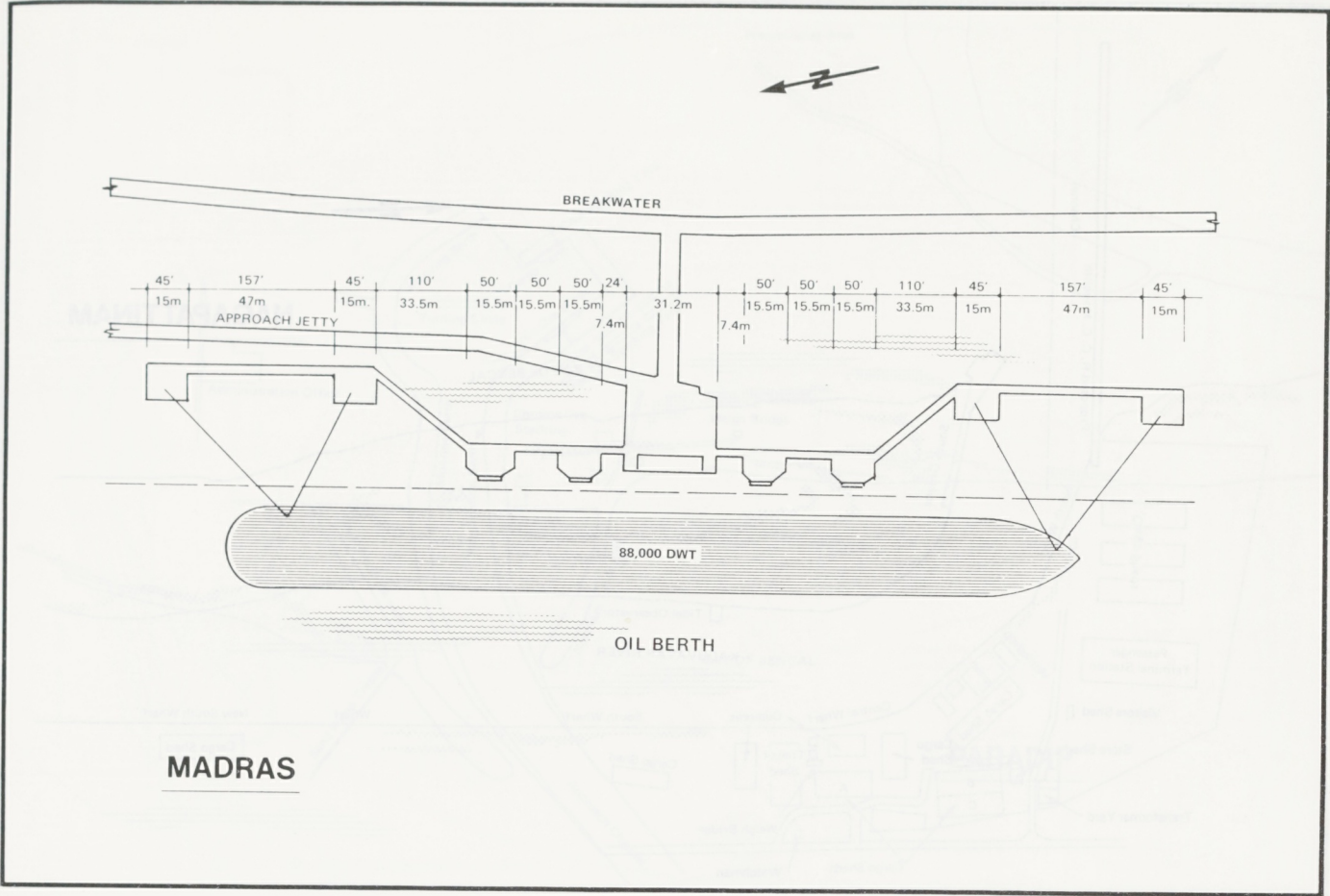
HALDIA

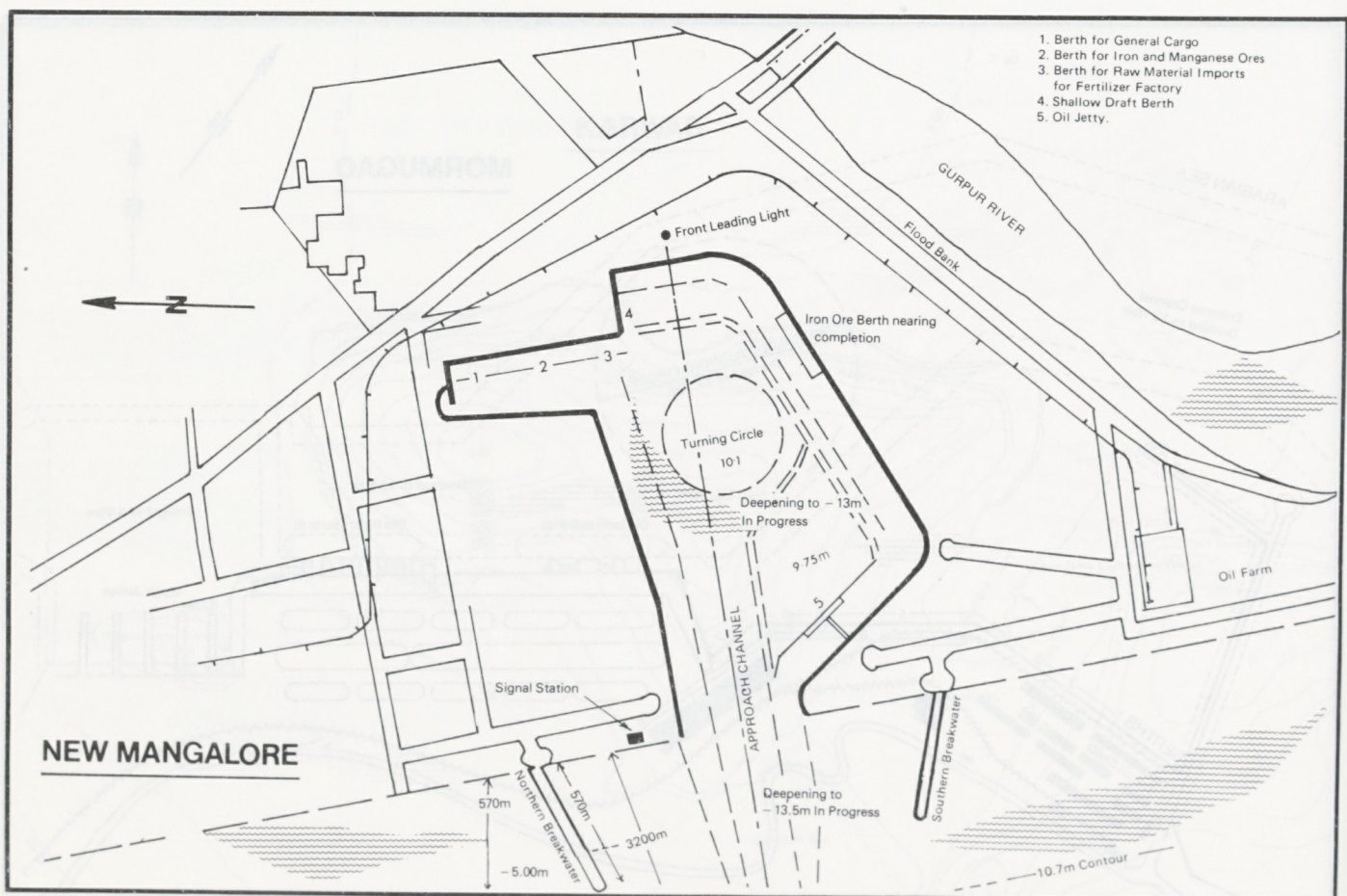
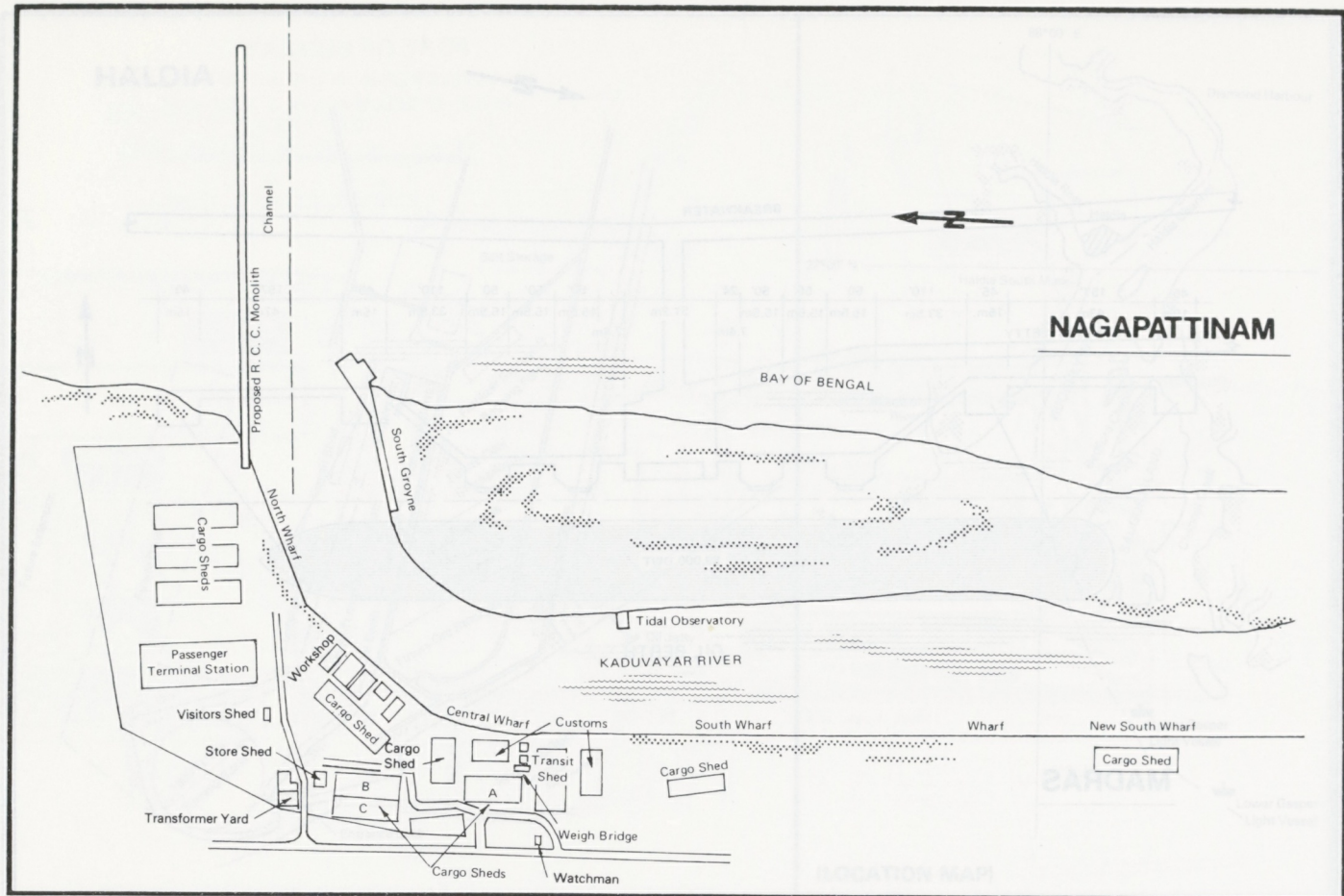


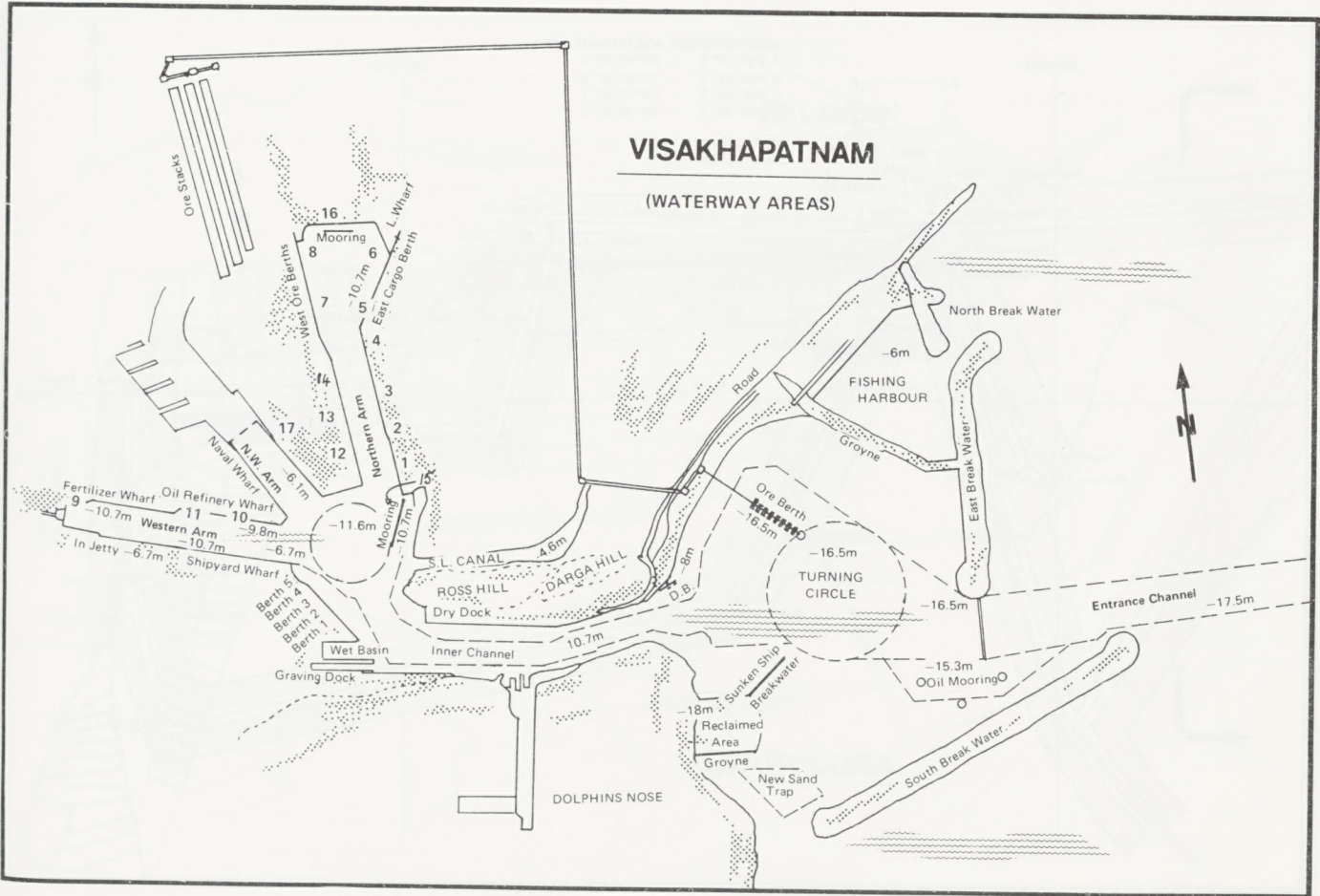
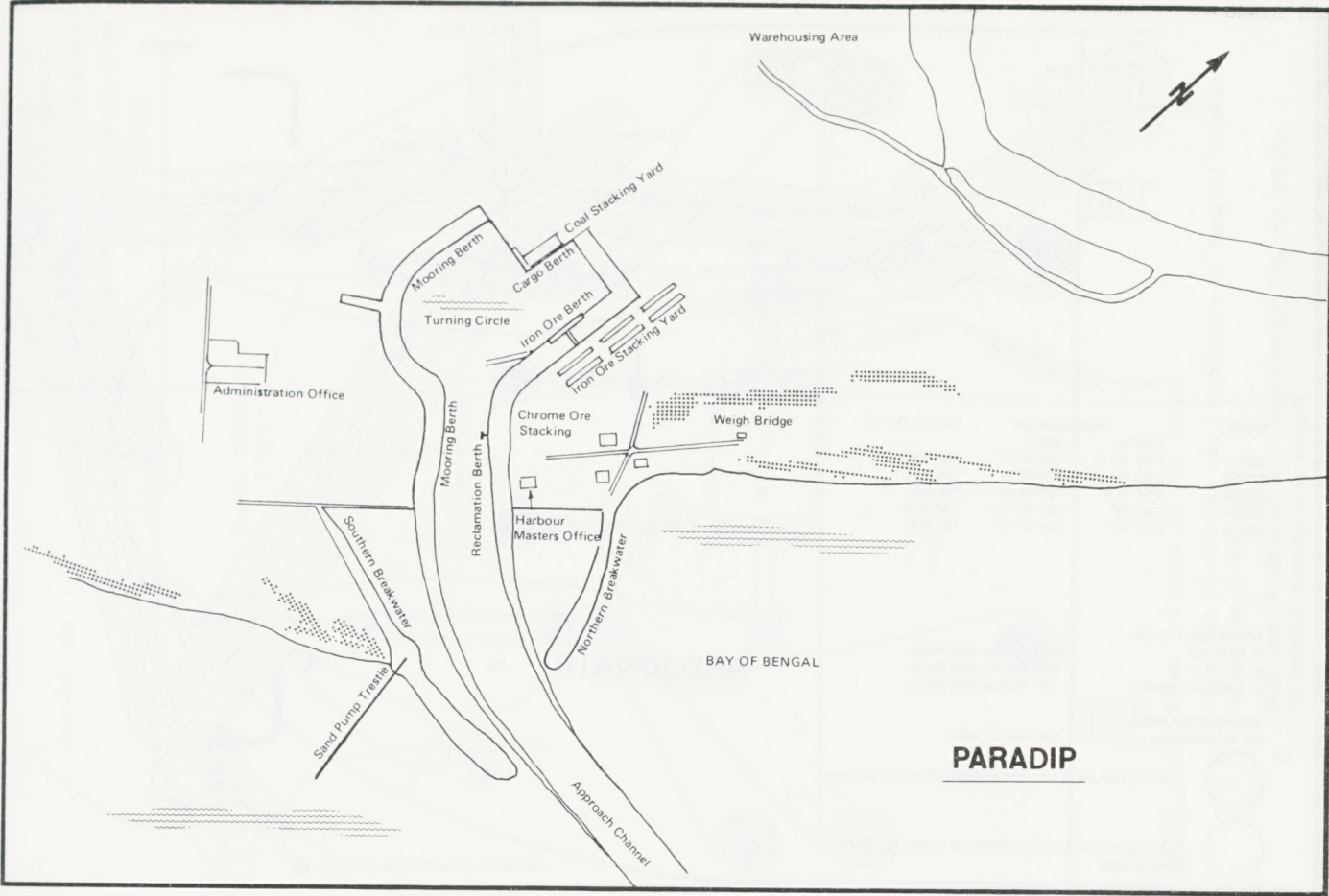
(LOCATION MAP)

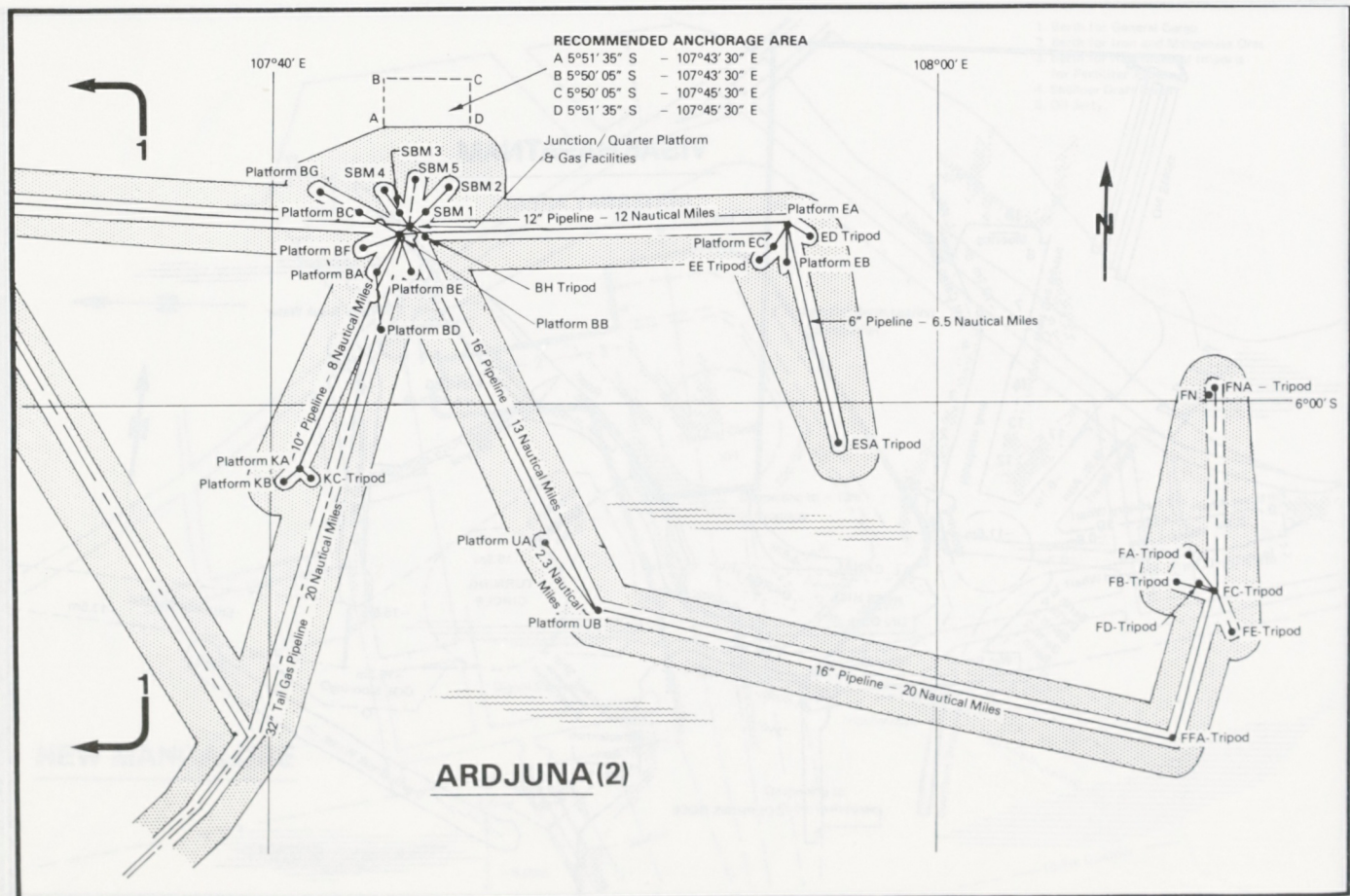
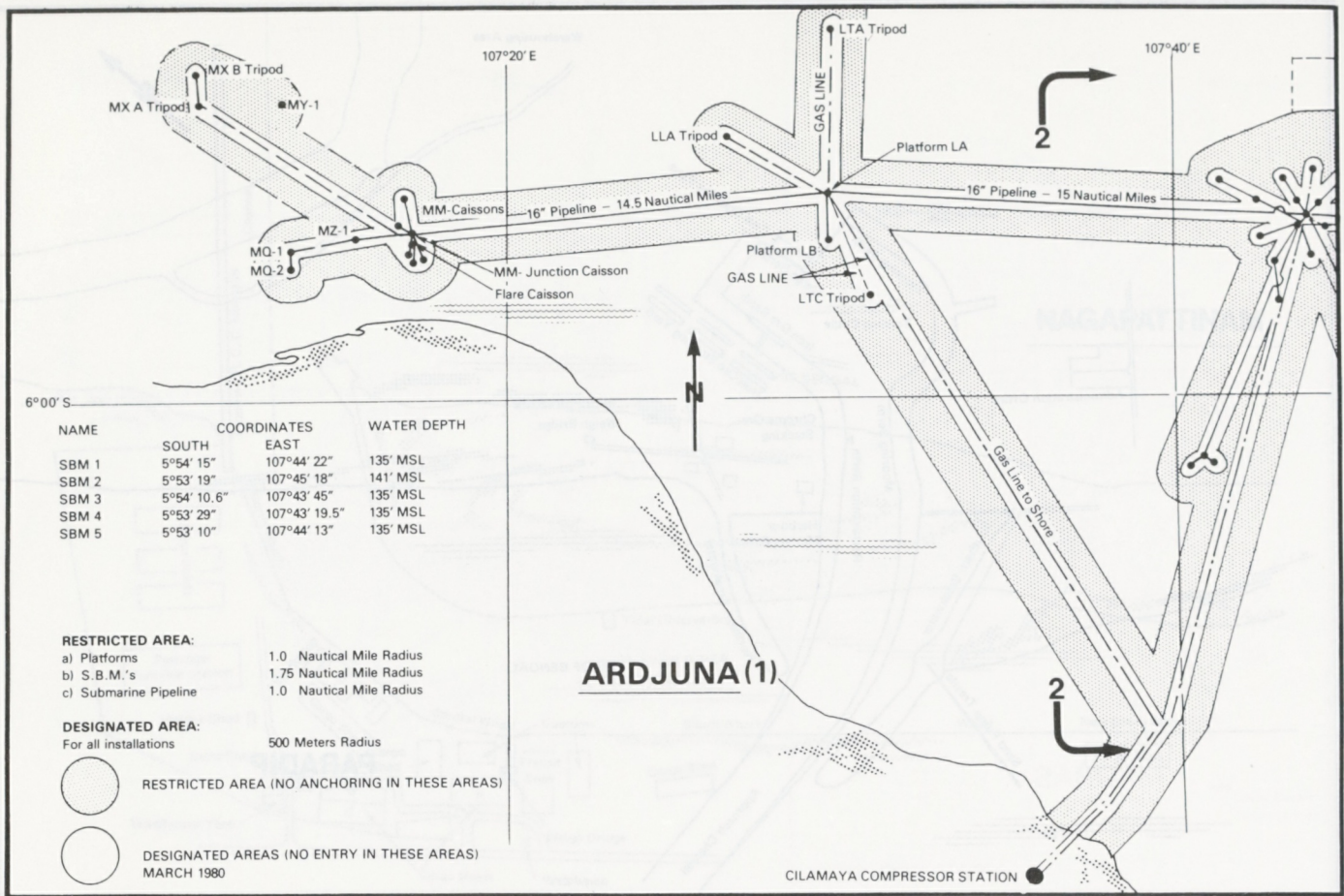
KARWAR

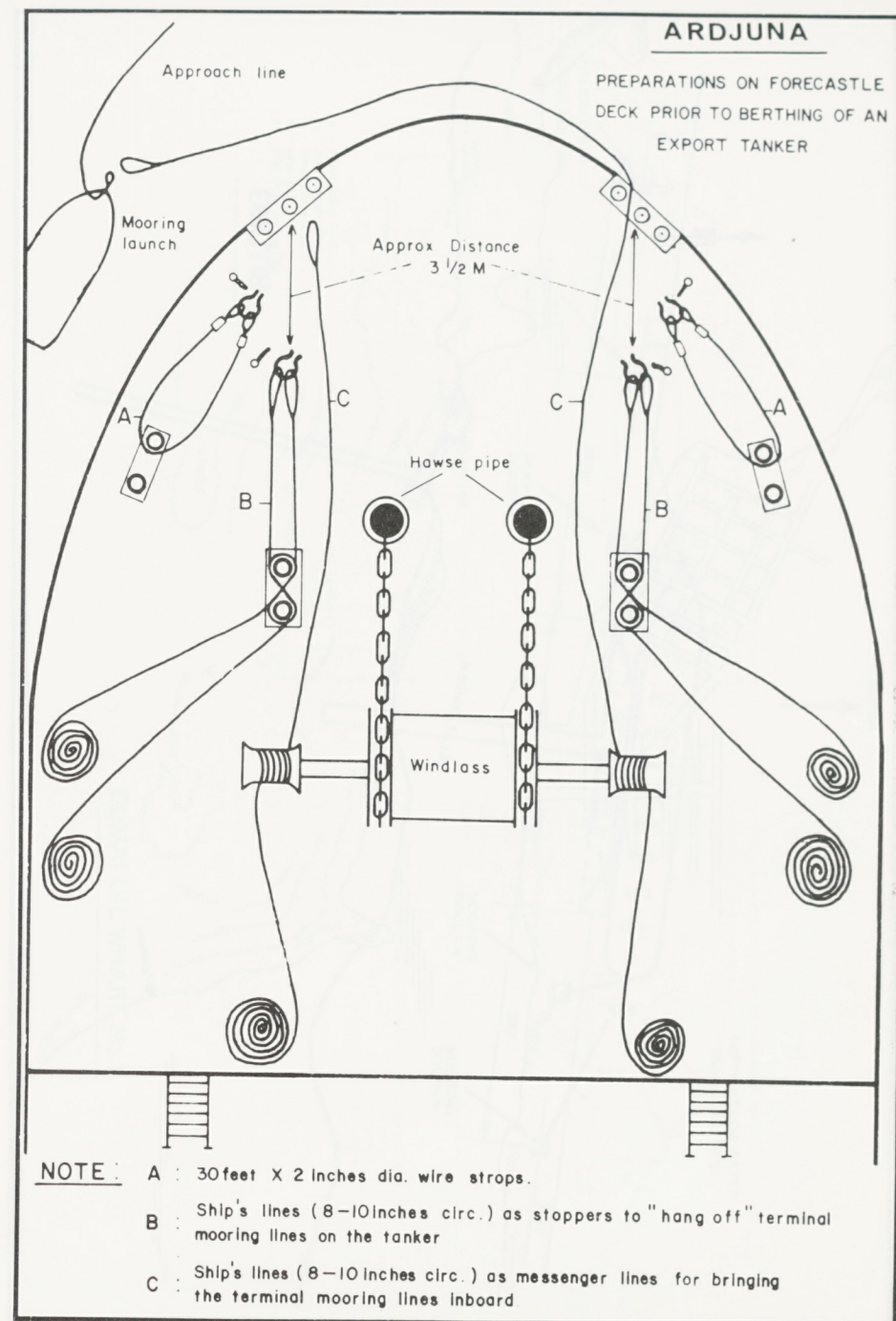
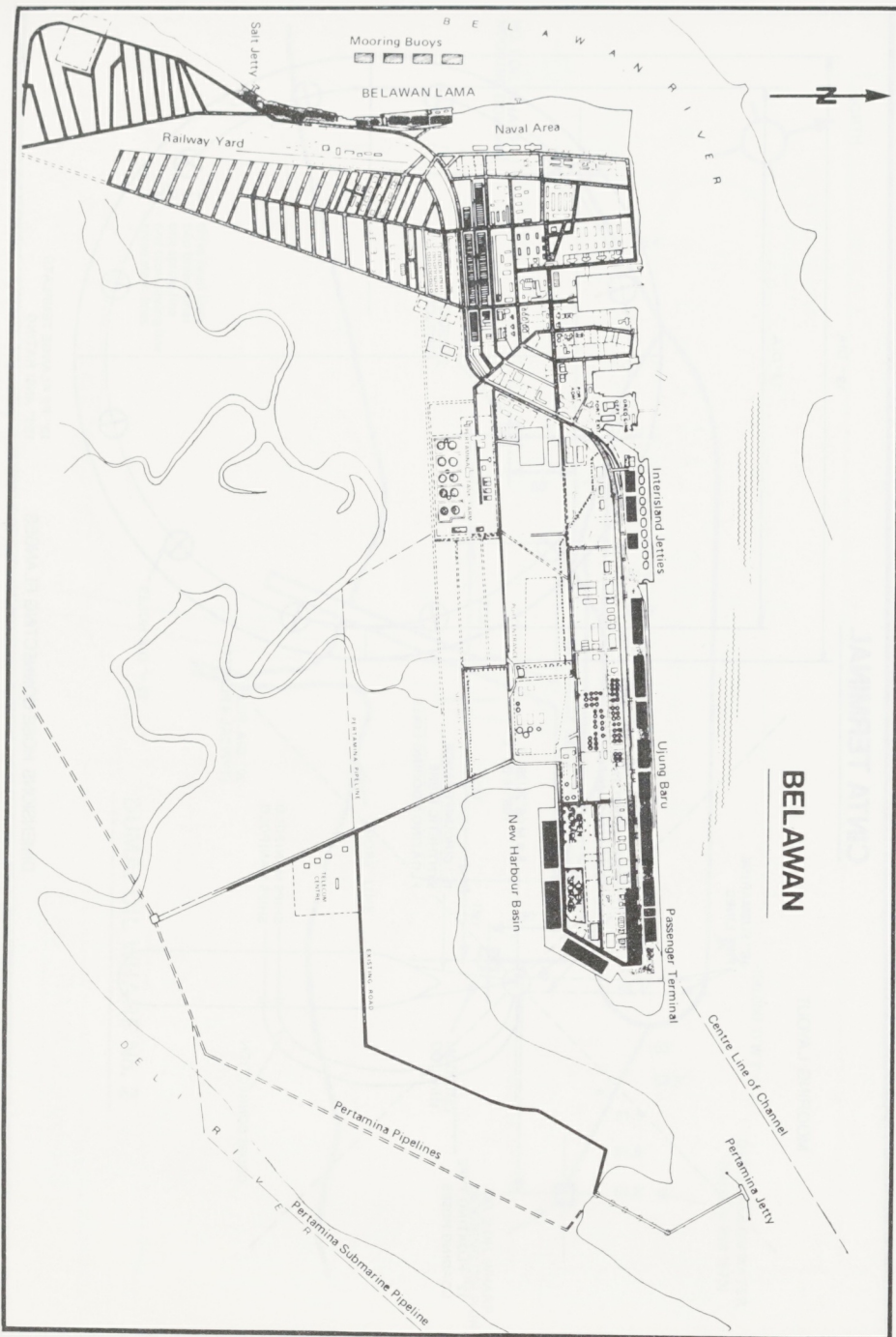


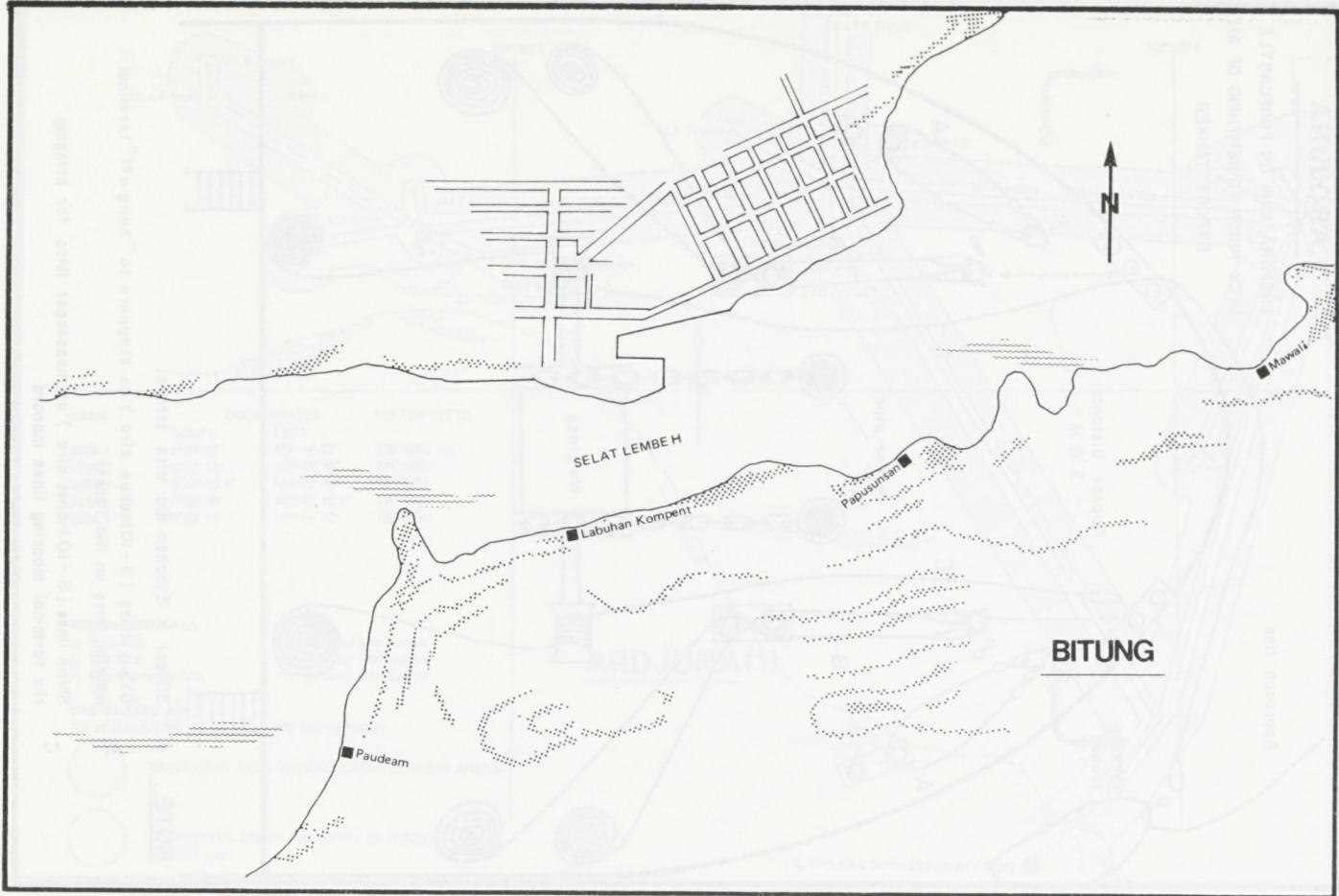






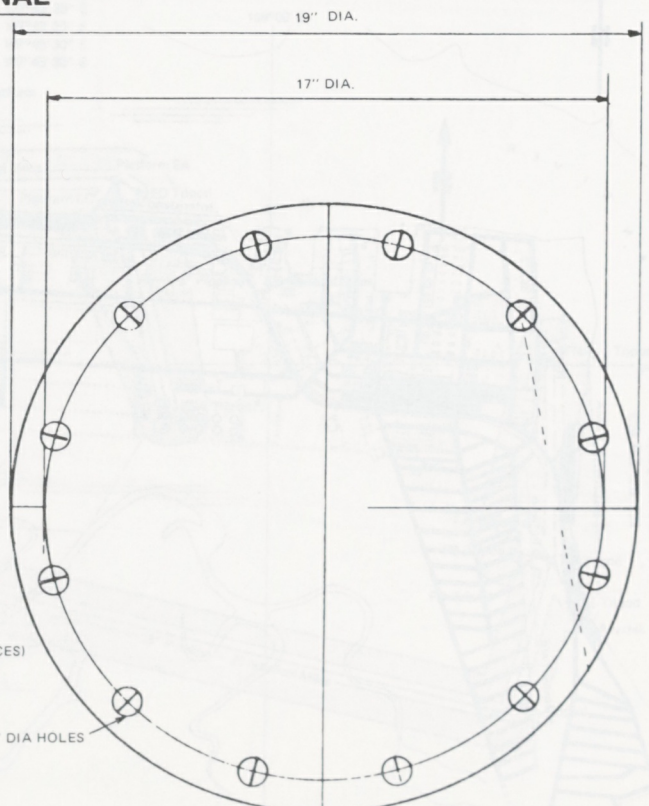
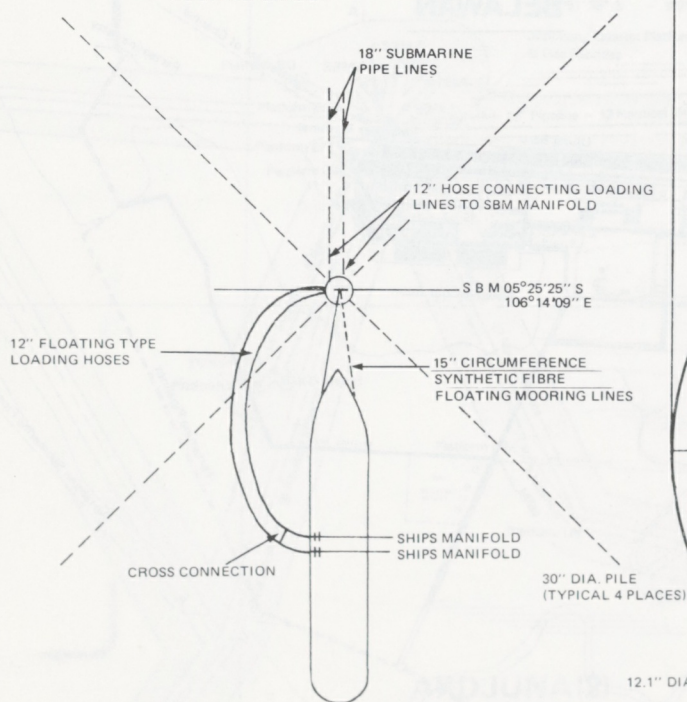






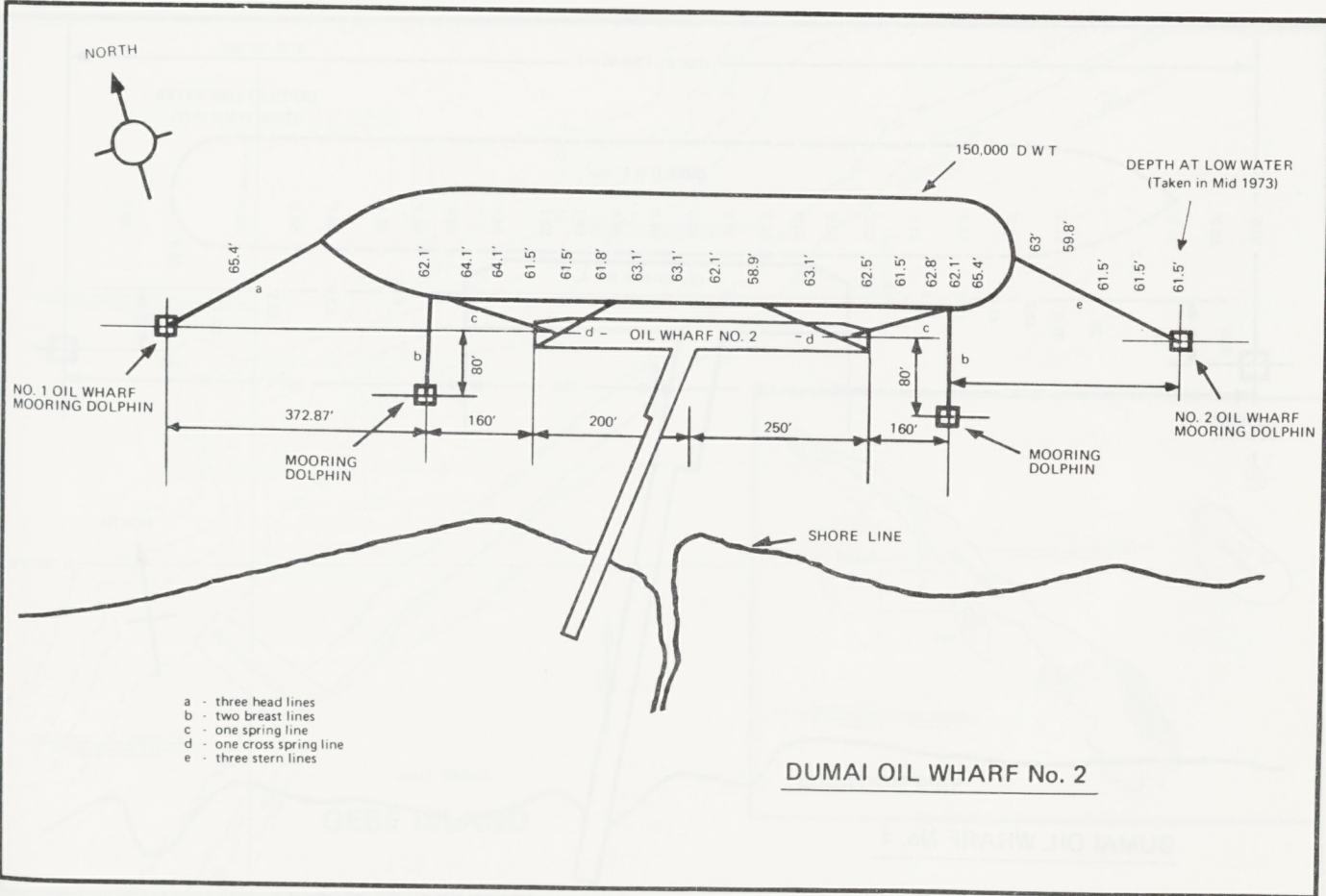
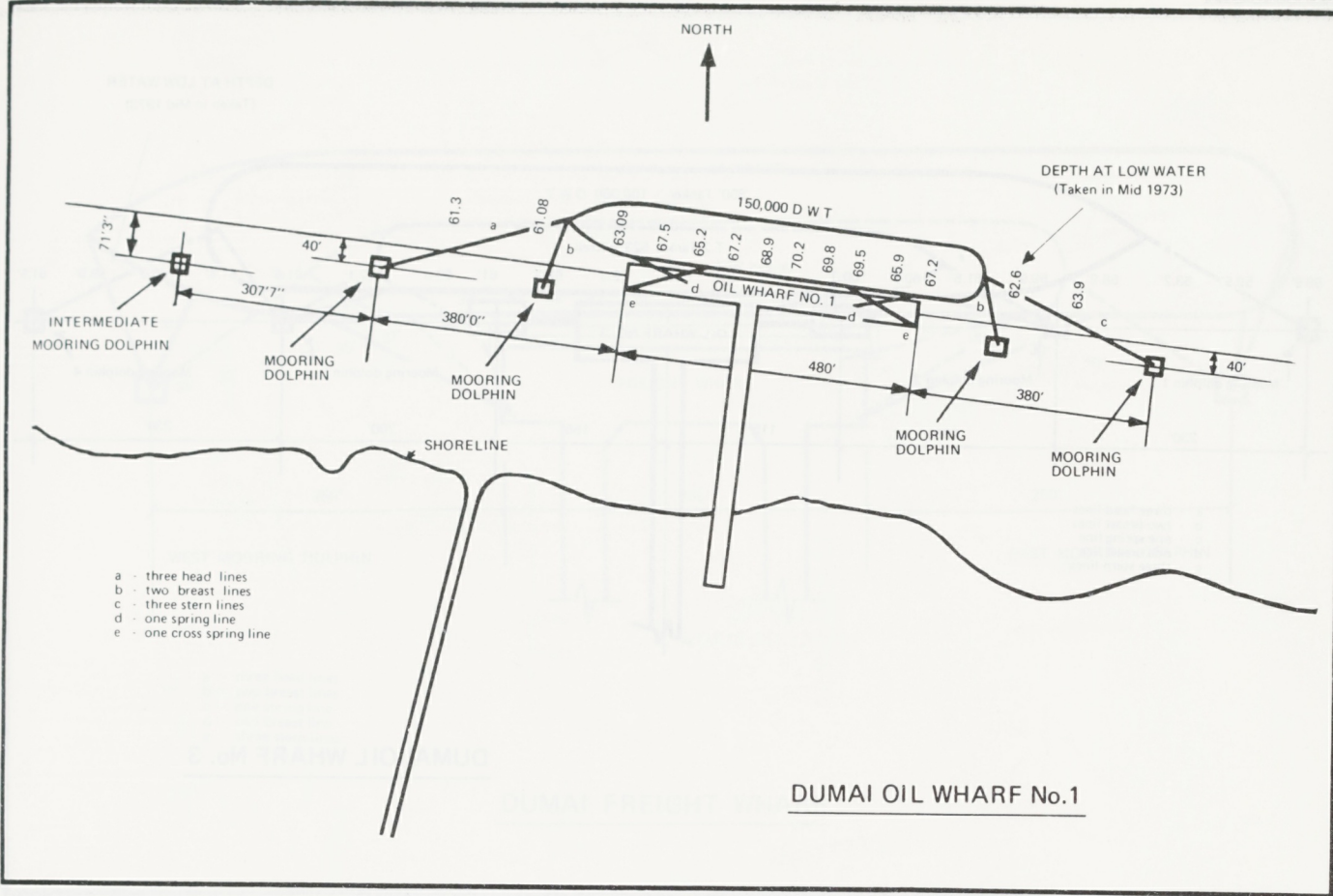
CINTA TERMINAL

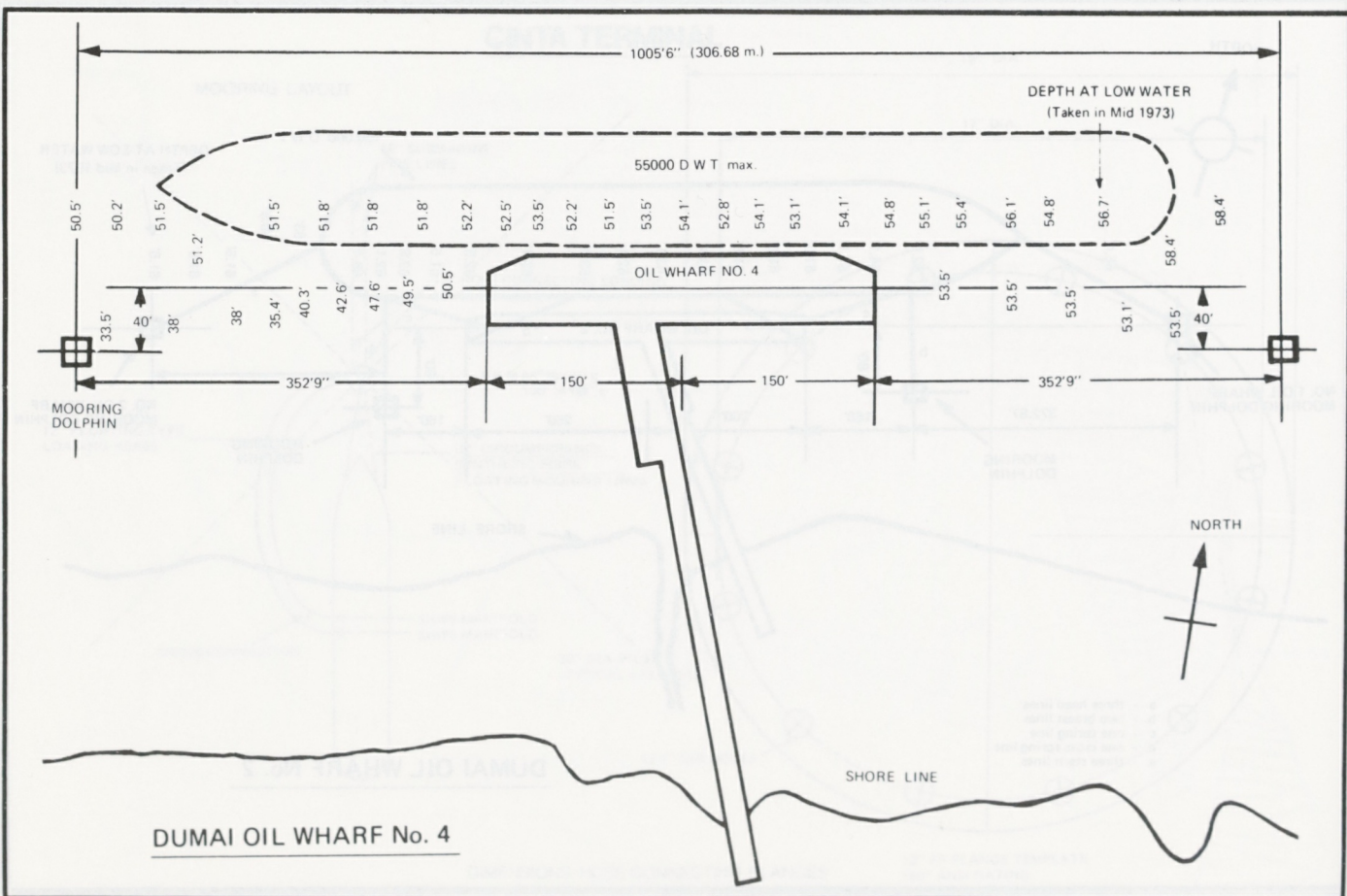
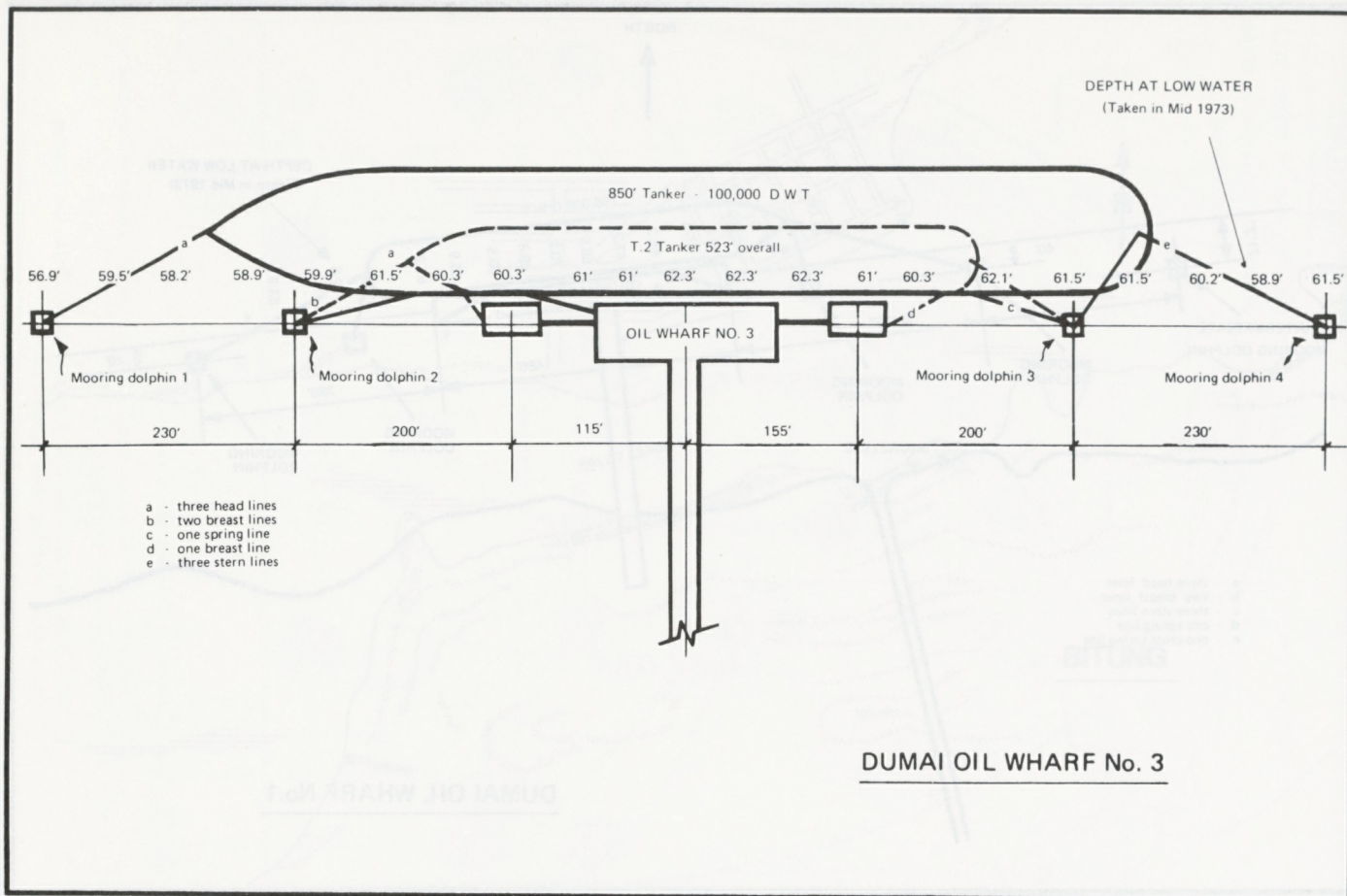
MOORING LAYOUT

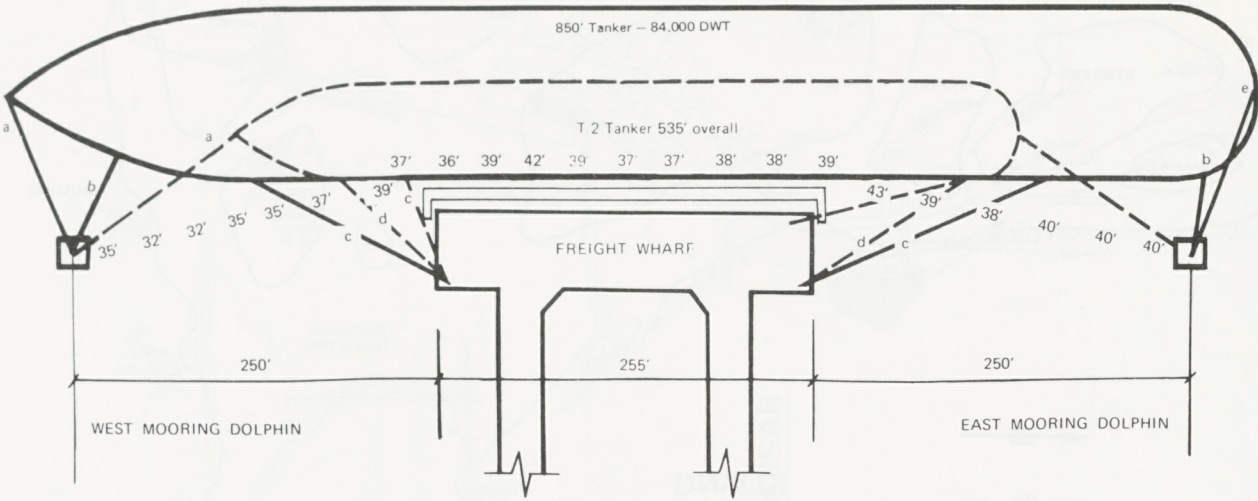


DIMENSIONS HOSE CONNECTING FLANGES

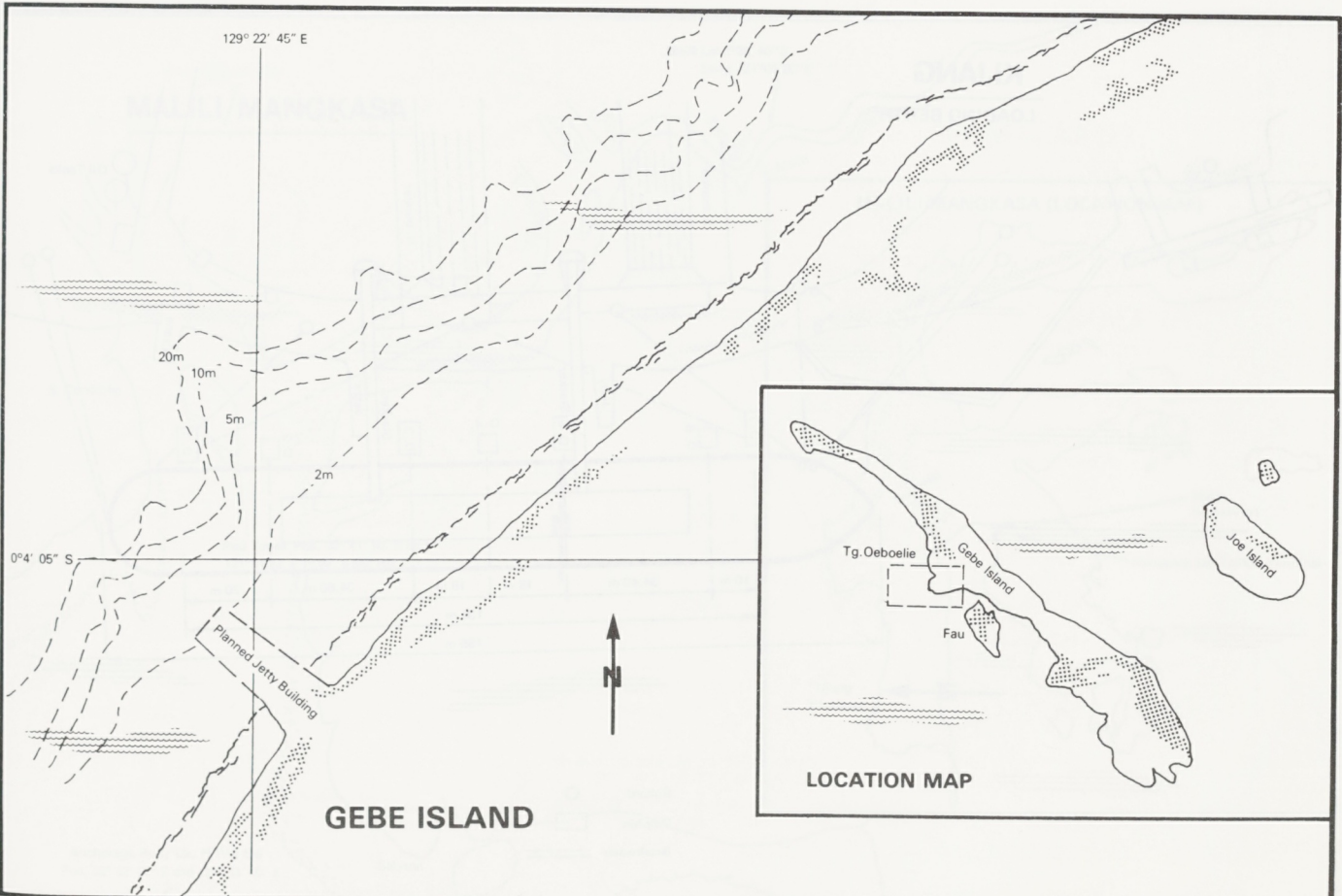
12" FF FLANGE TEMPLATE
150" ANSI RATING

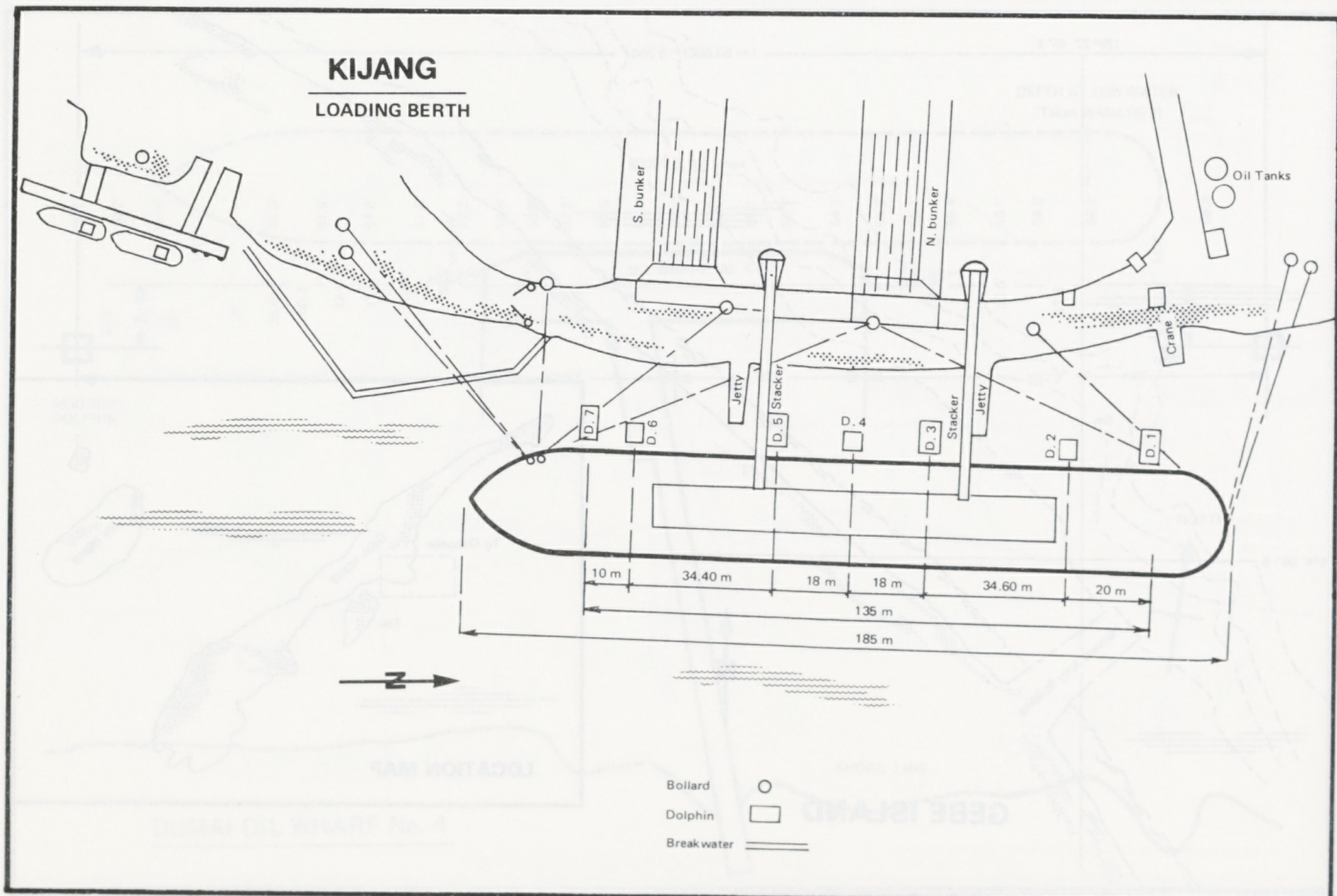
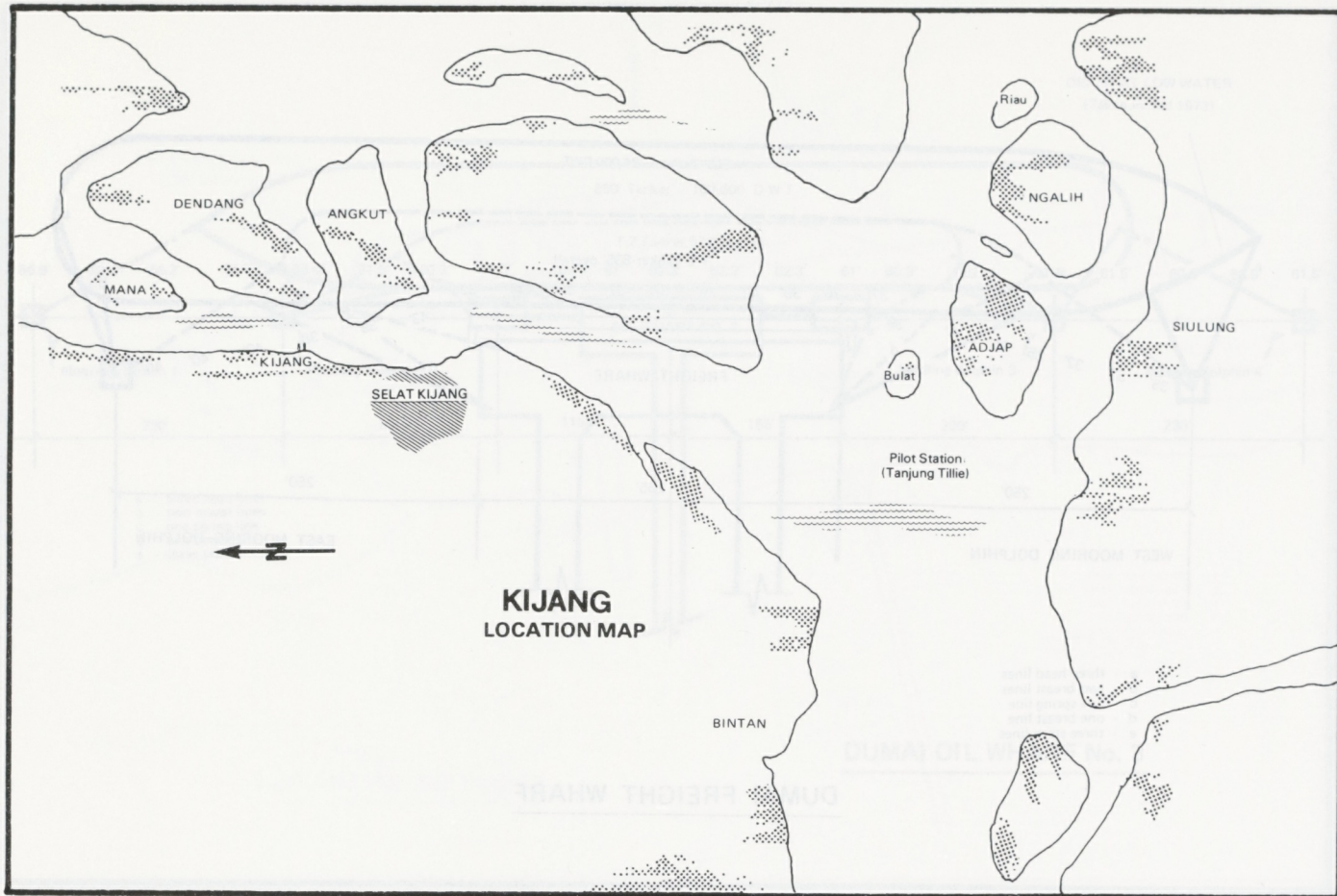


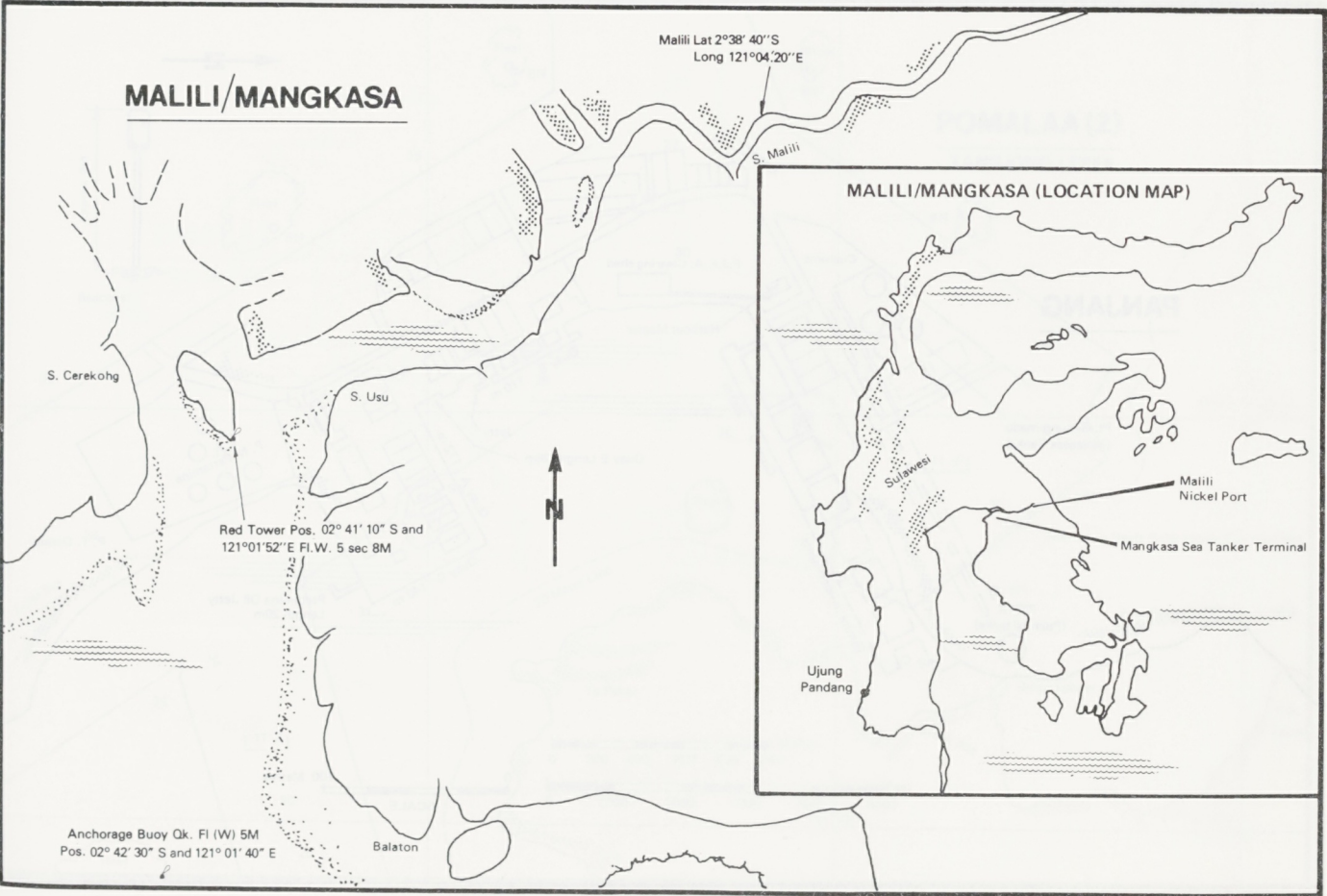
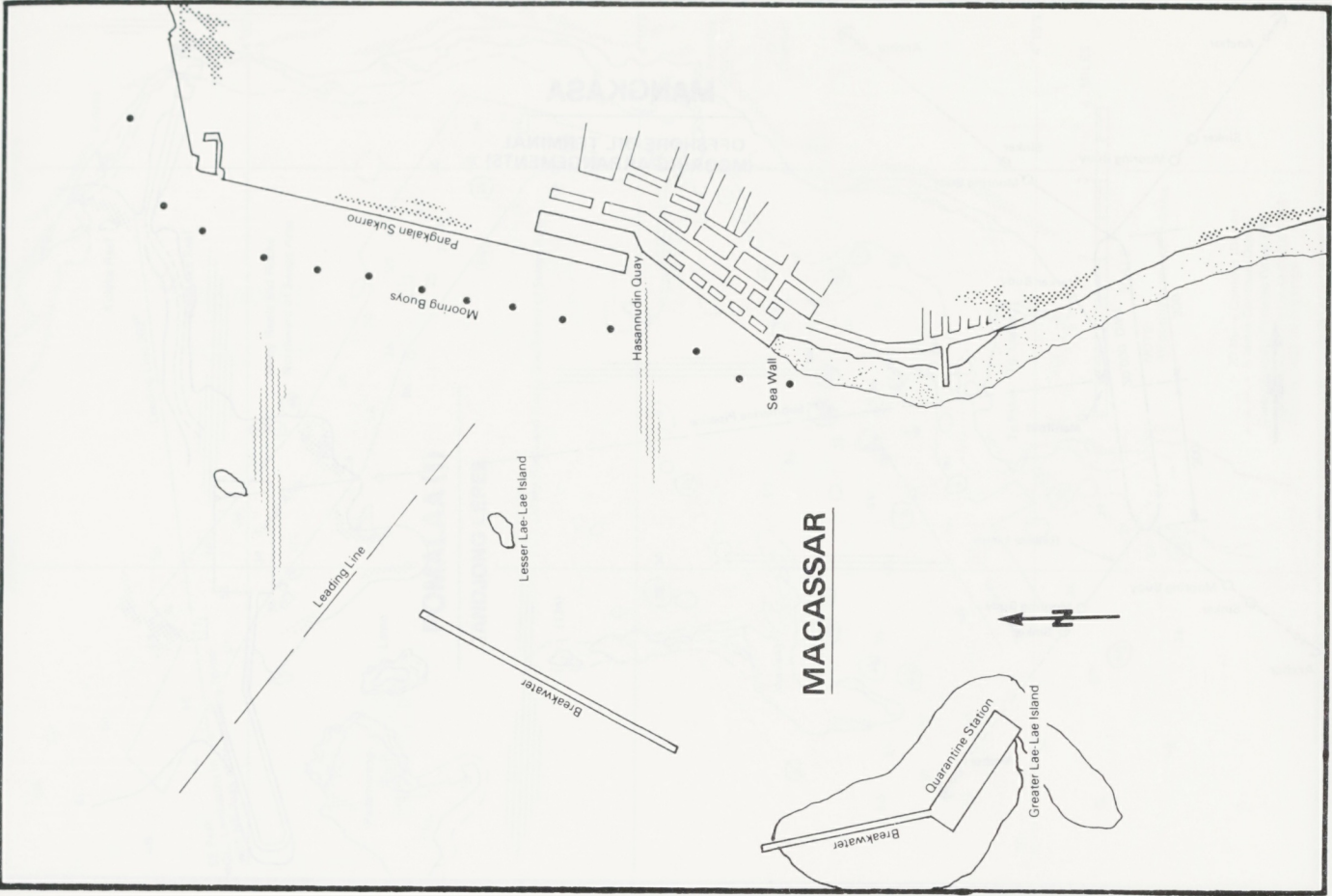


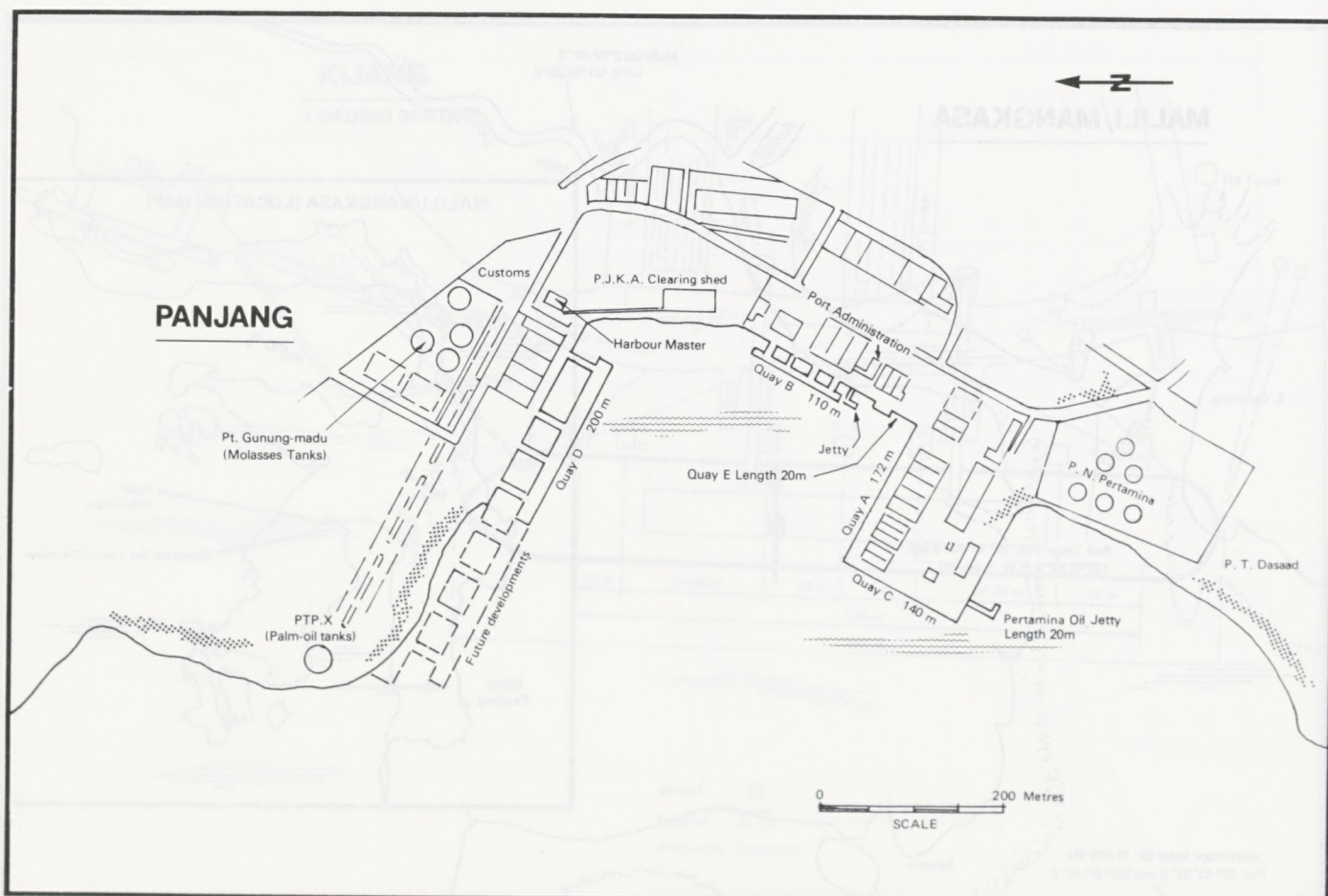
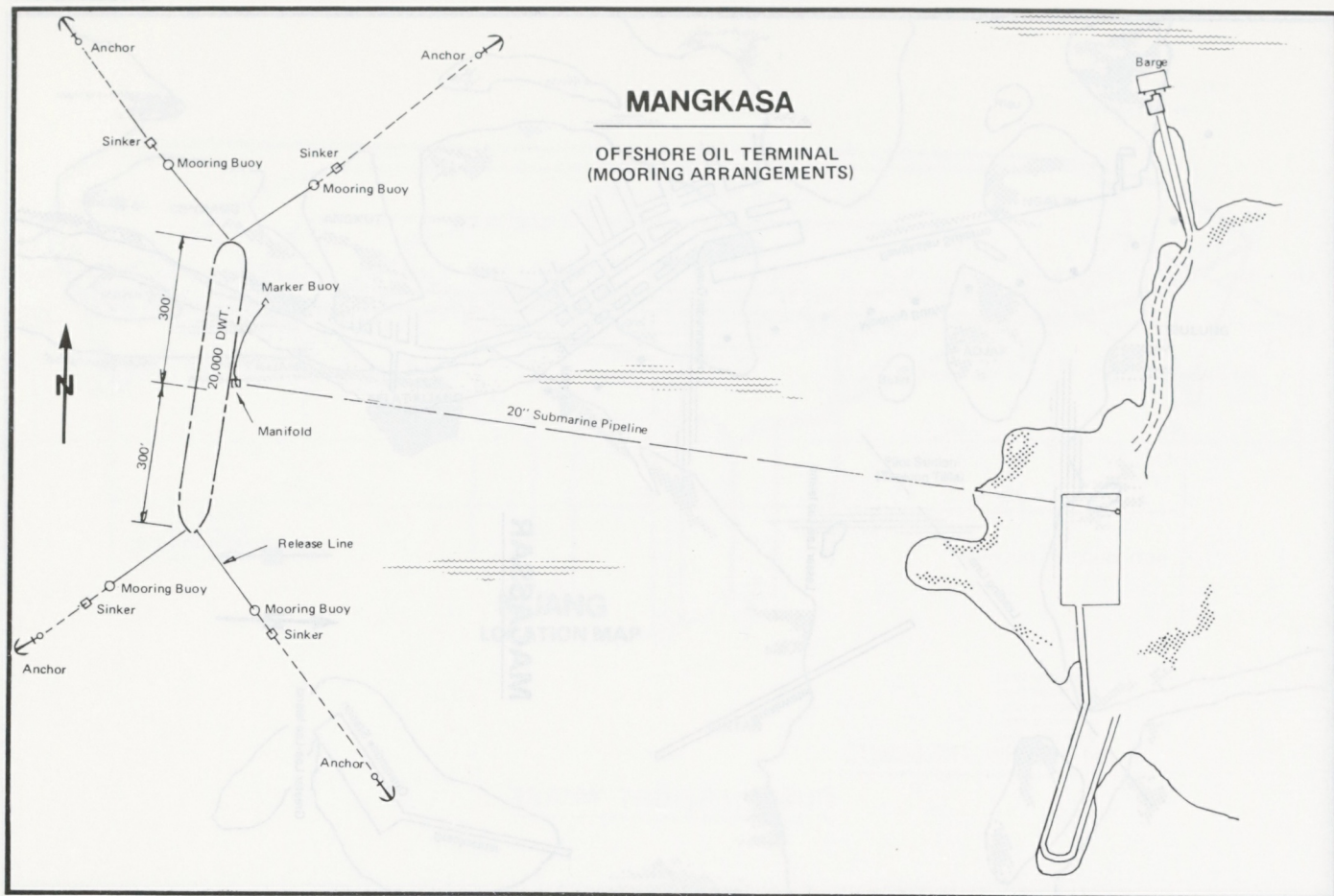


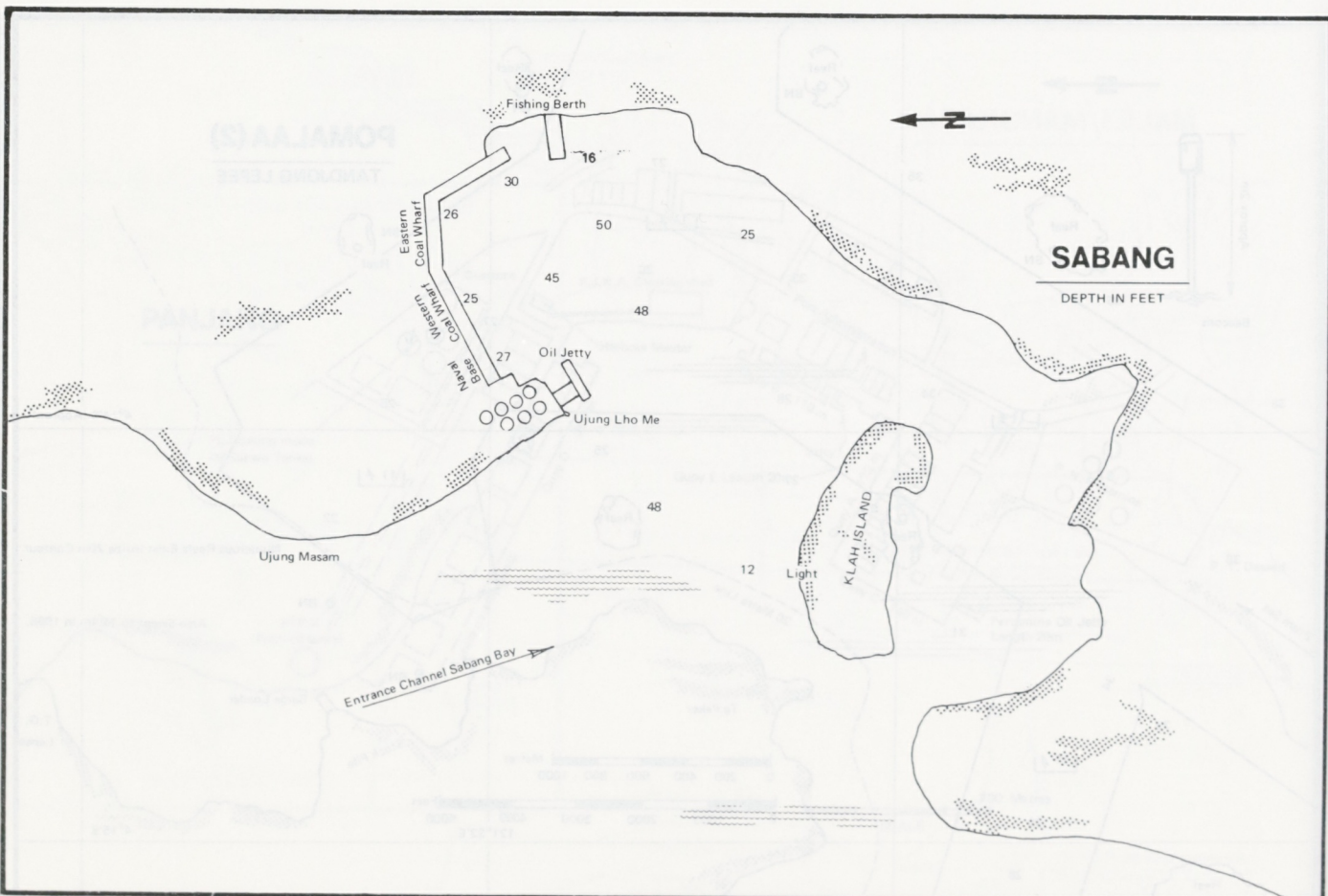
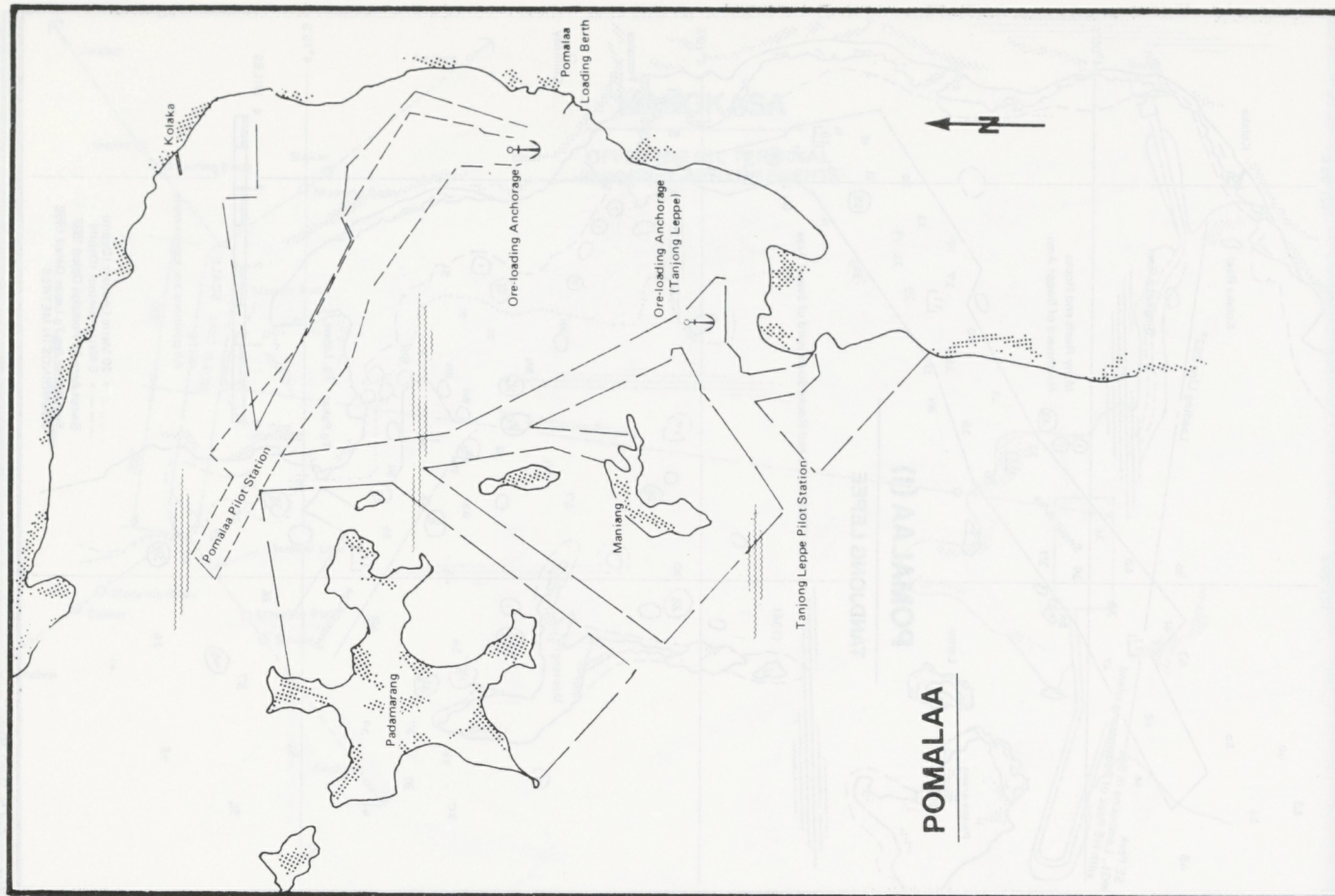
DUMAI FREIGHT WHARF

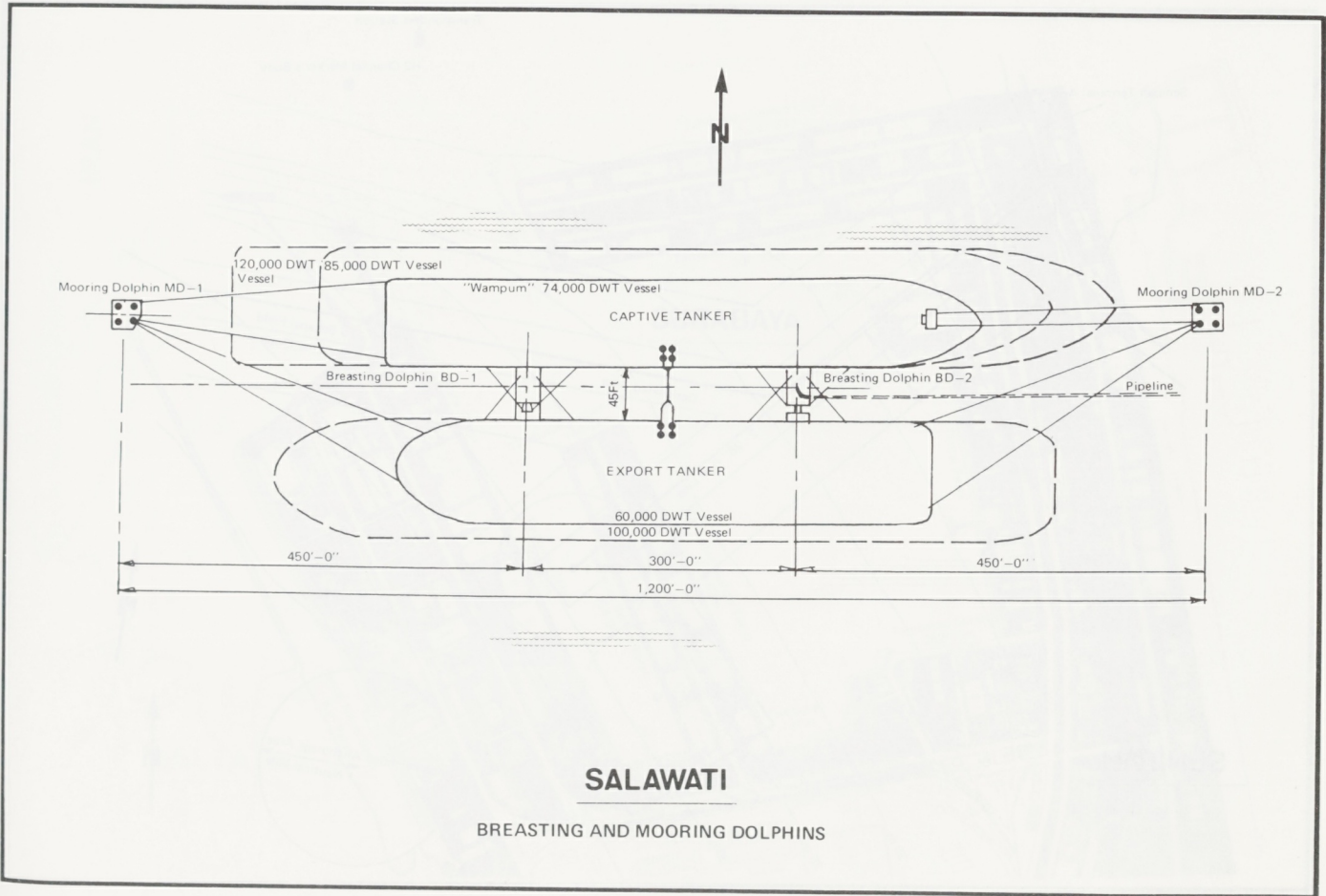
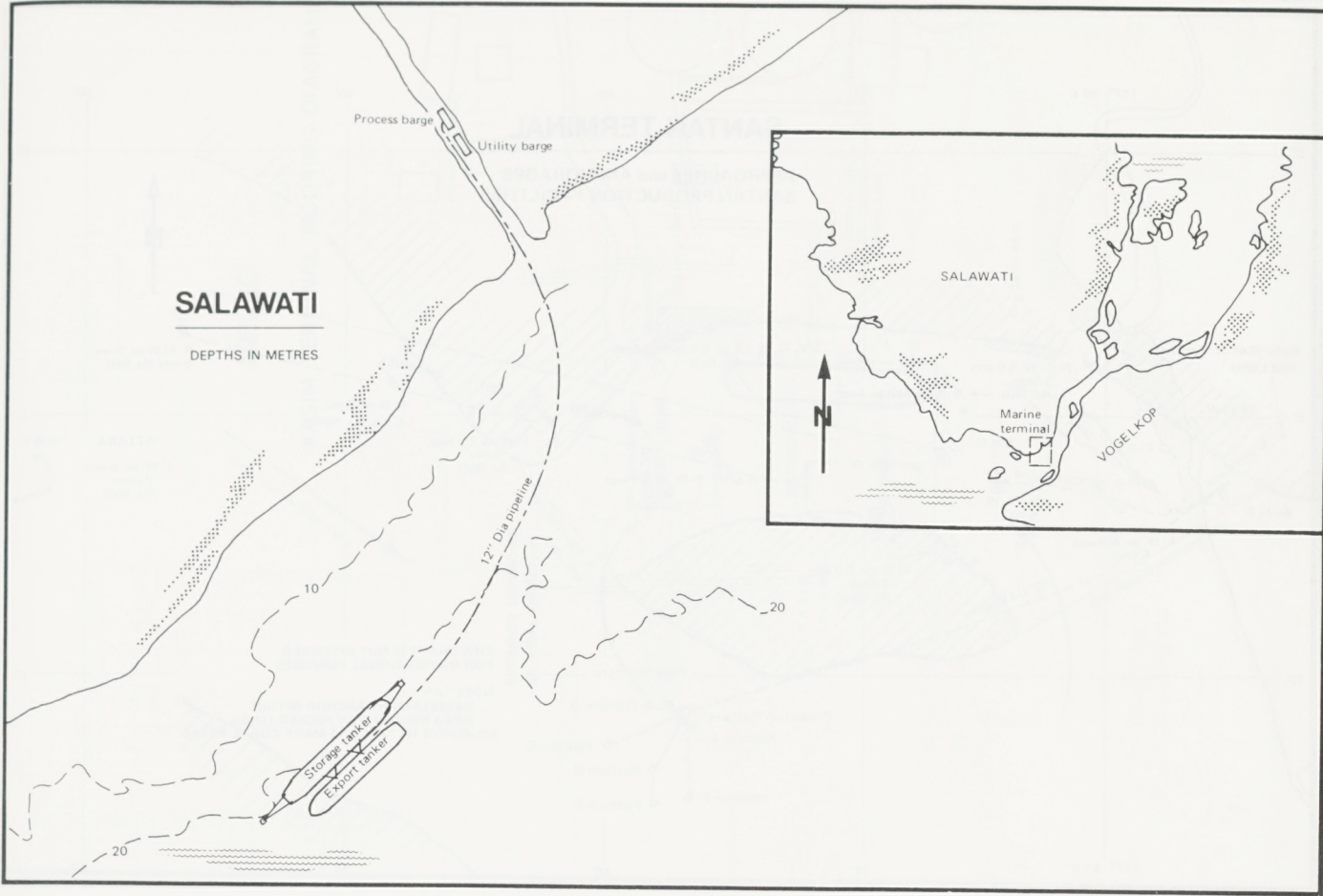




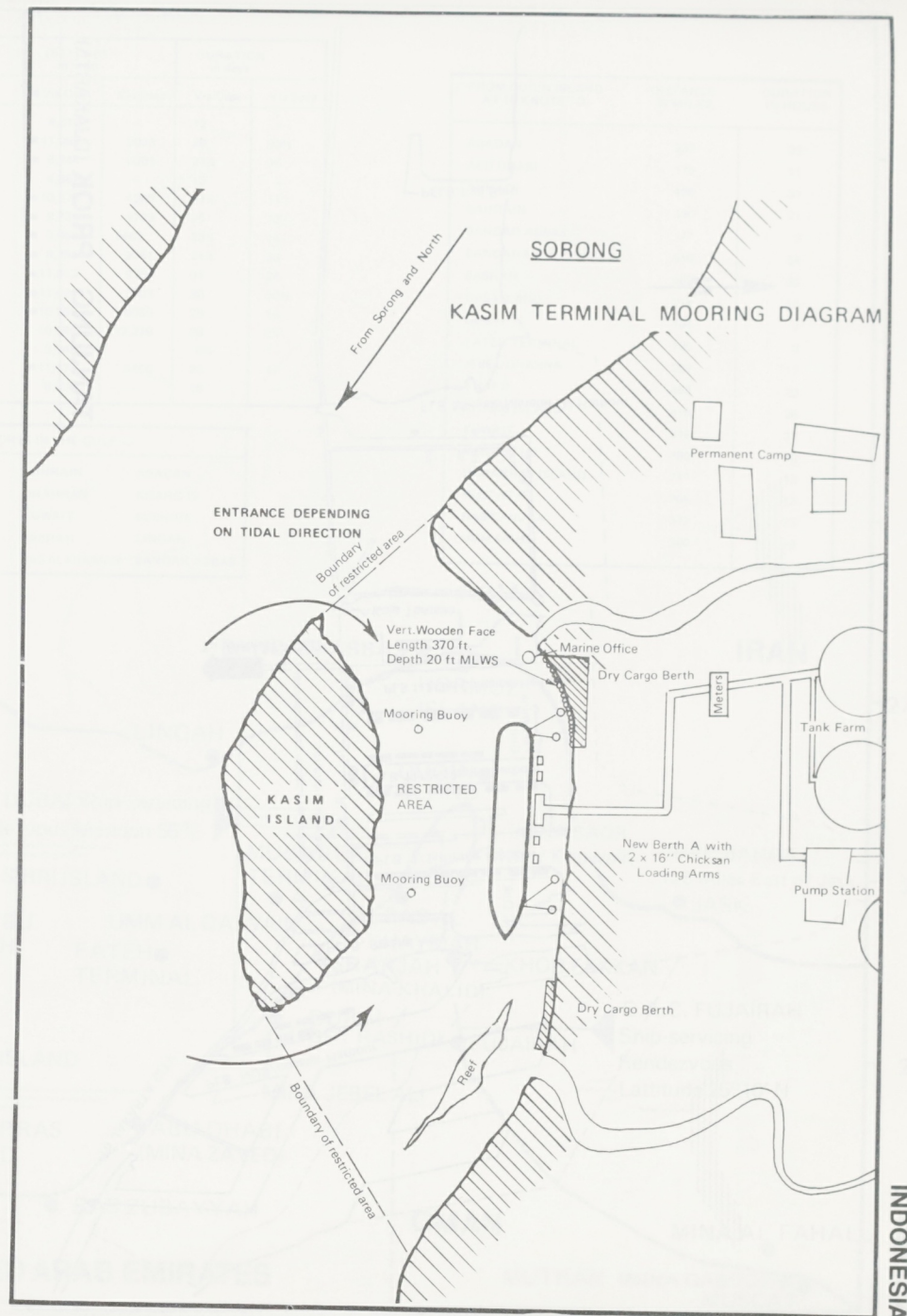
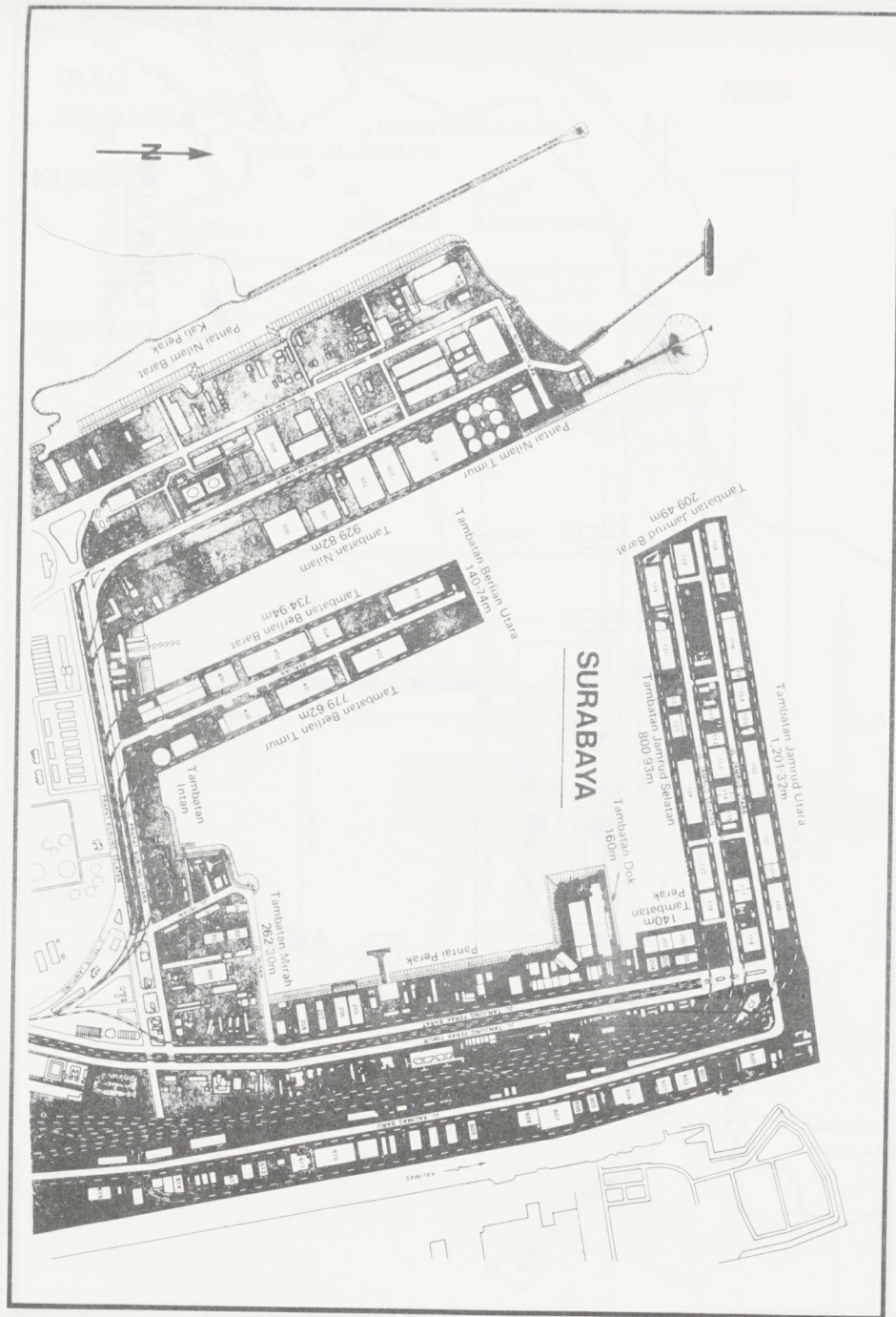


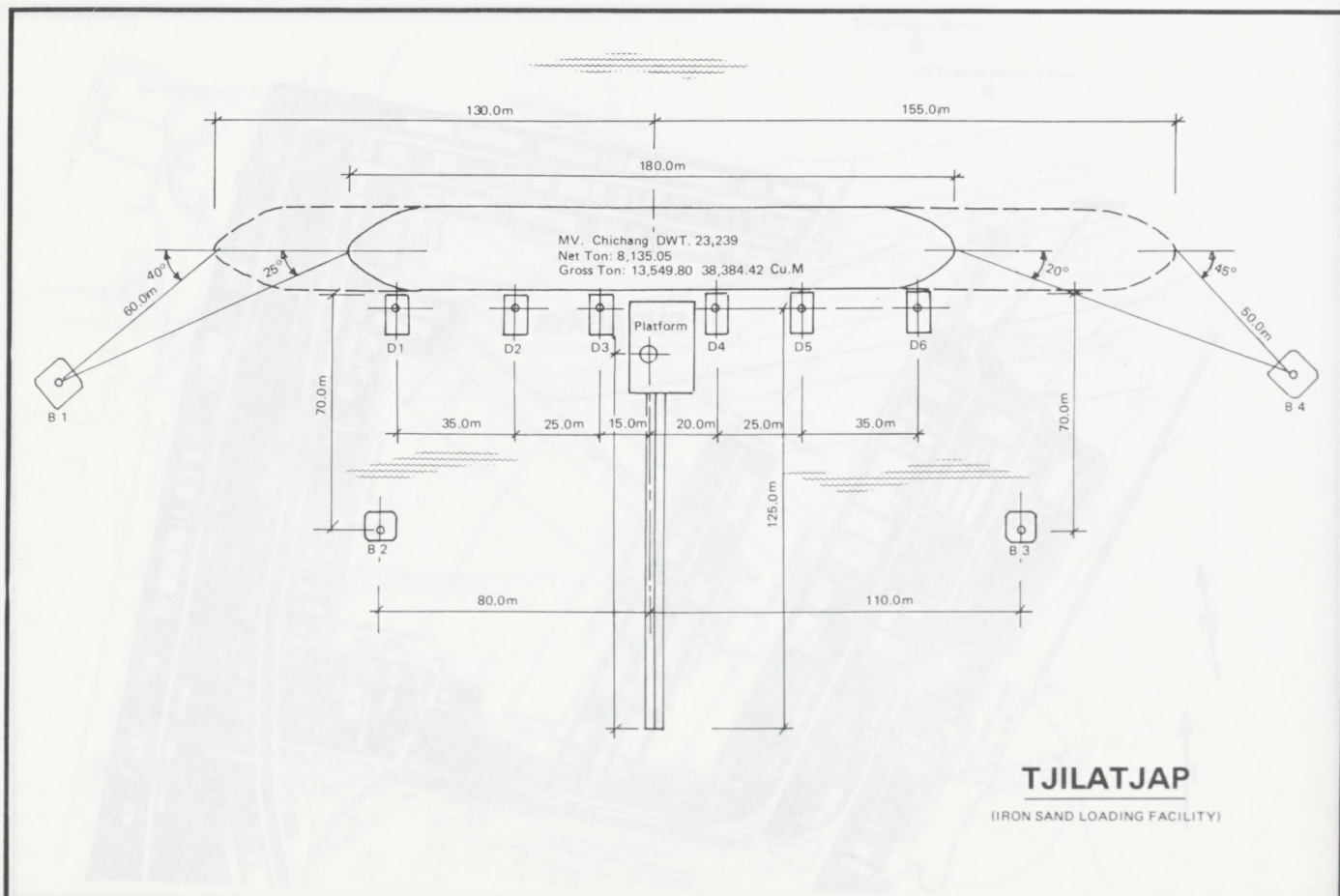
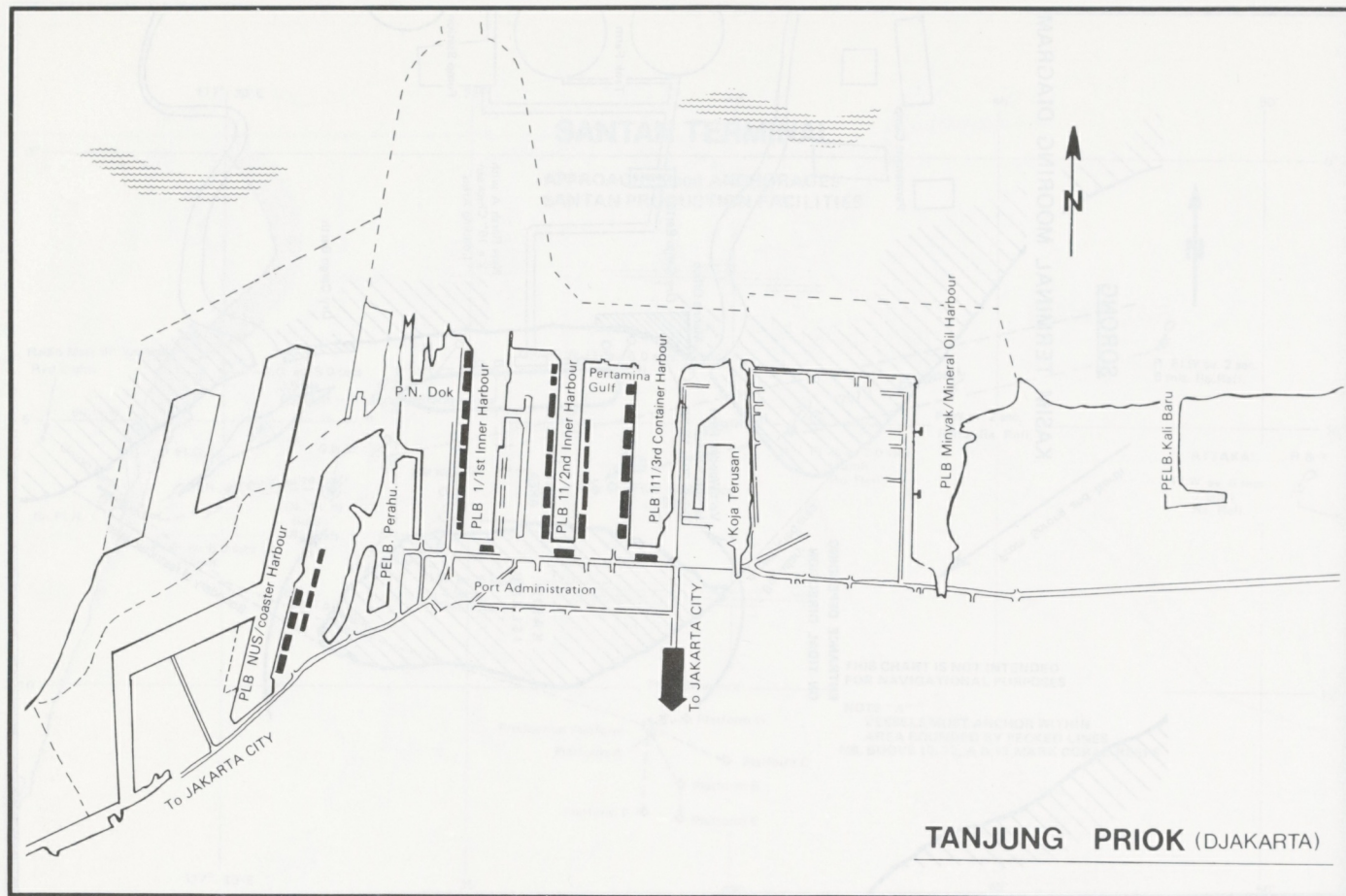


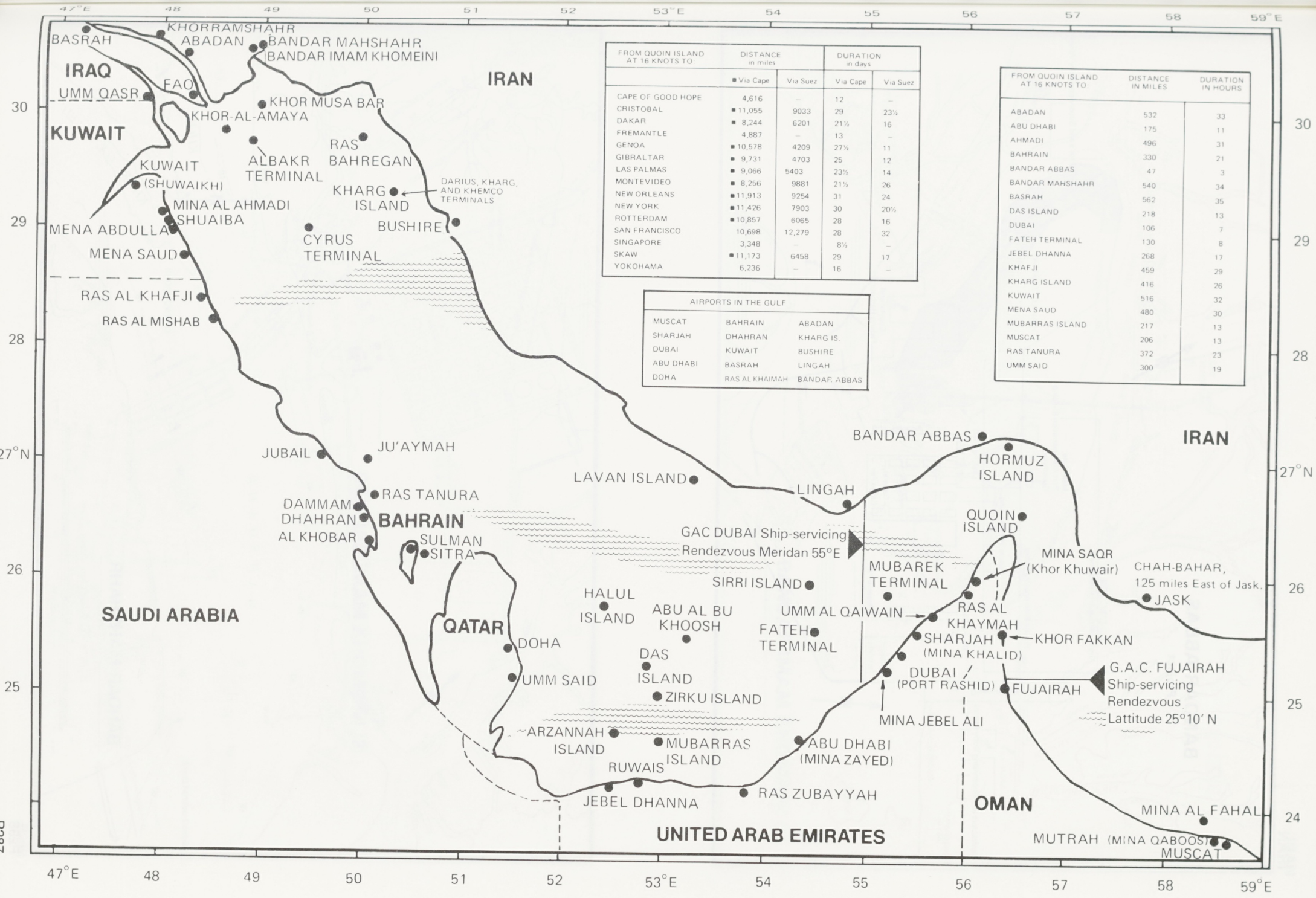




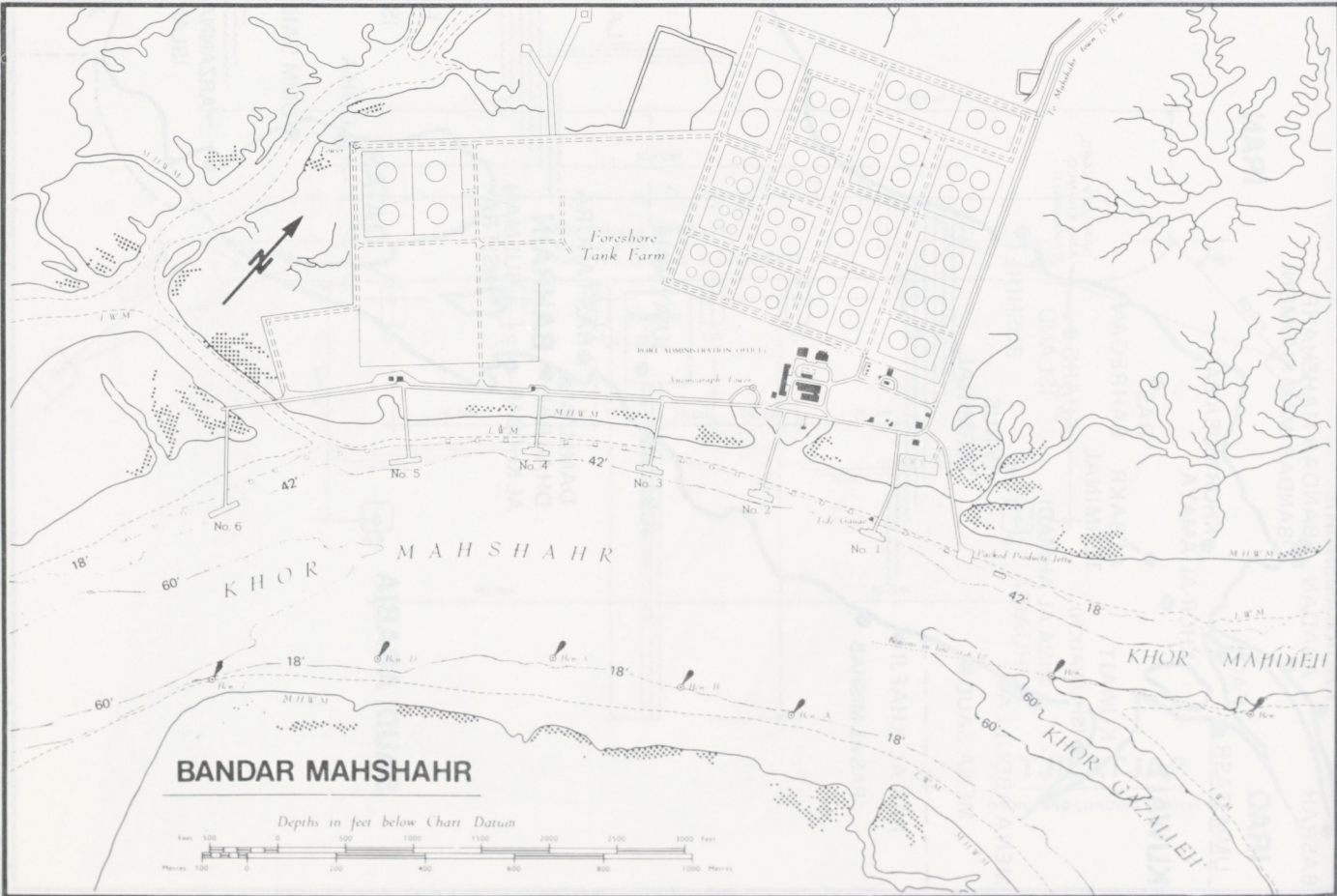
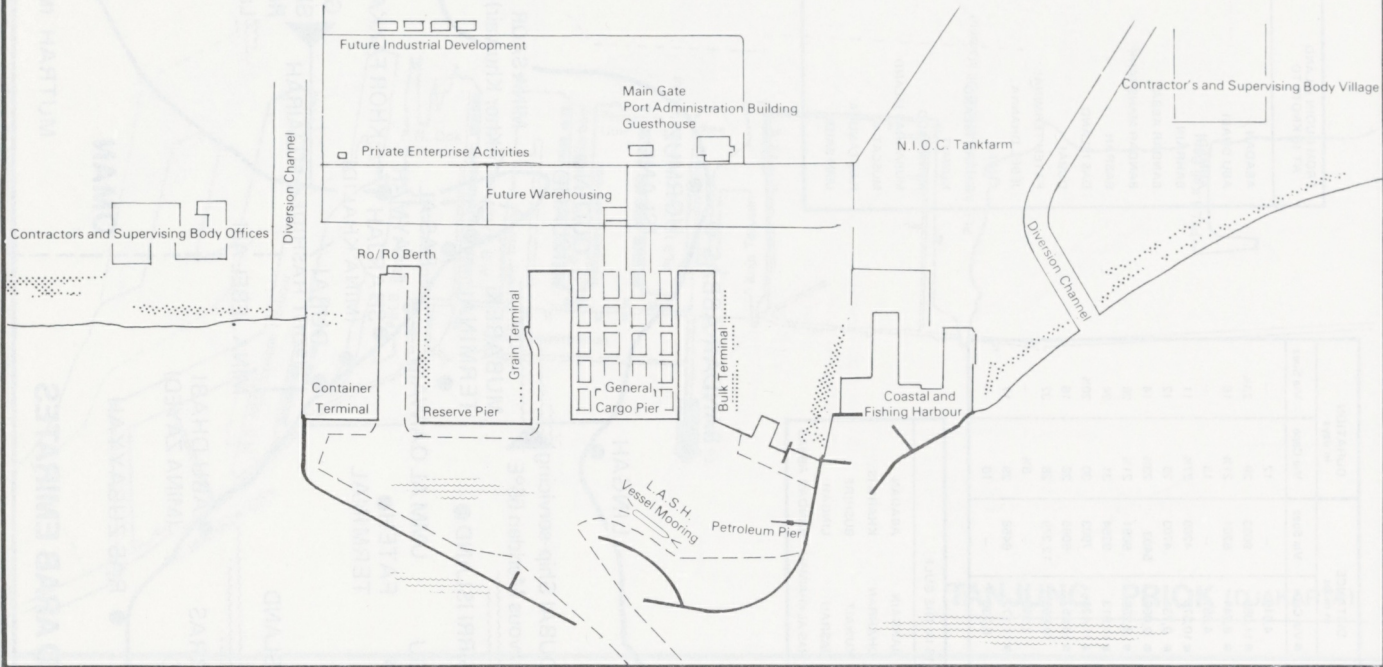


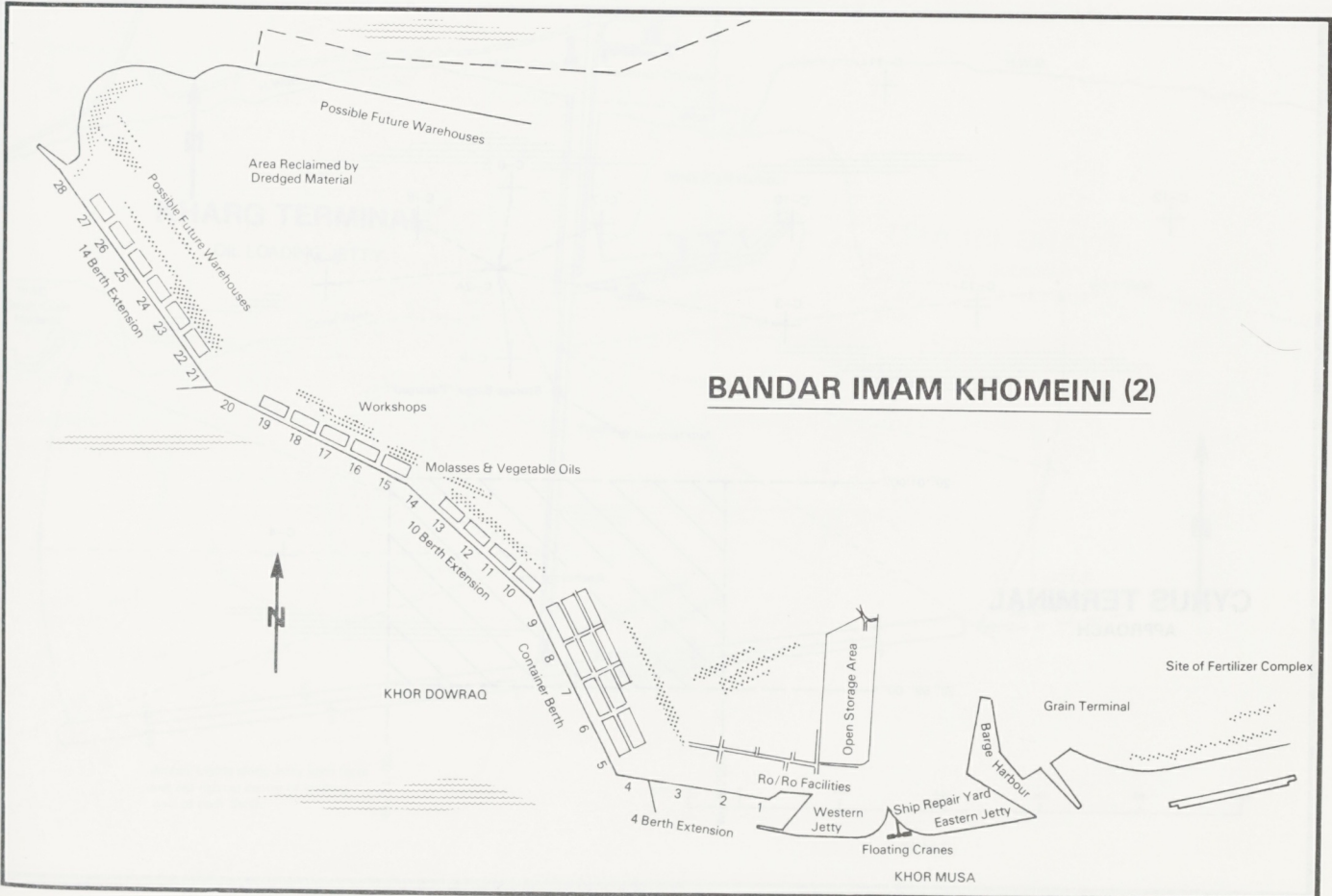
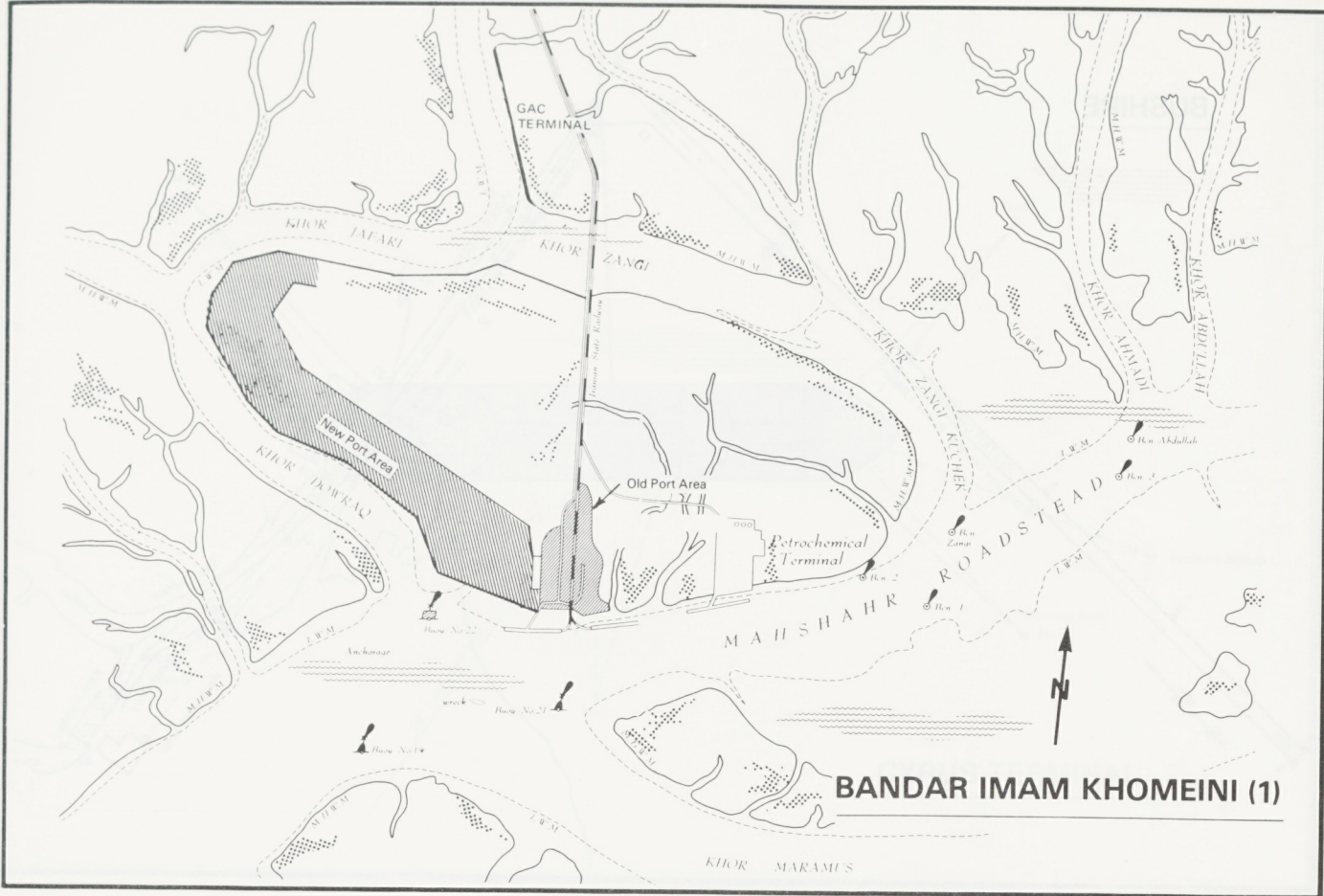




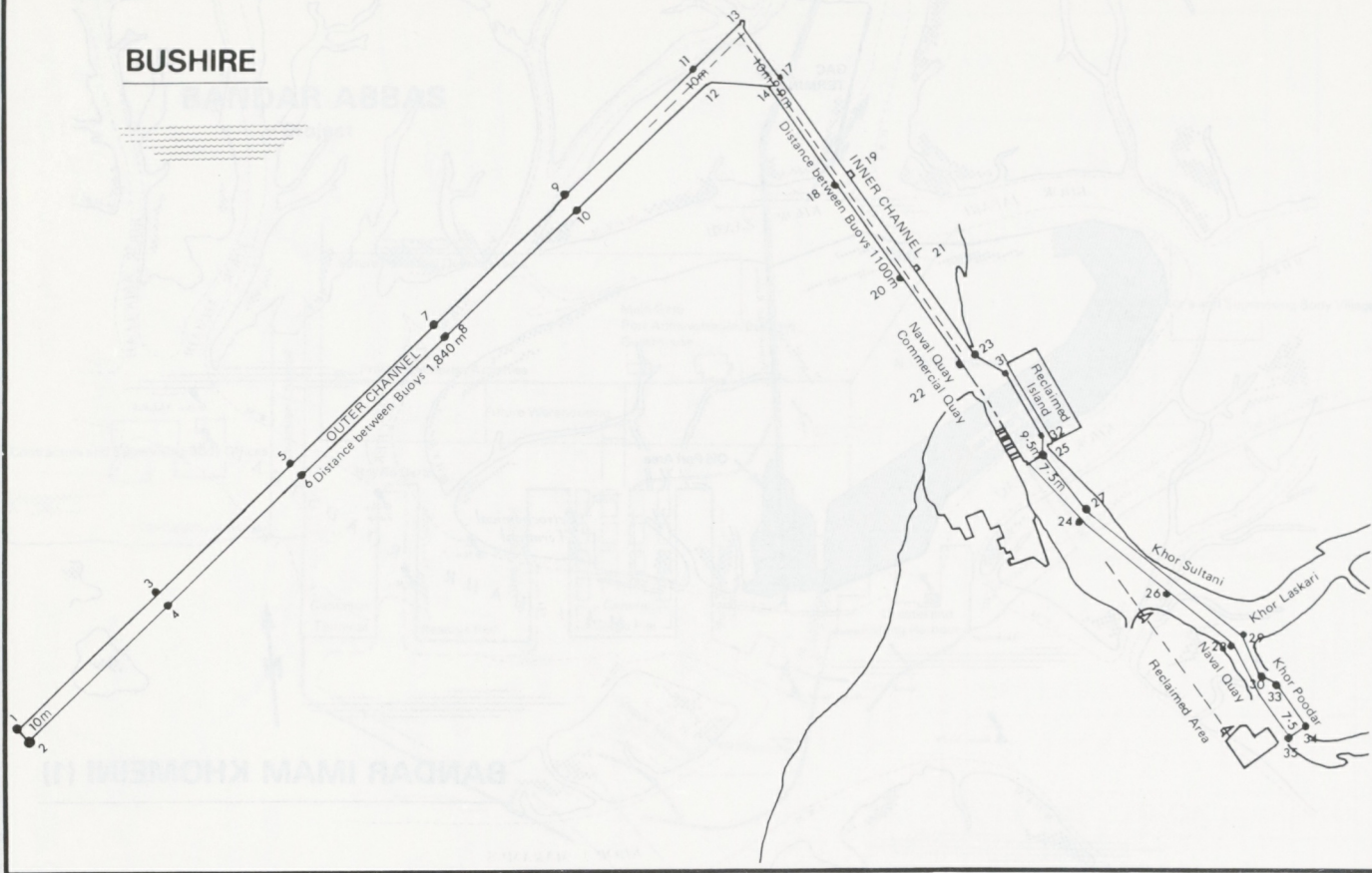


BANDAR ABBAS
Project

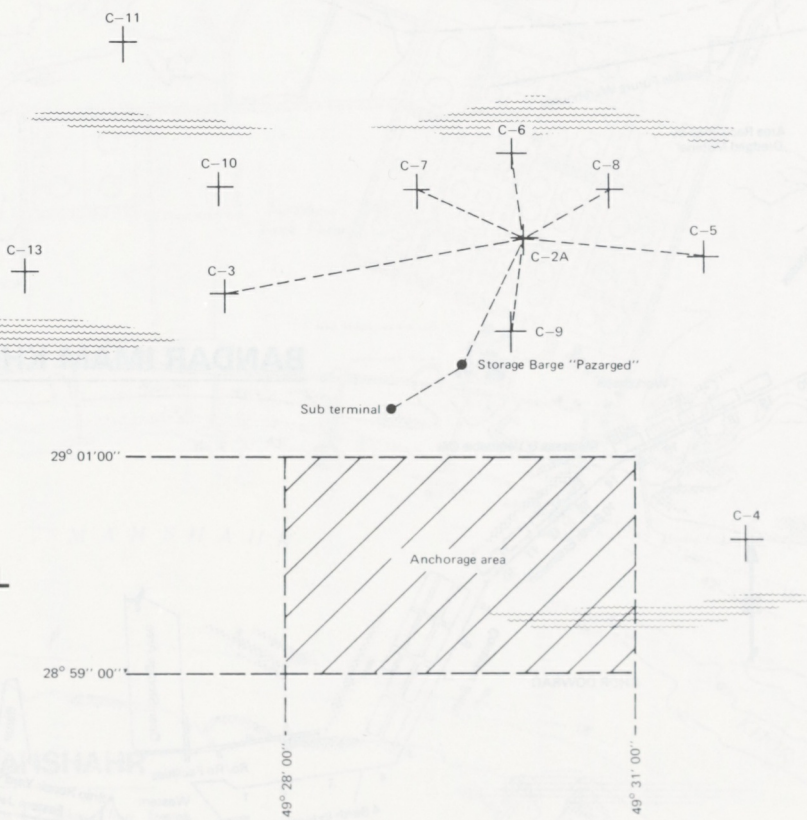


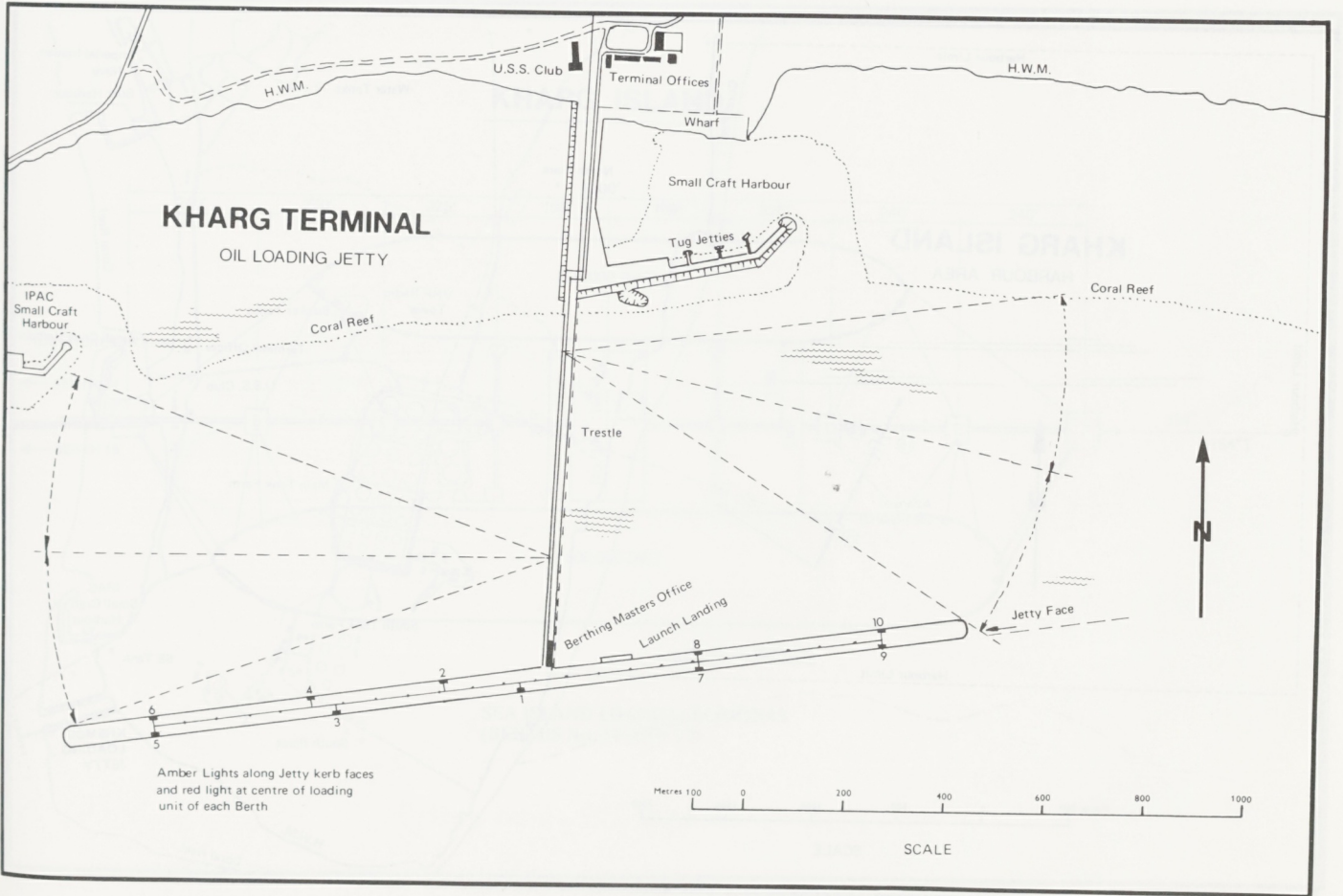
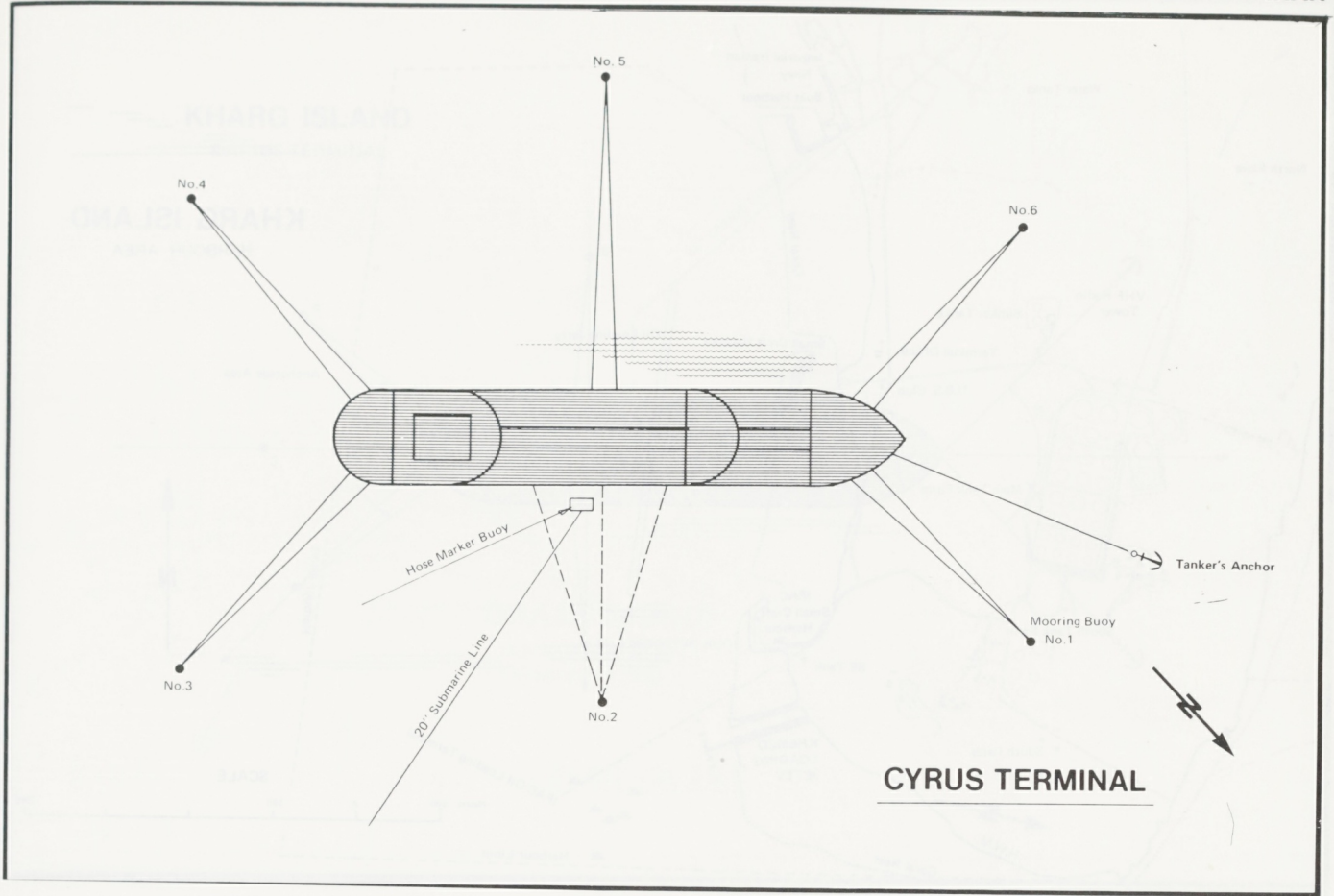


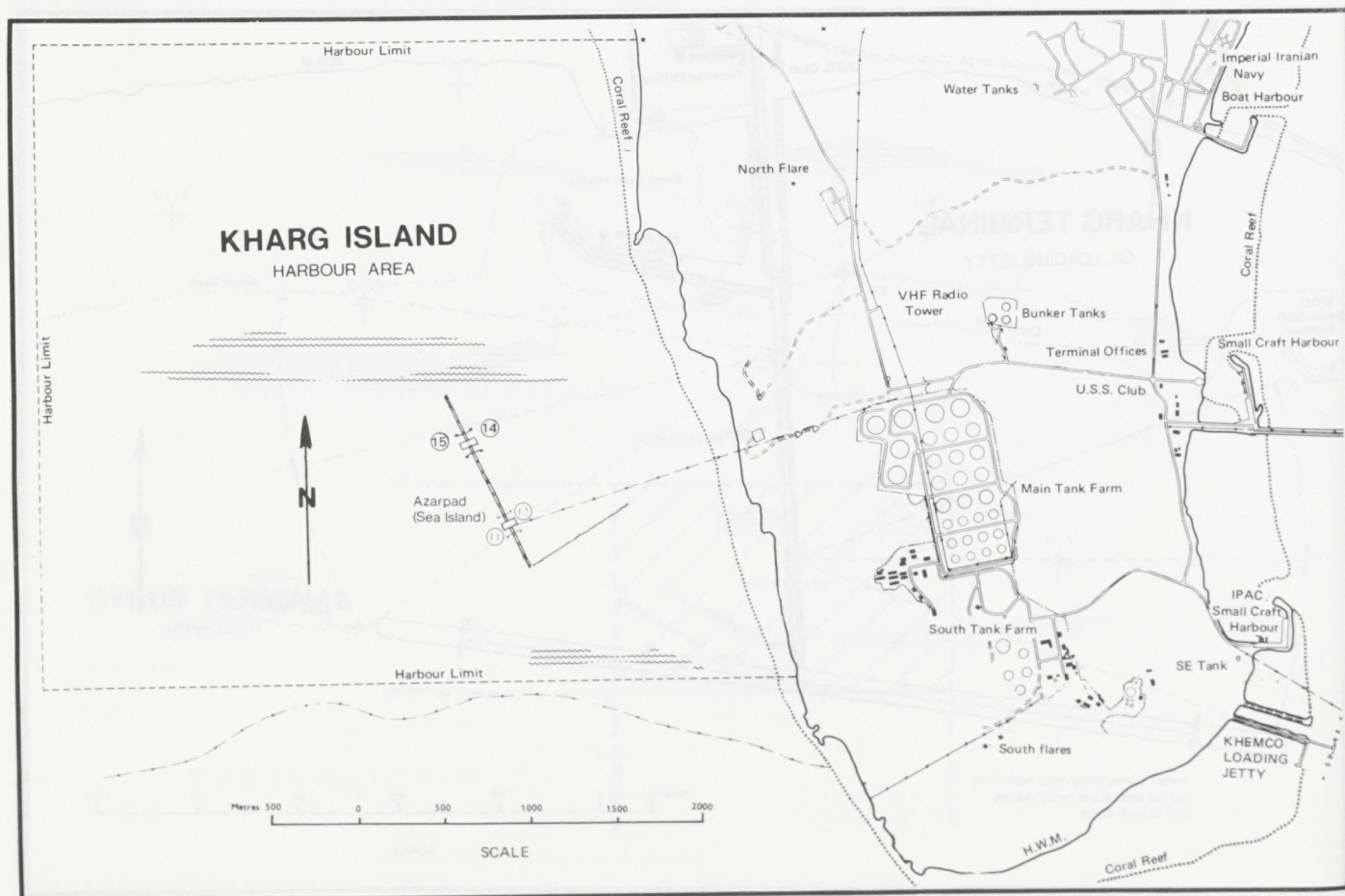
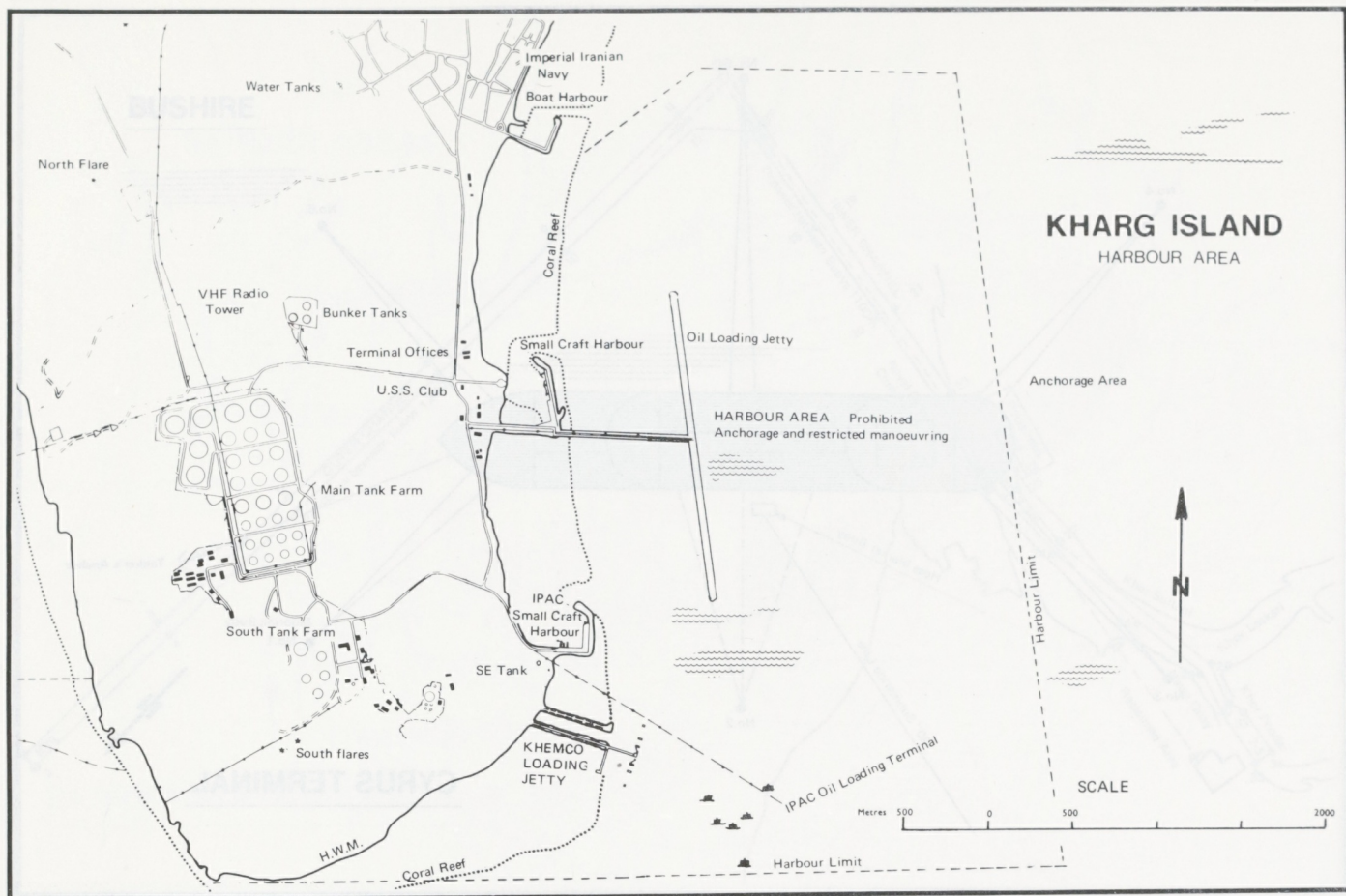
BUSHIRE



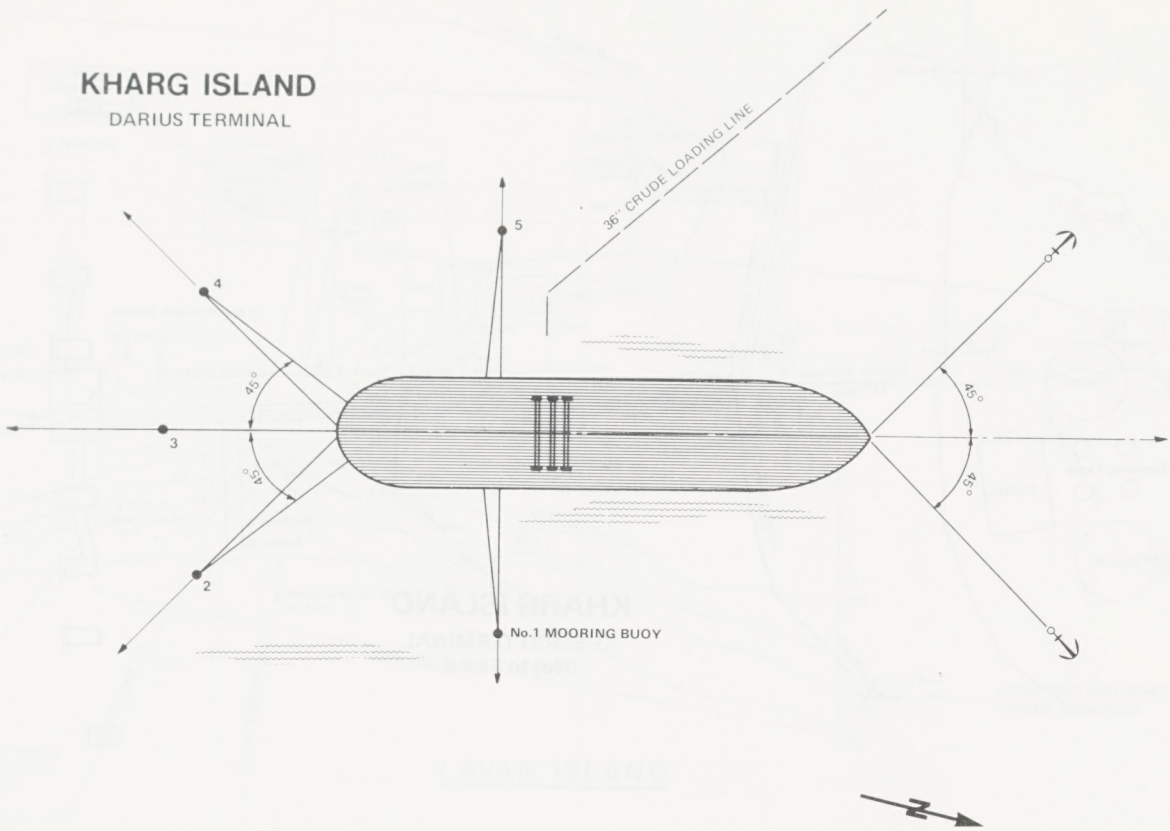
CYRUS TERMINAL
APPROACH



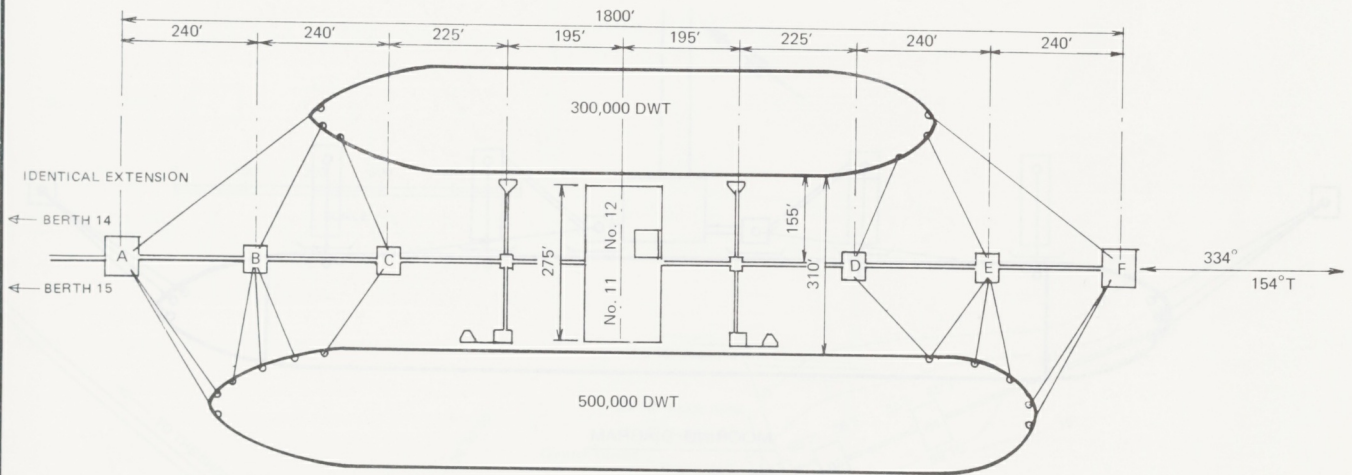




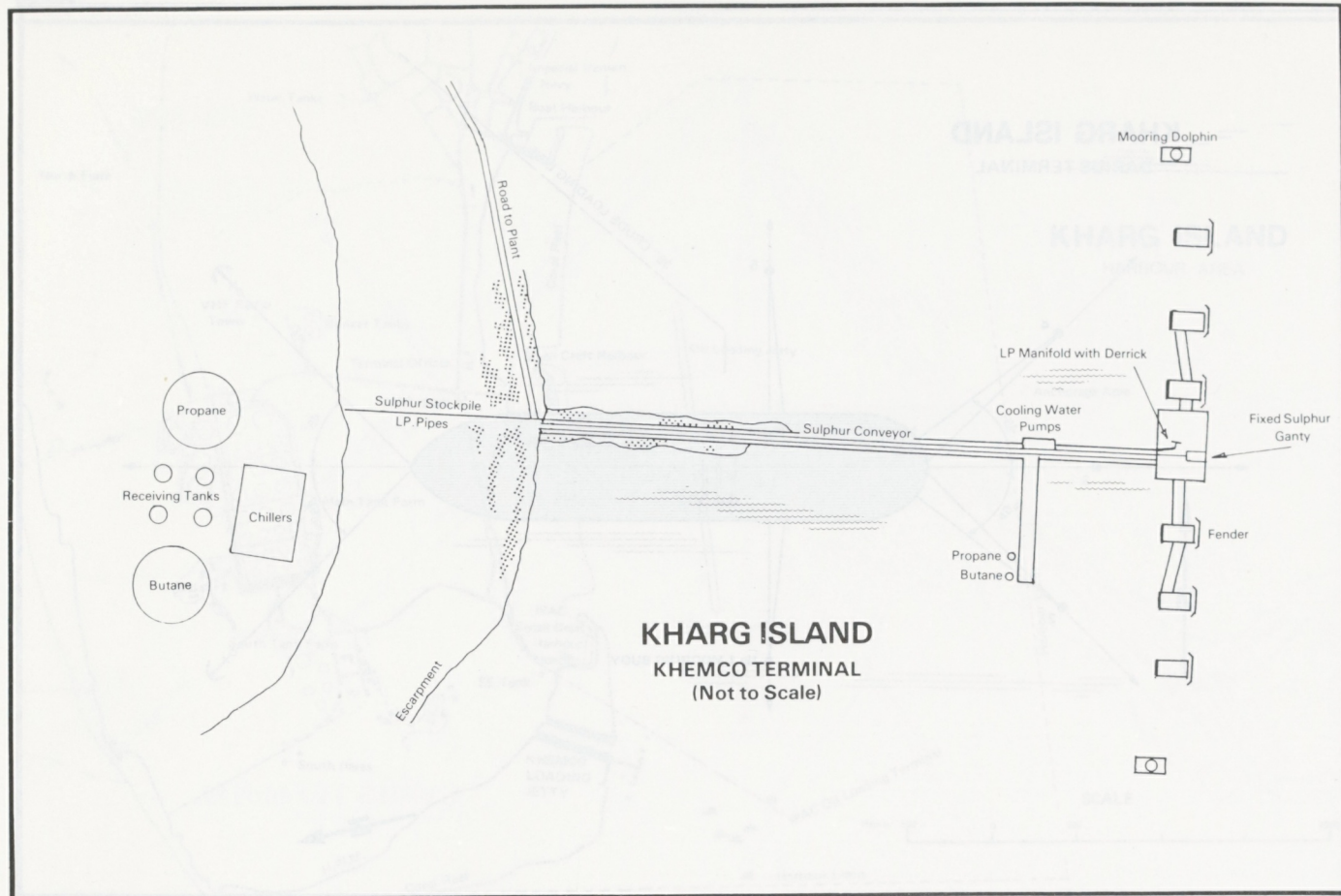
KHARG ISLAND
DARIUS TERMINAL



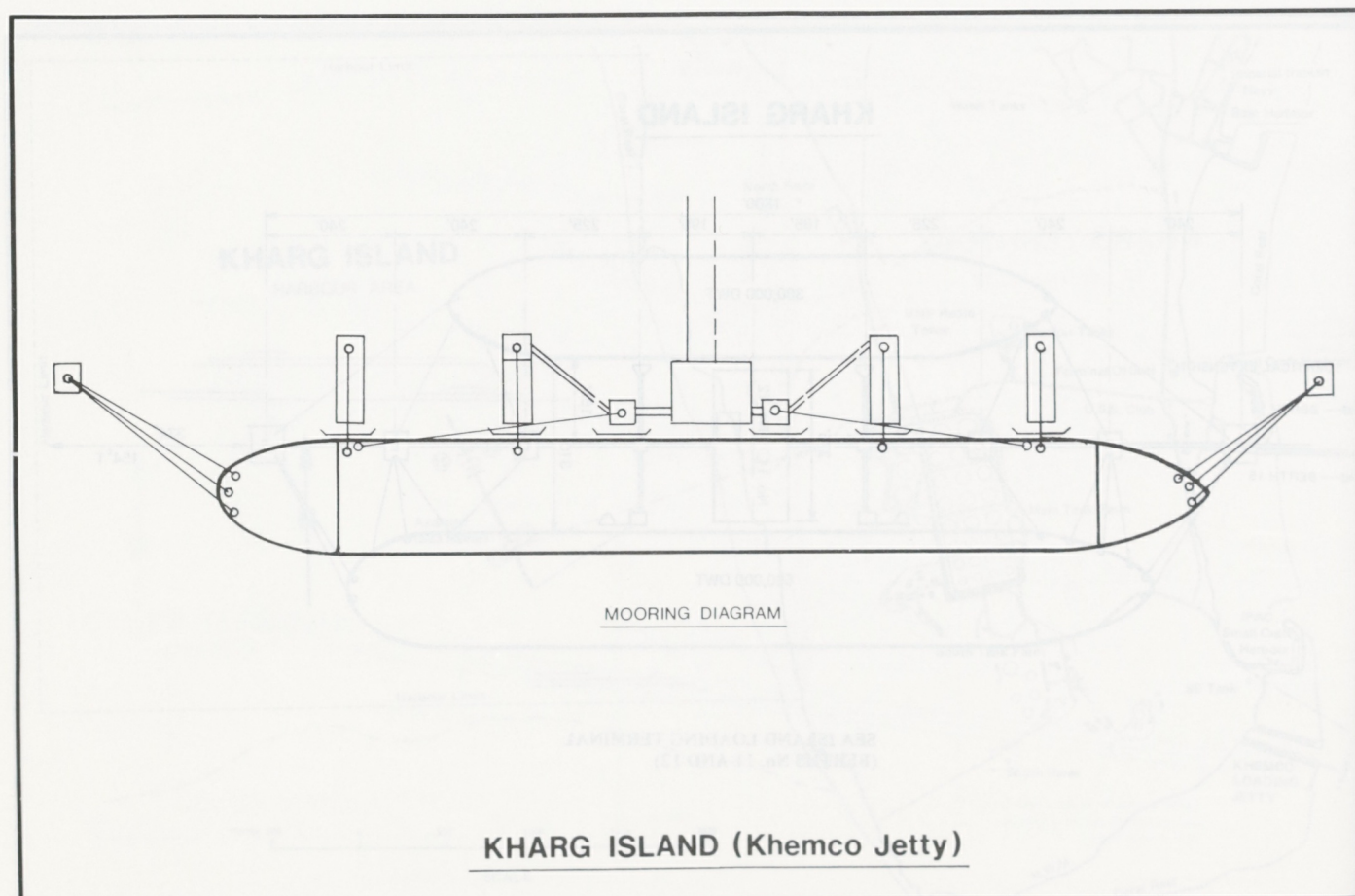
KHARG ISLAND



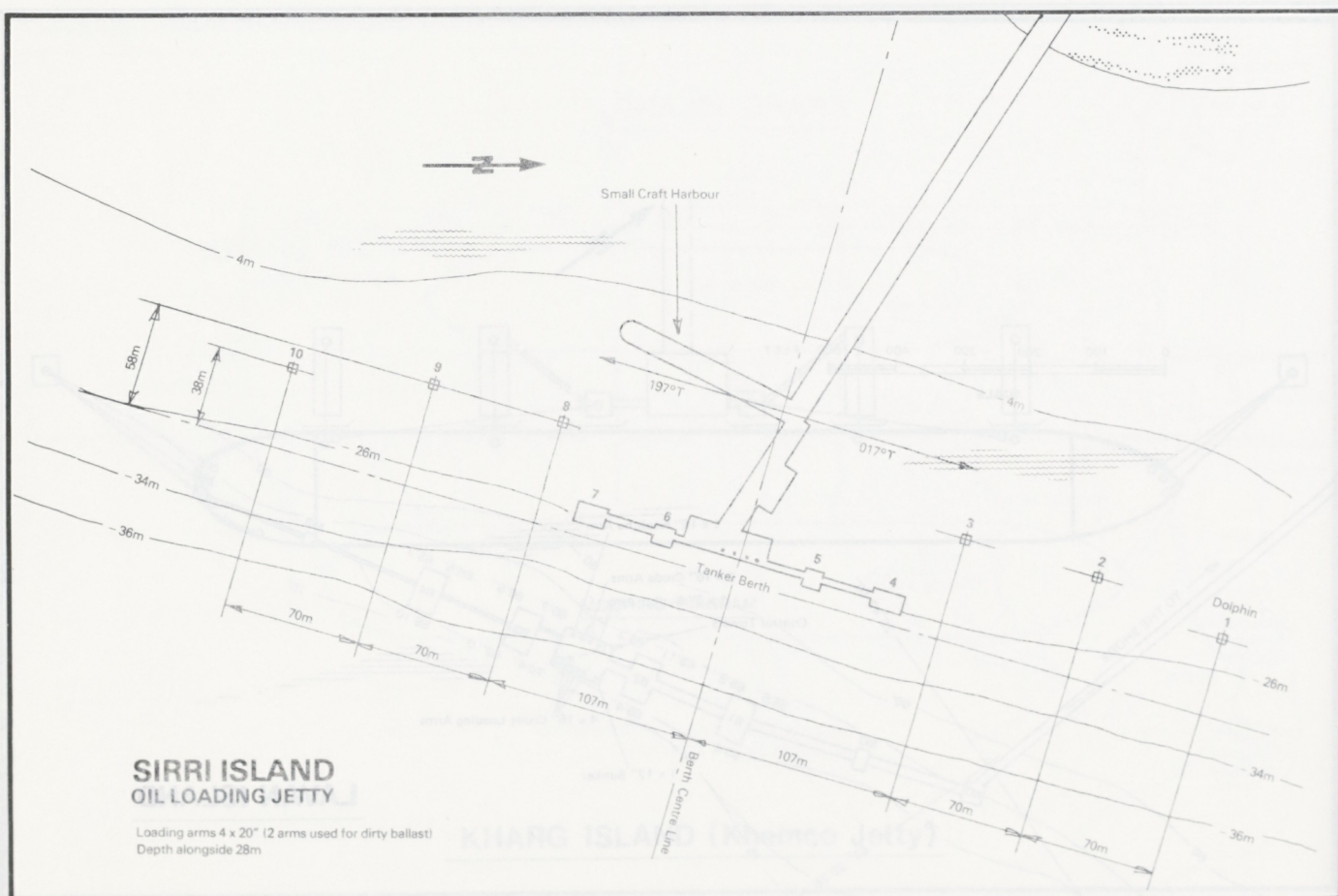
SEA ISLAND LOADING TERMINAL
(BERTHS No. 11 AND 12)

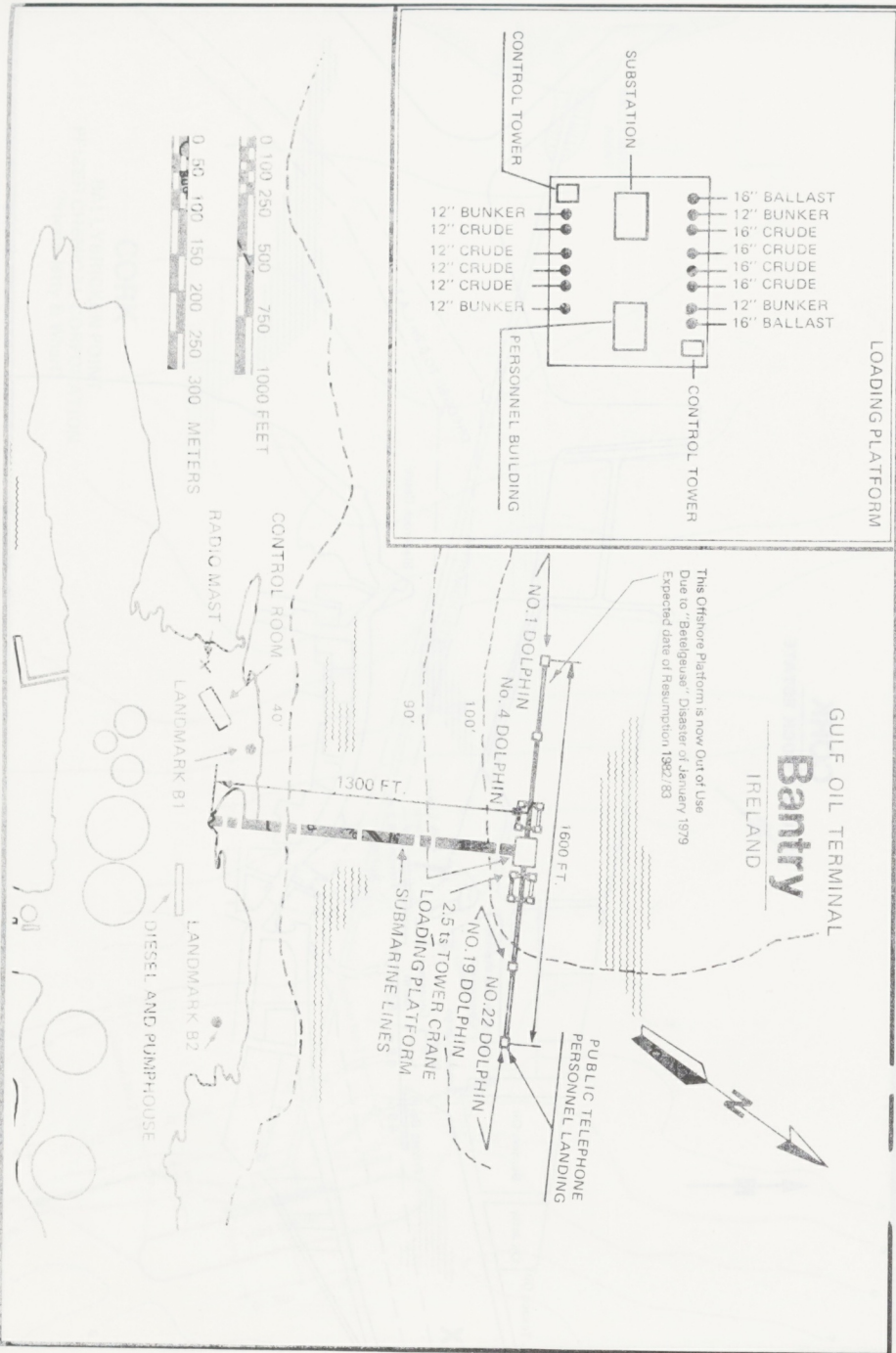
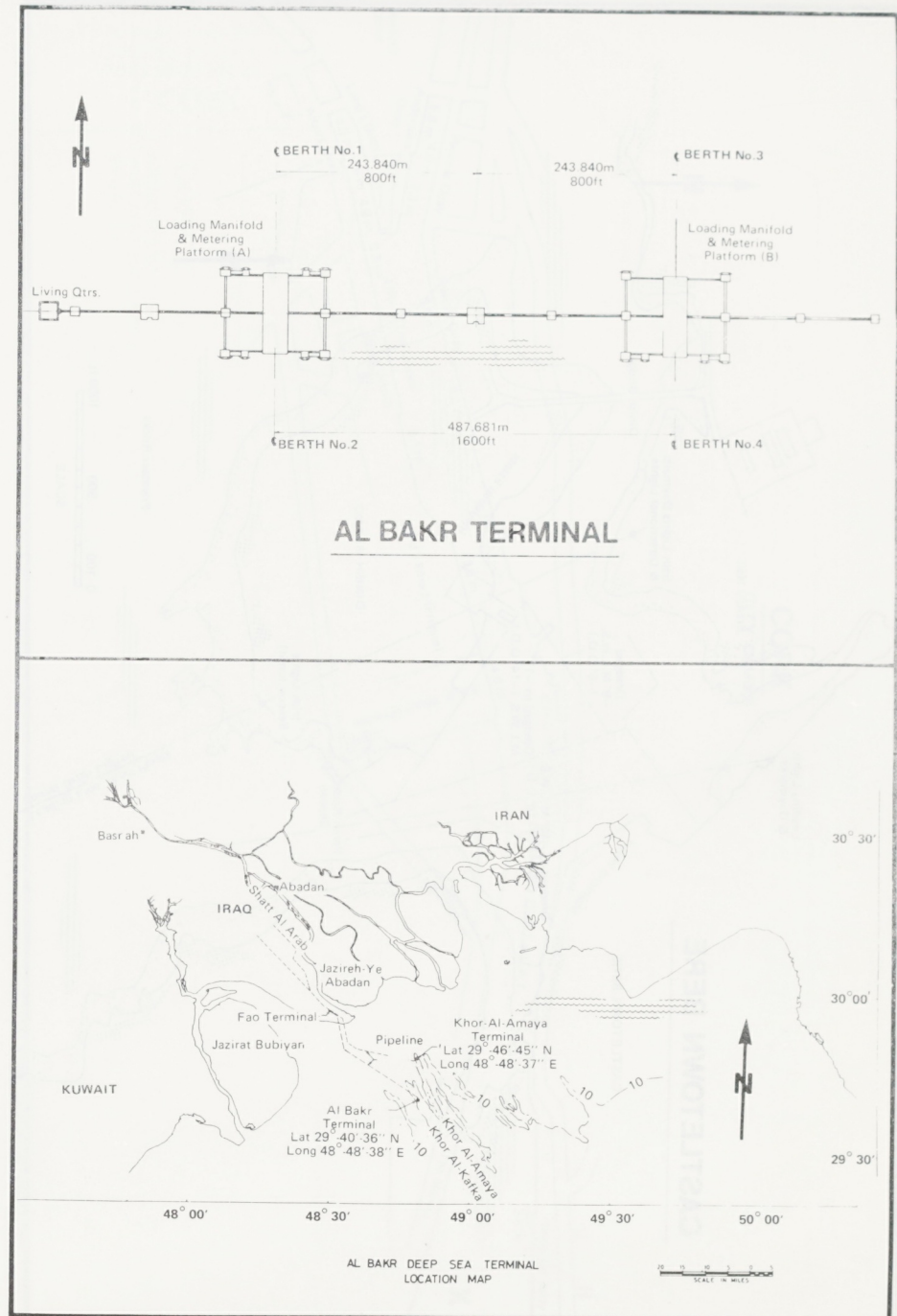


"Plan supplied by Ship's Master"

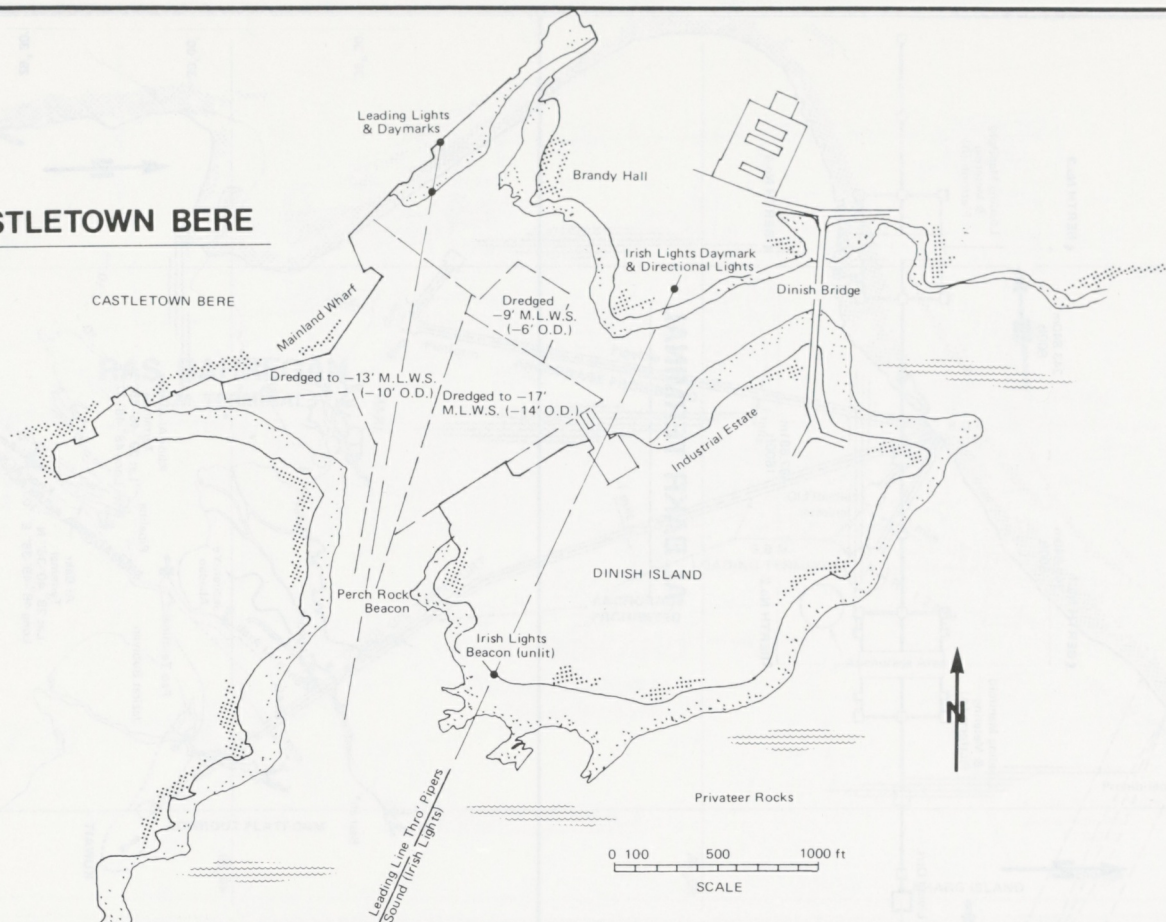




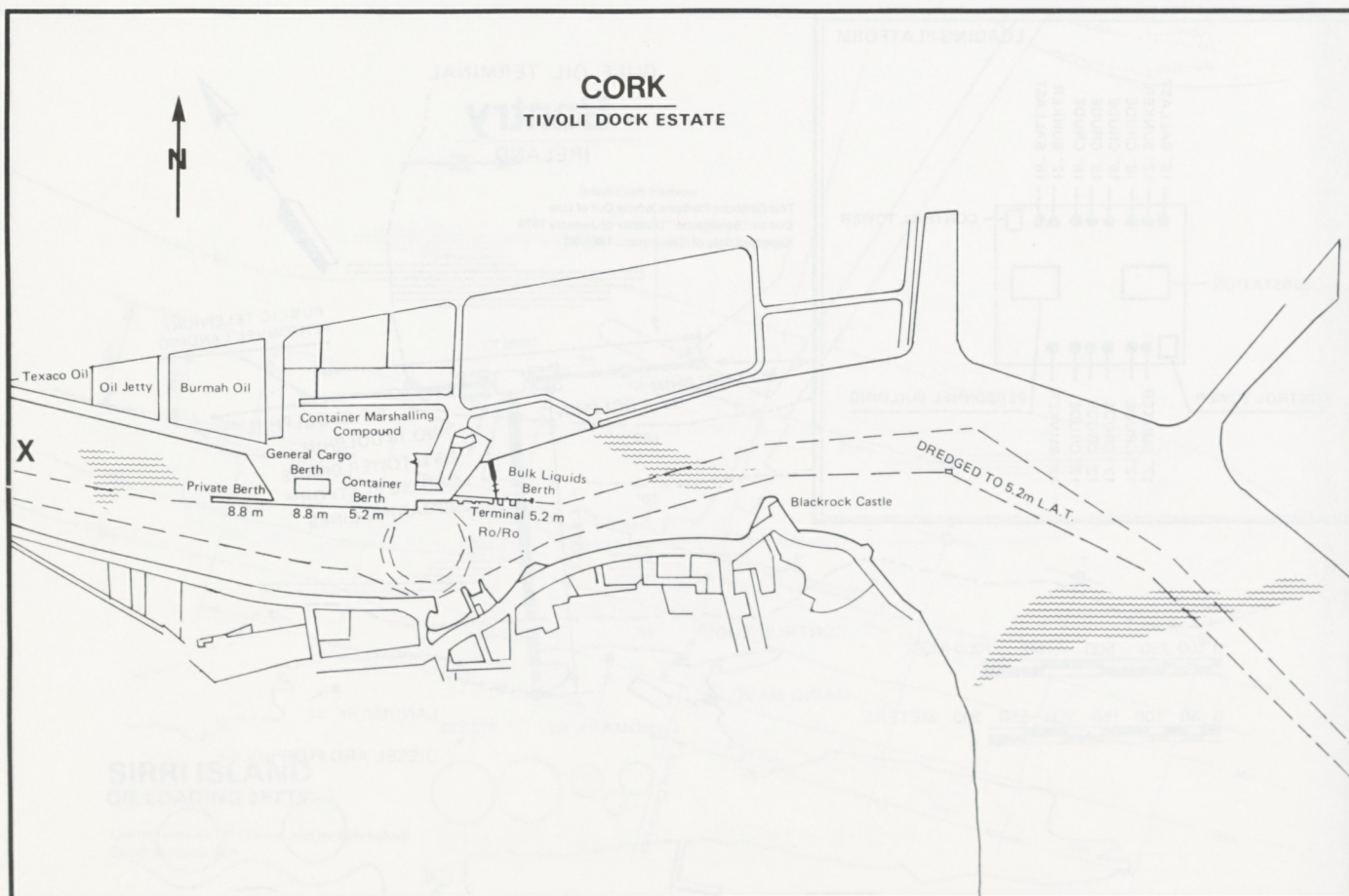


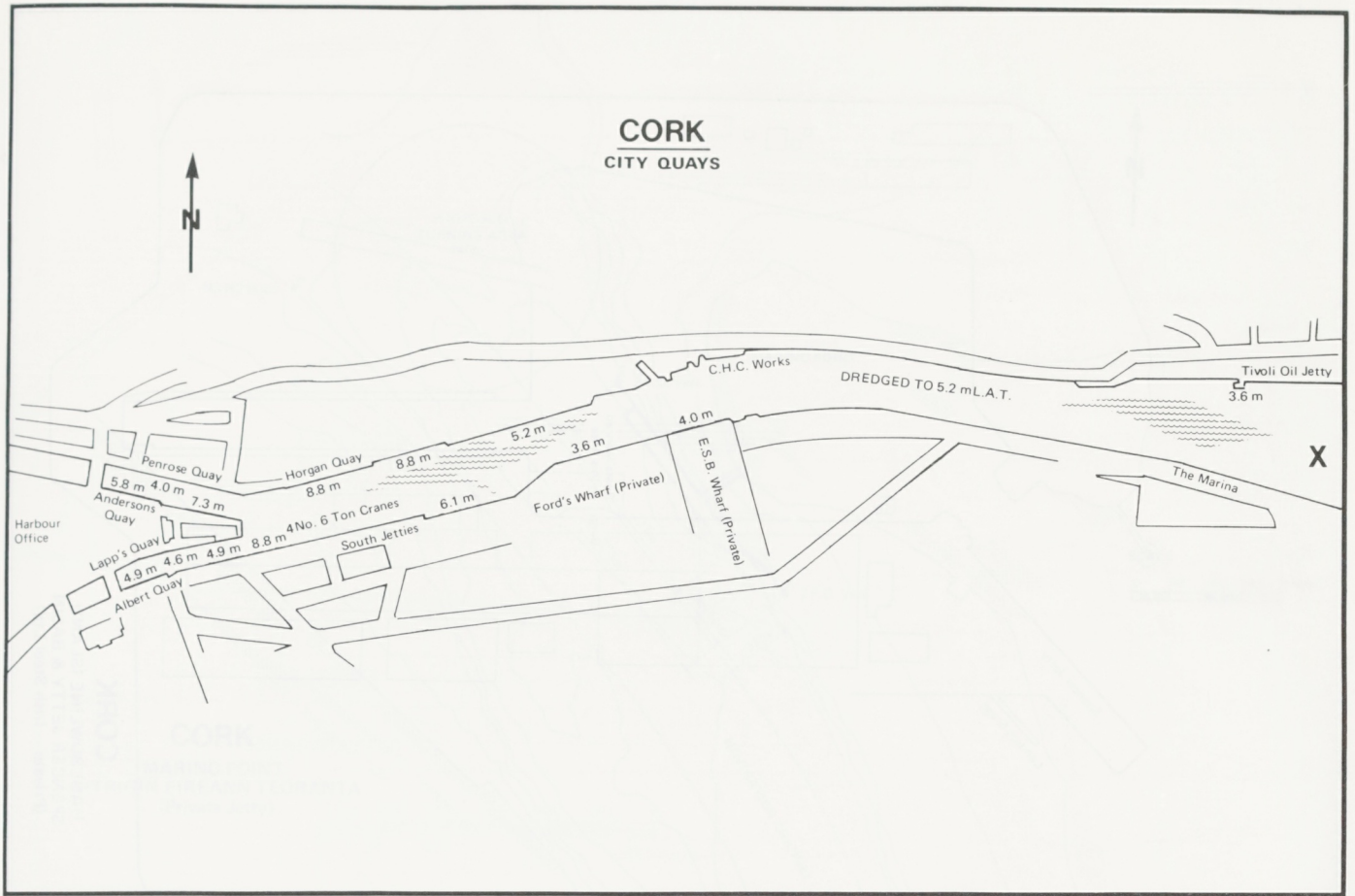


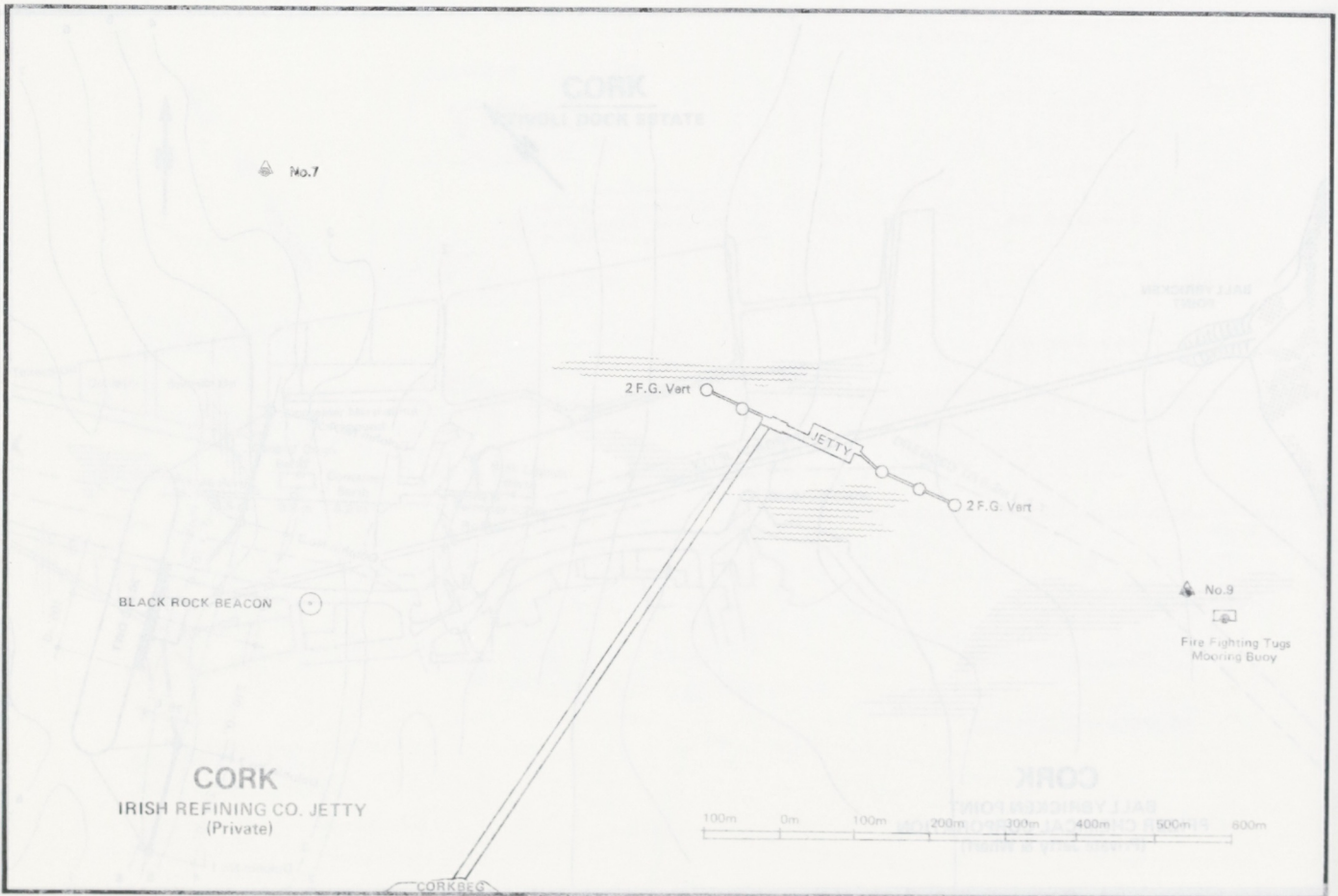
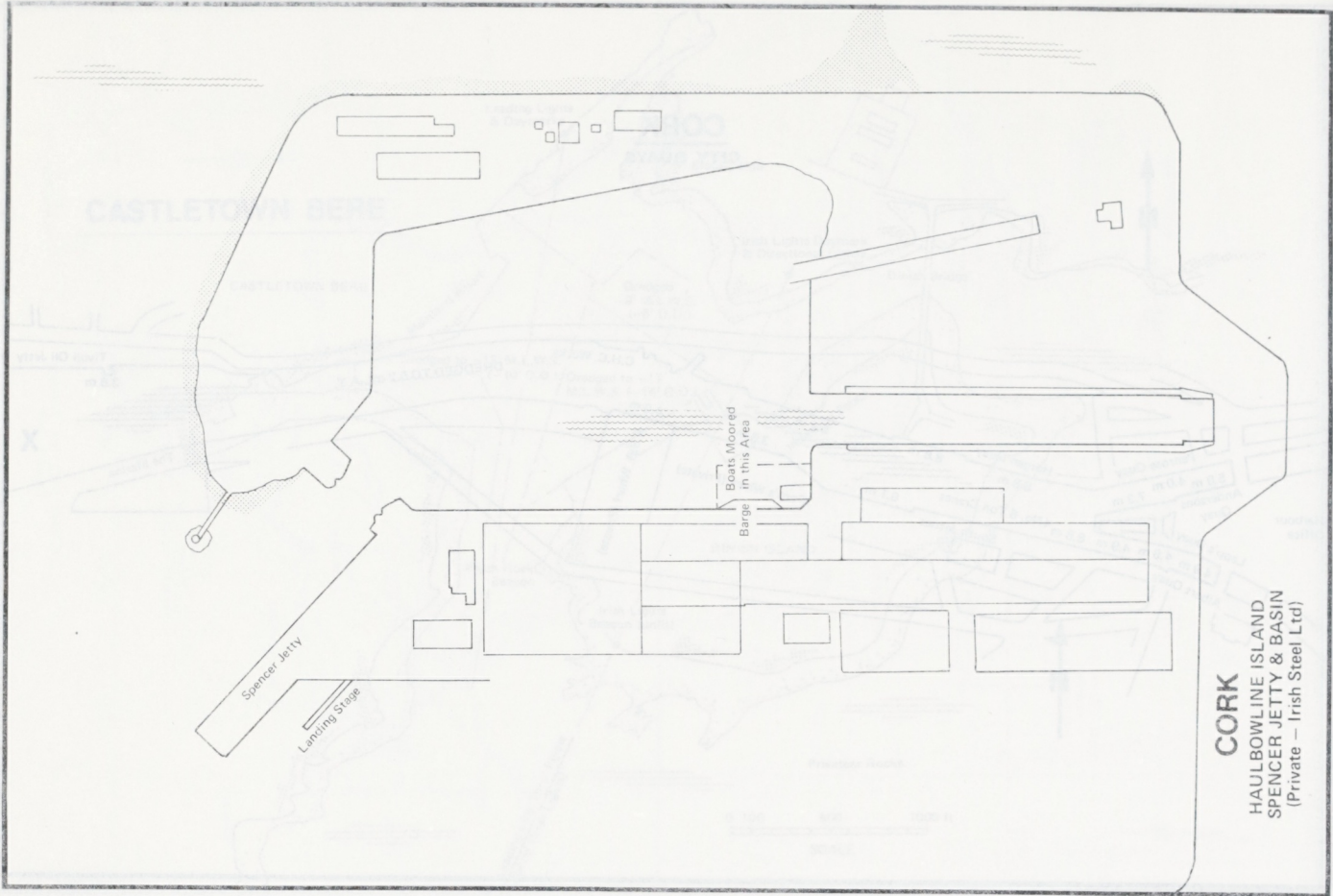
CASTLETOWN BERE

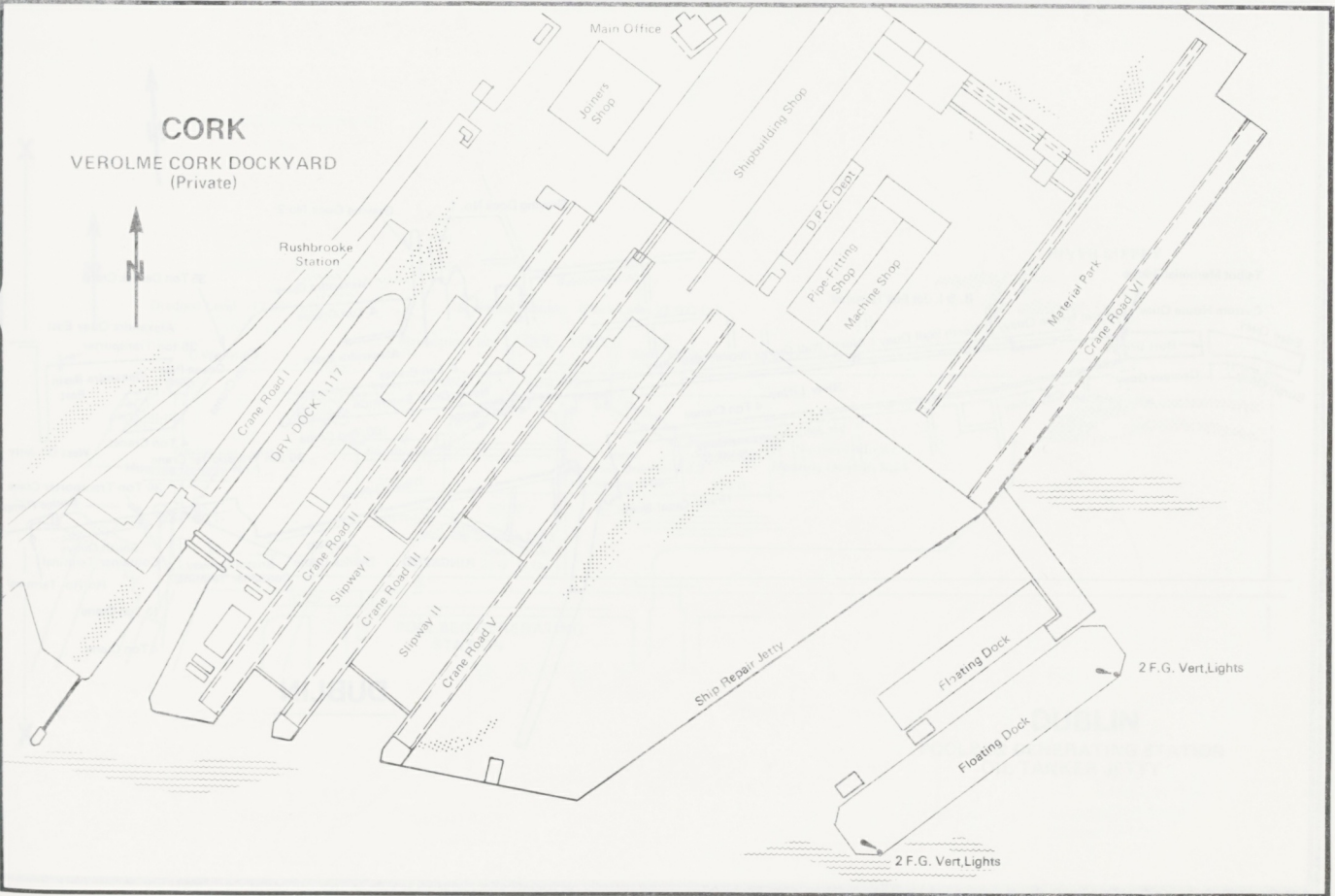
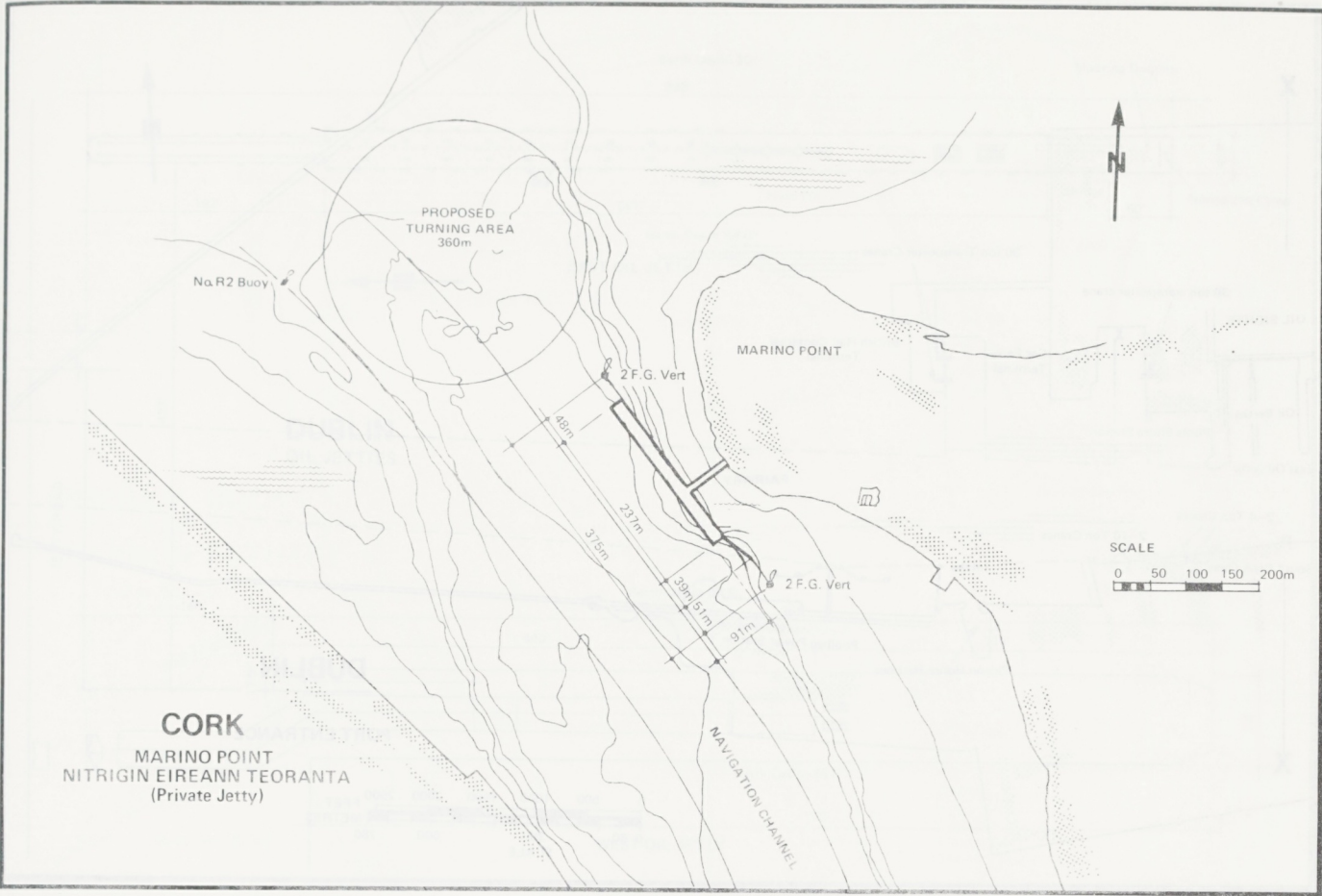


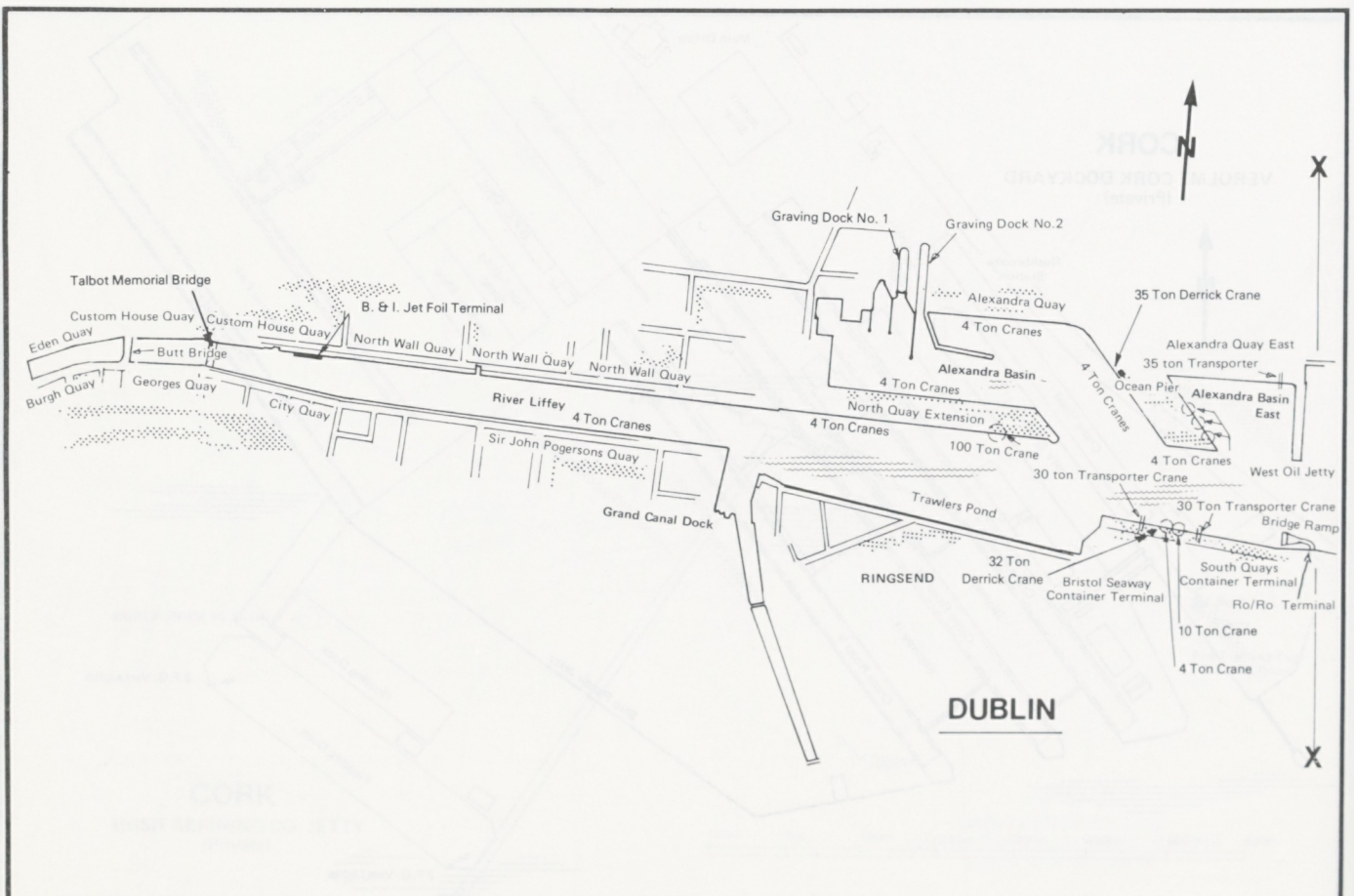
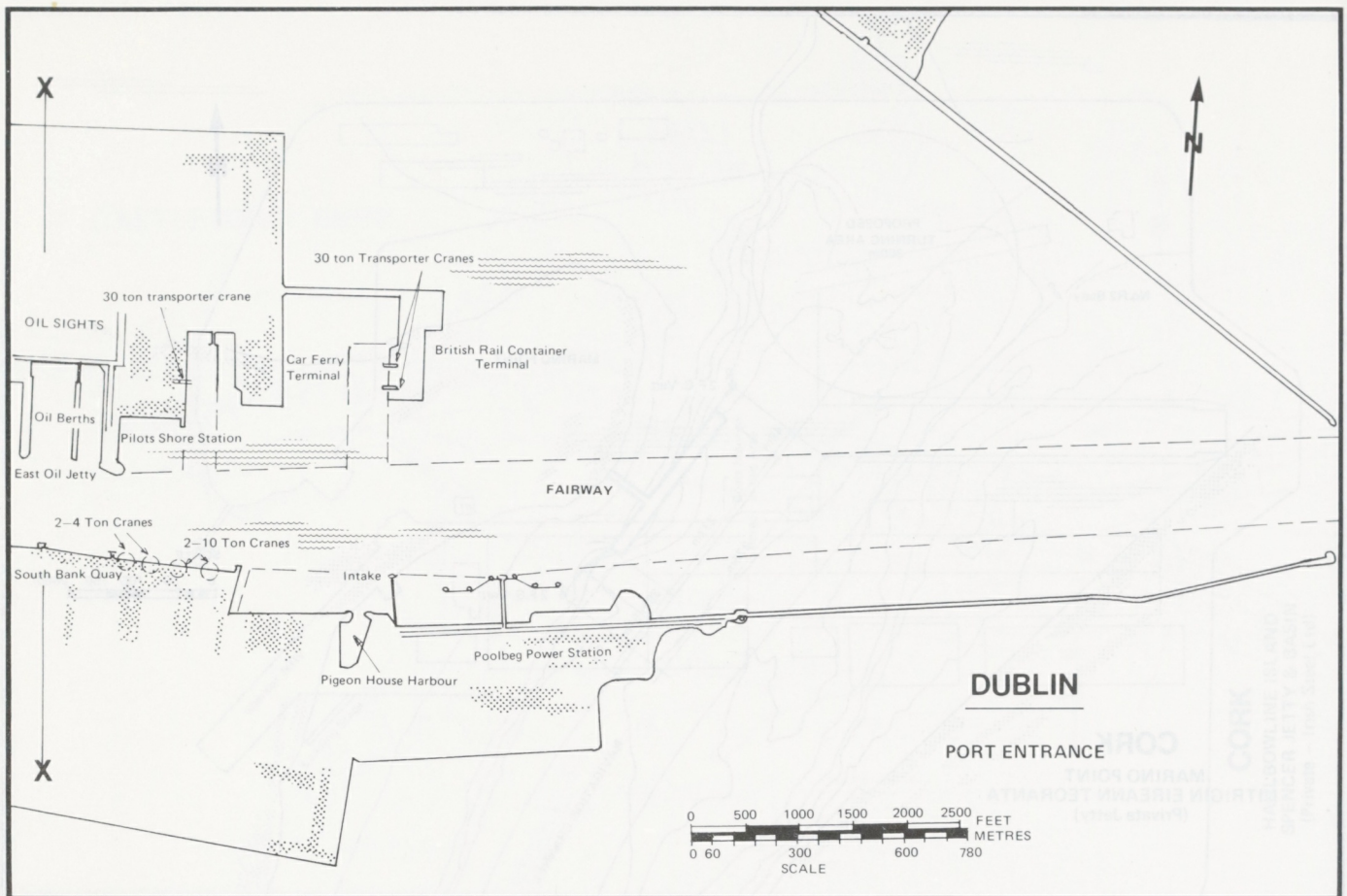
CORK TIVOLI DOCK ESTATE

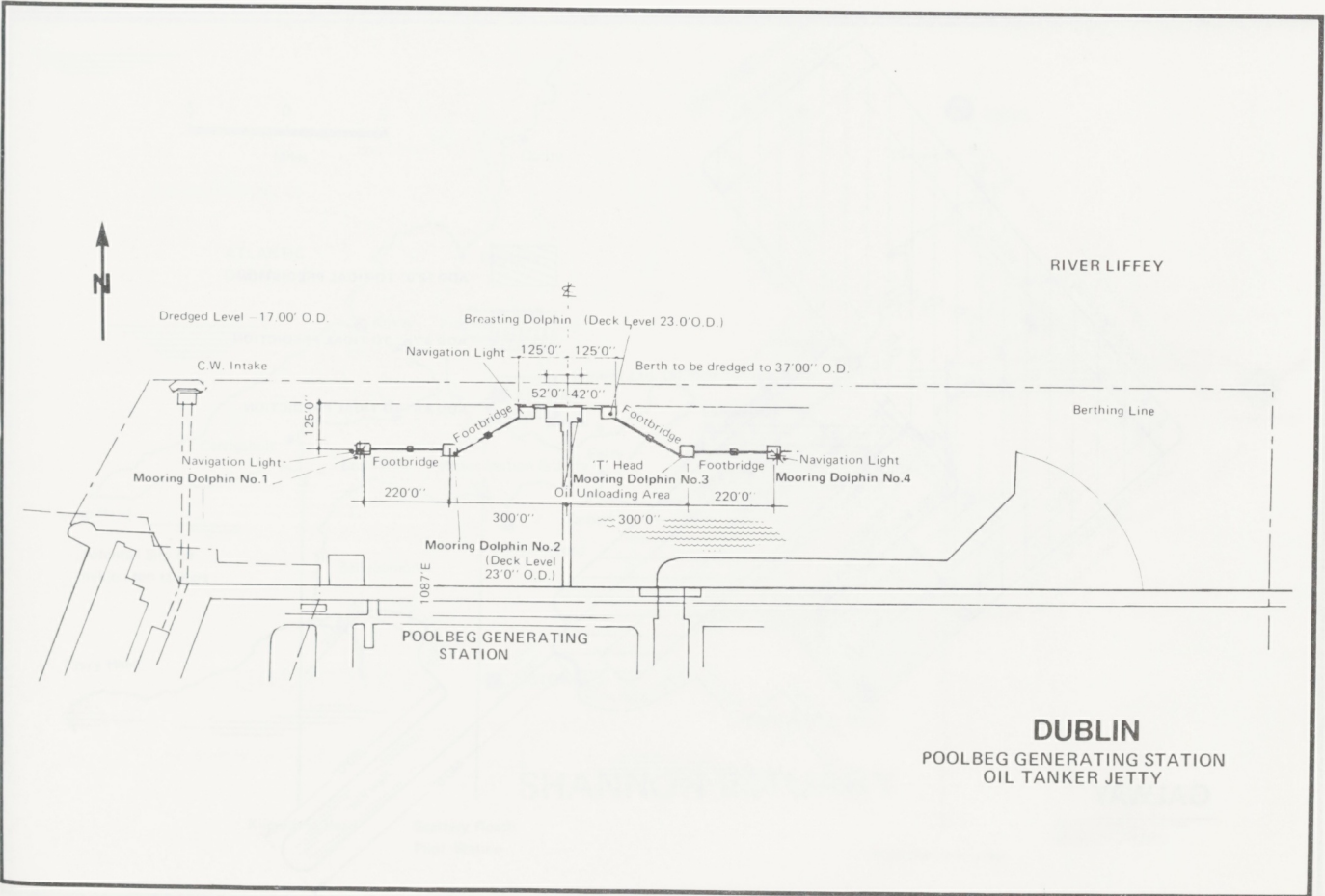
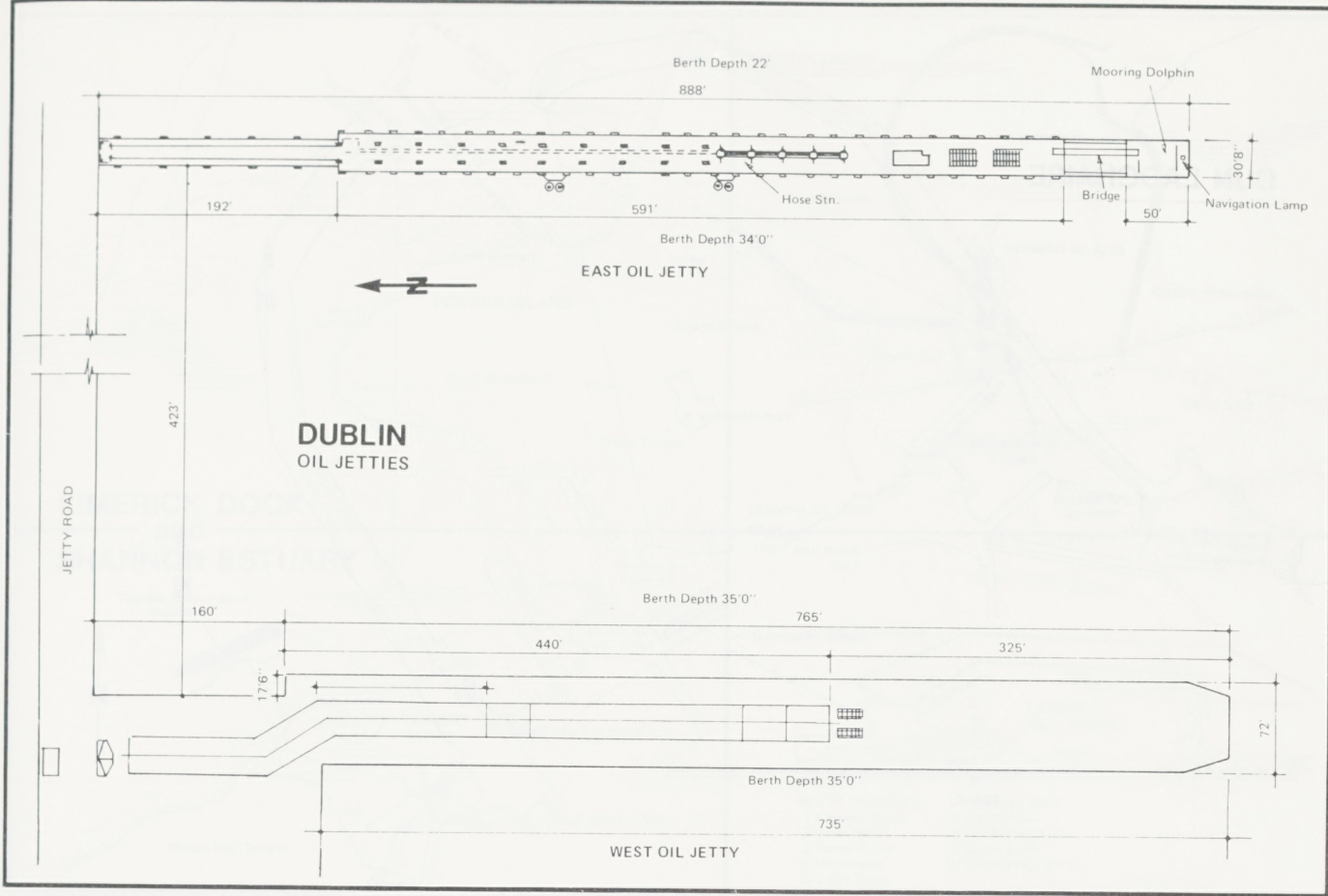




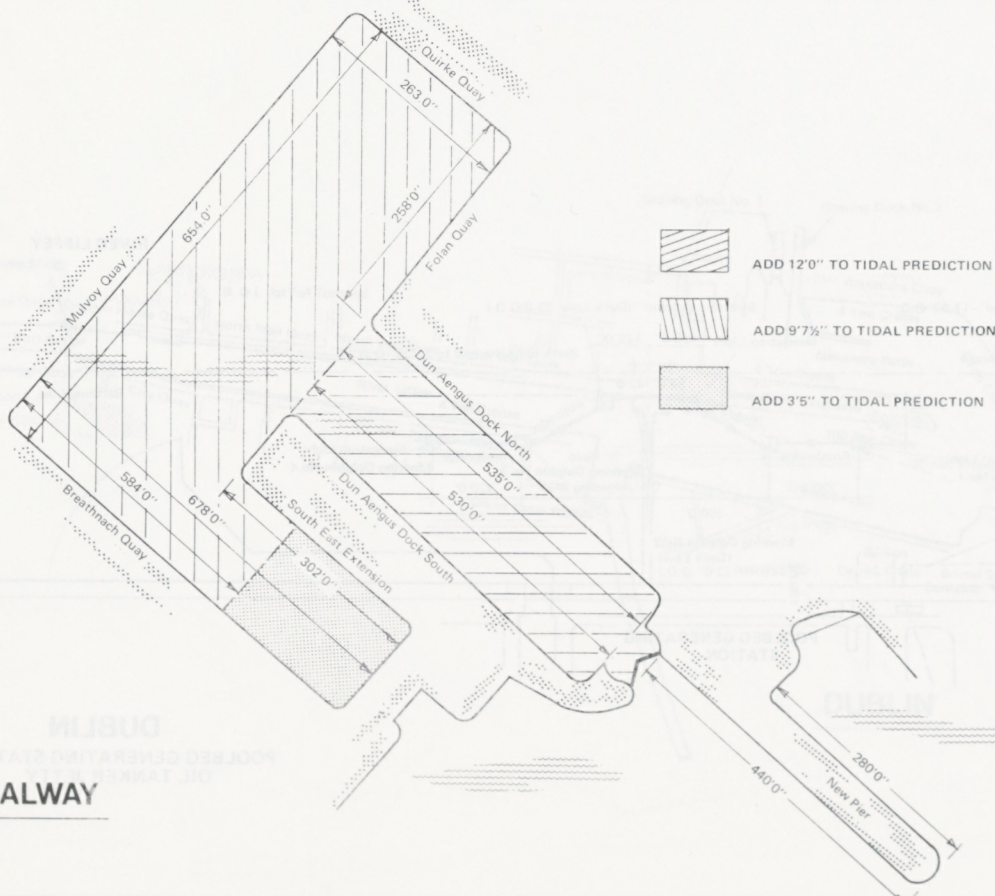
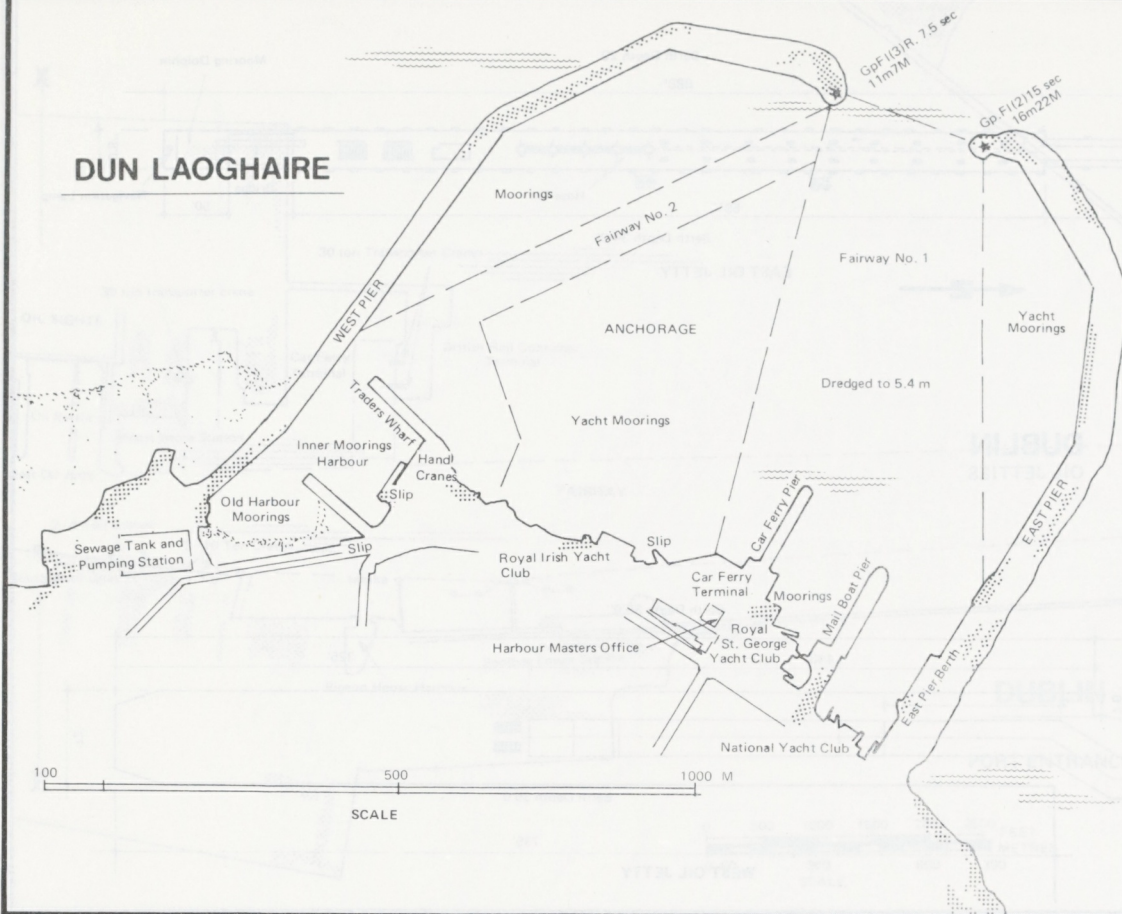


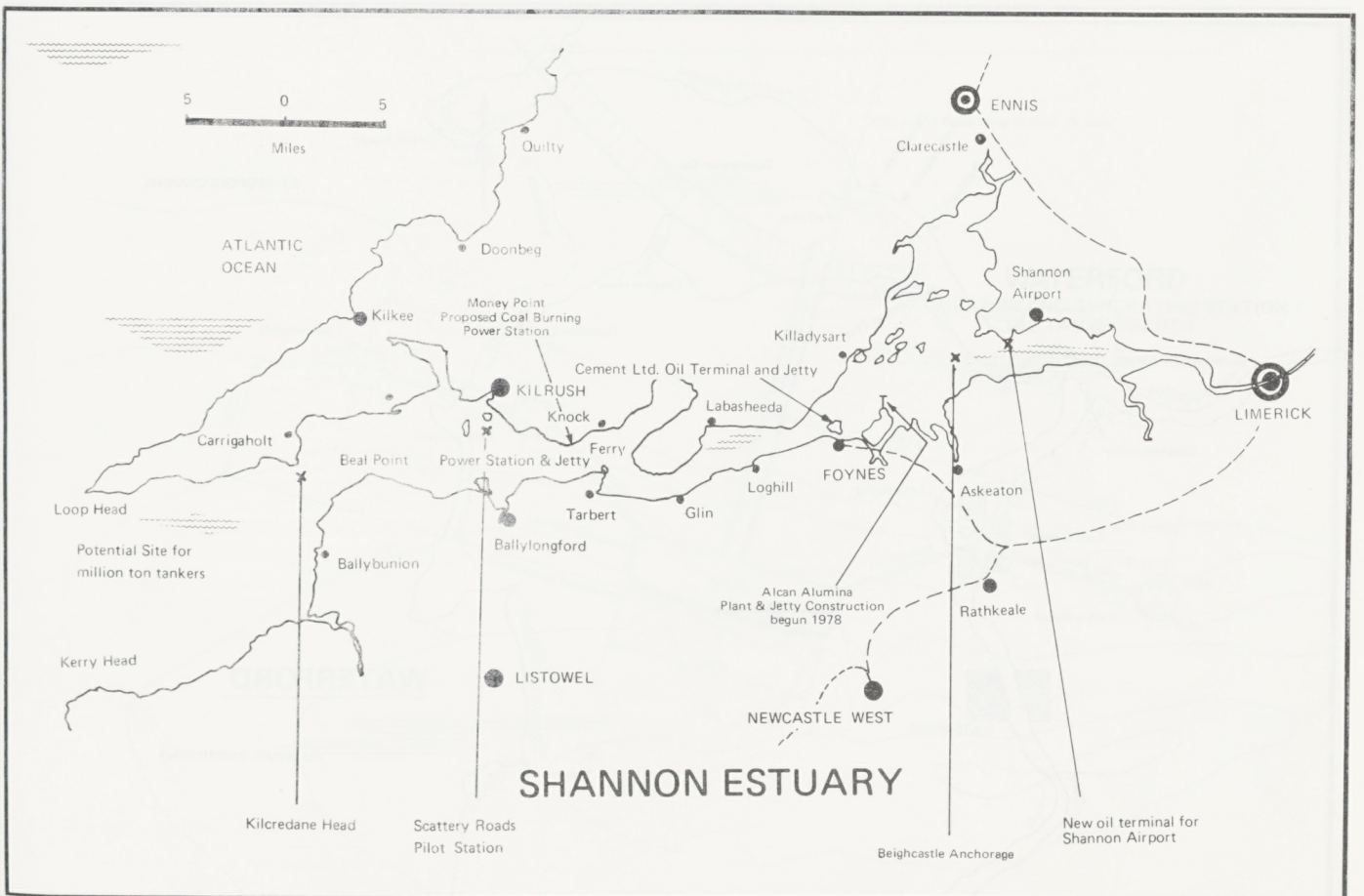
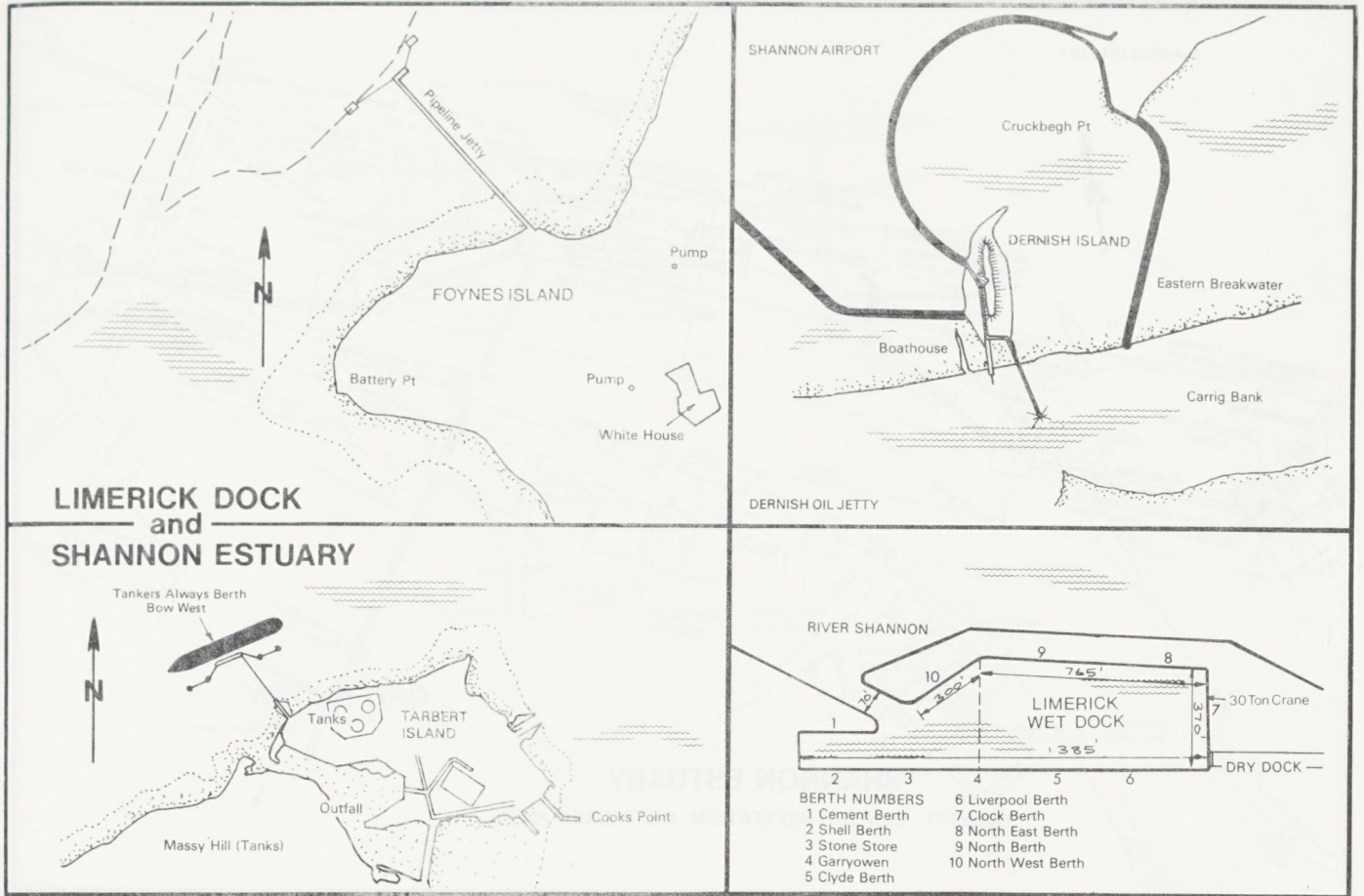


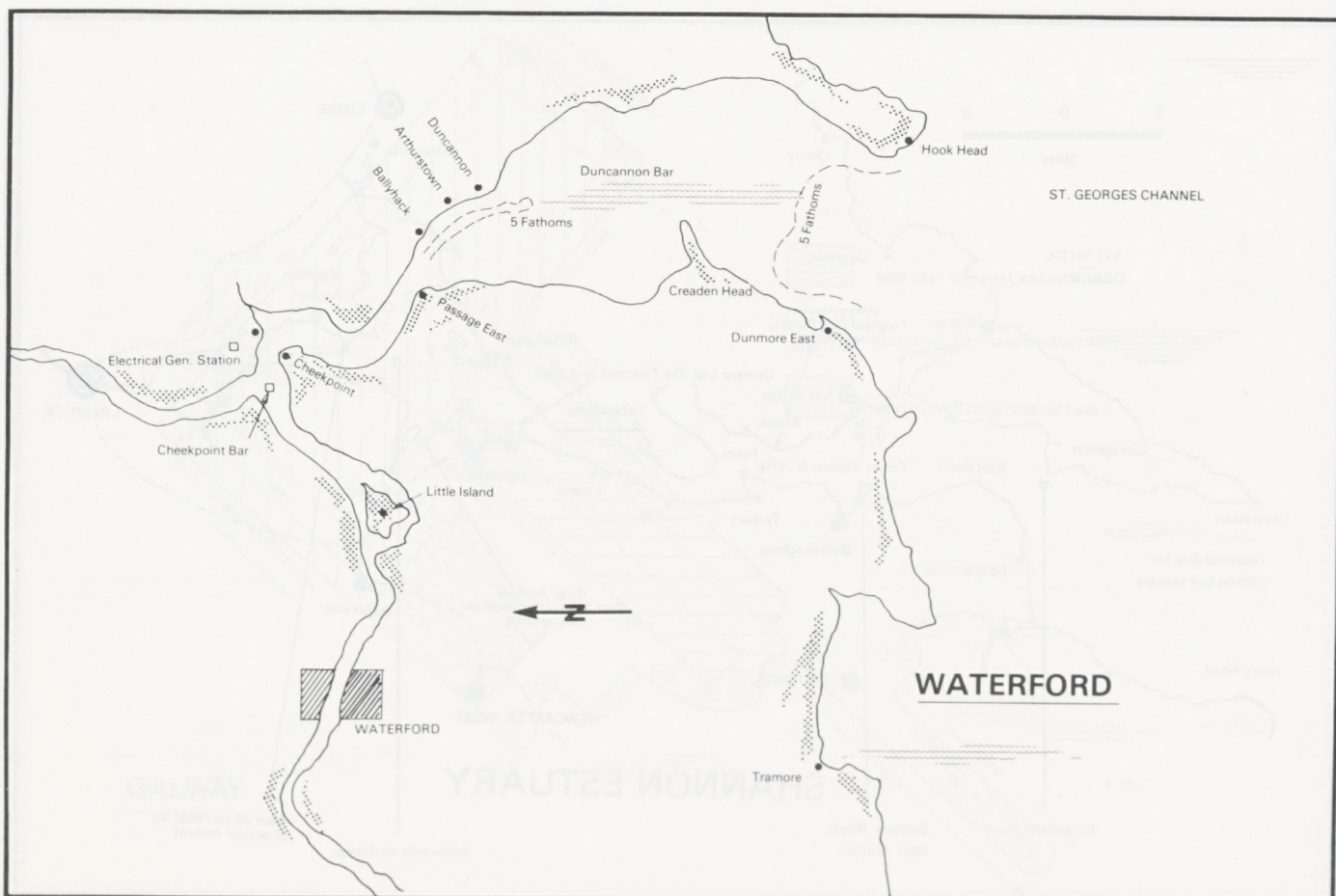
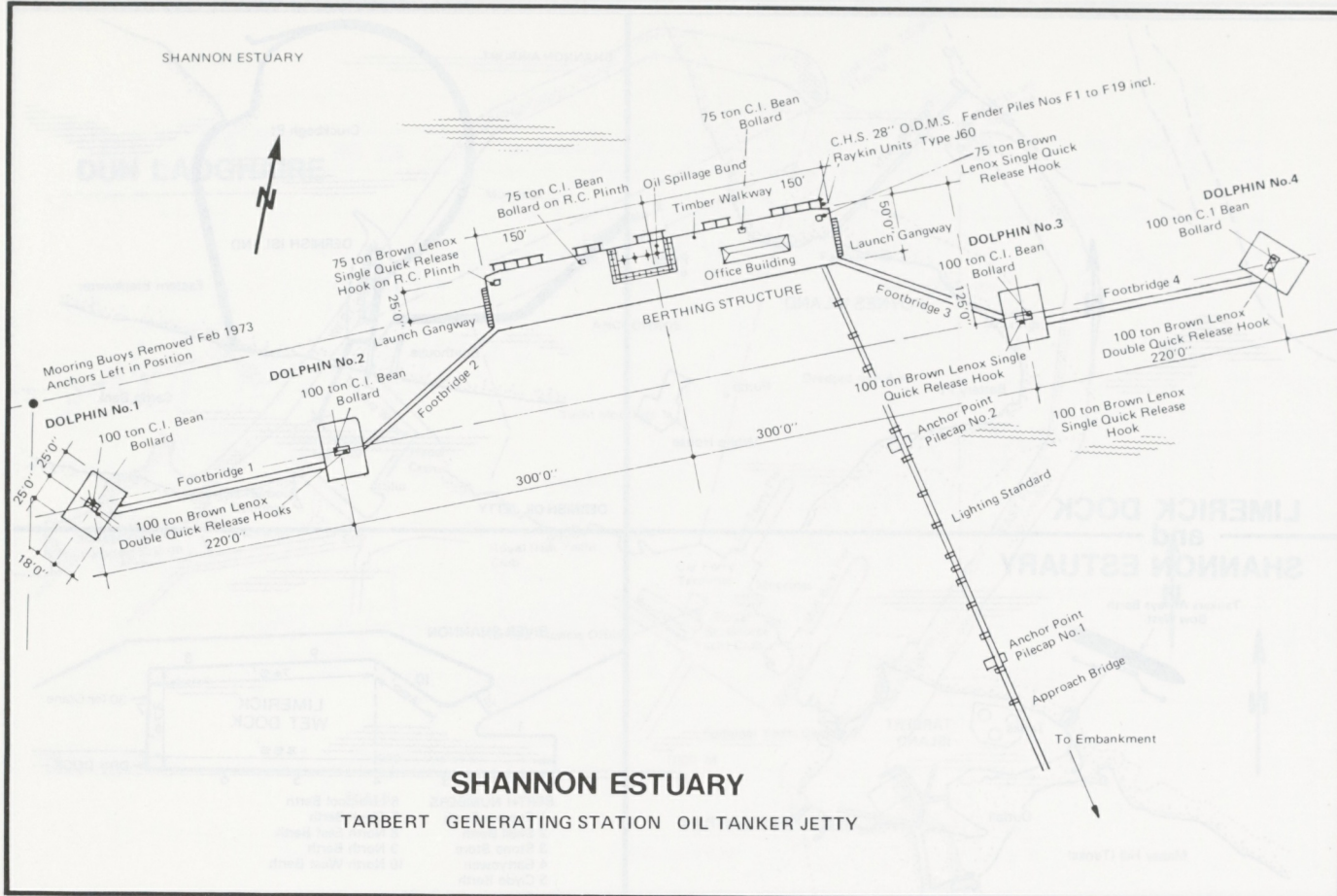


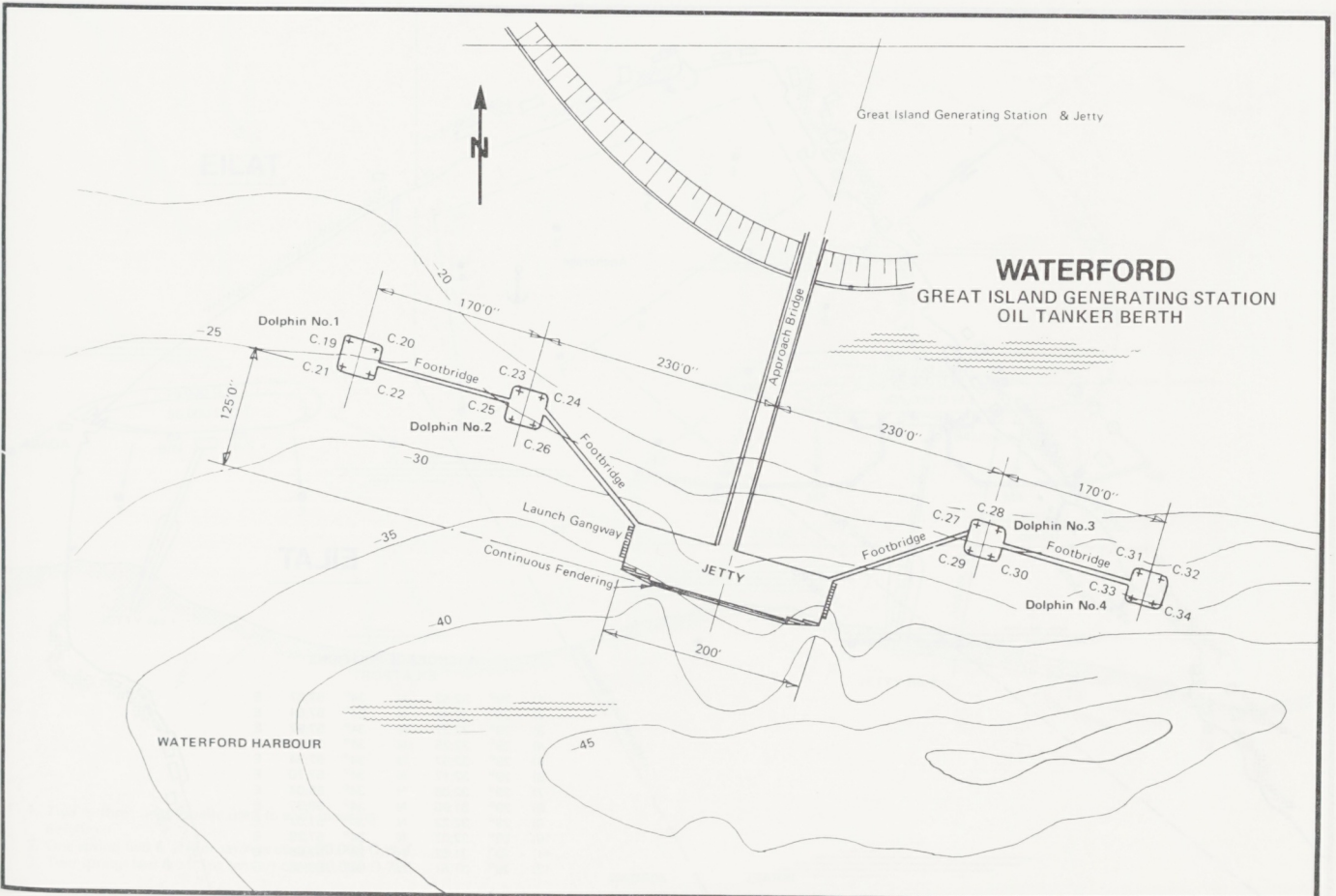
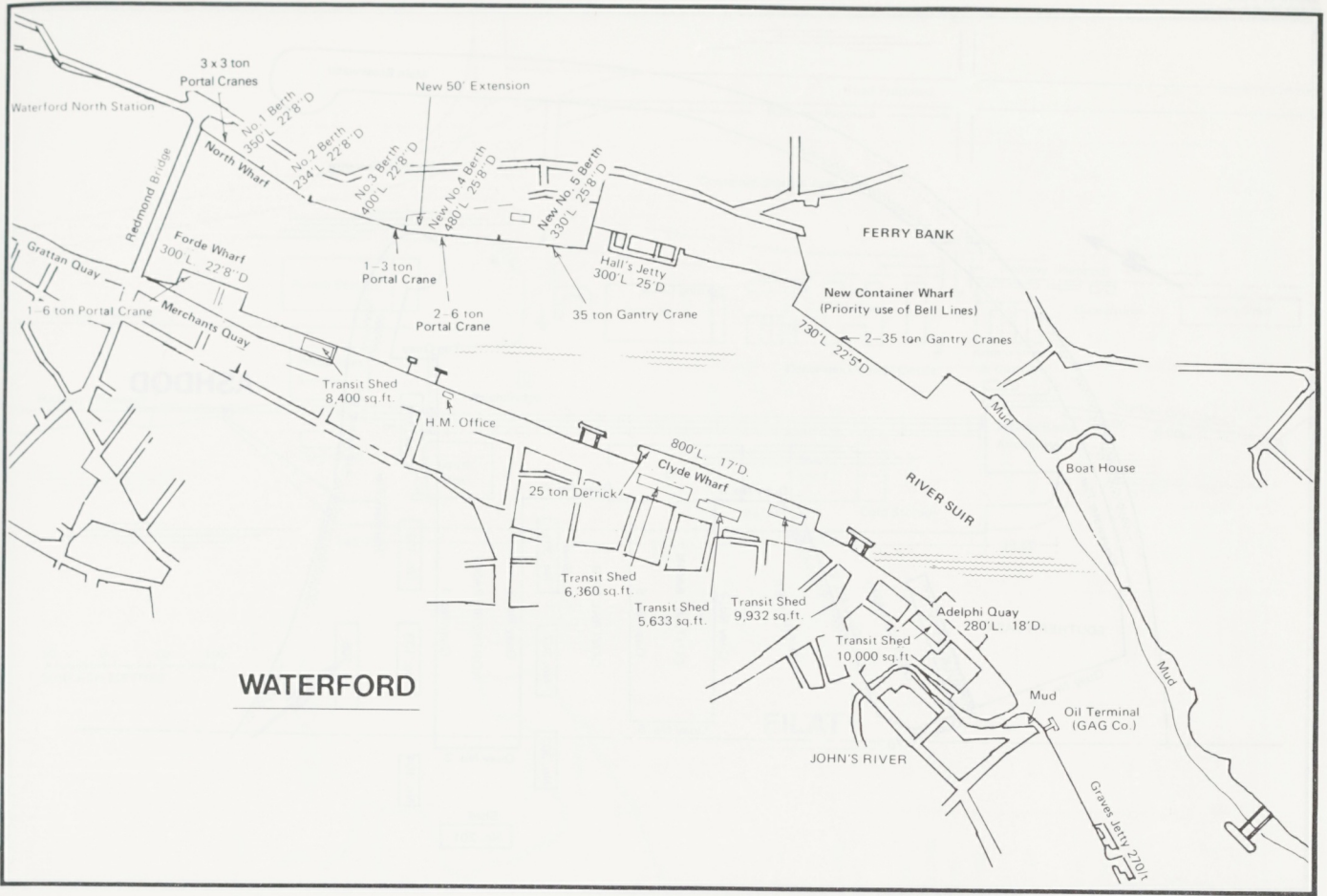


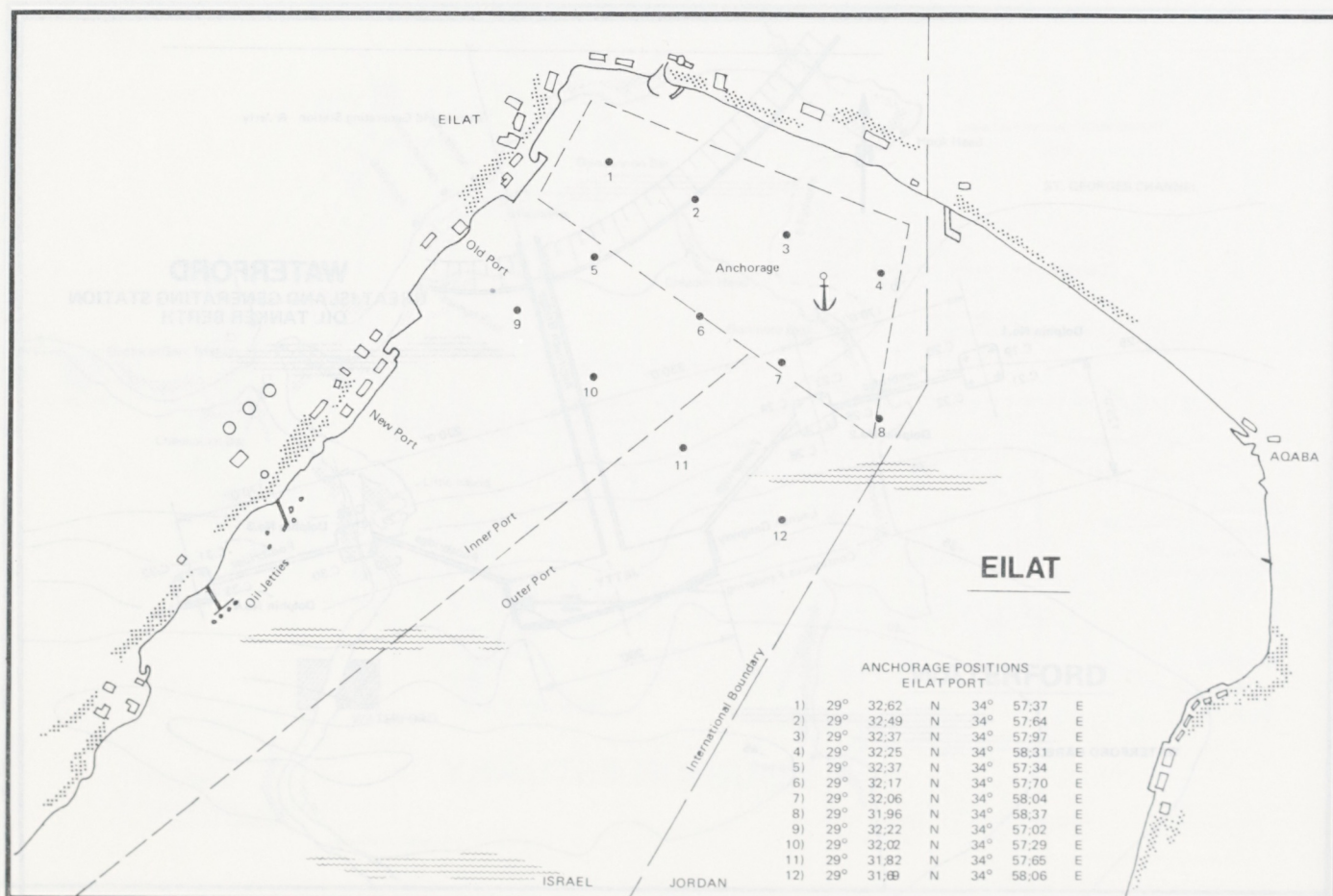
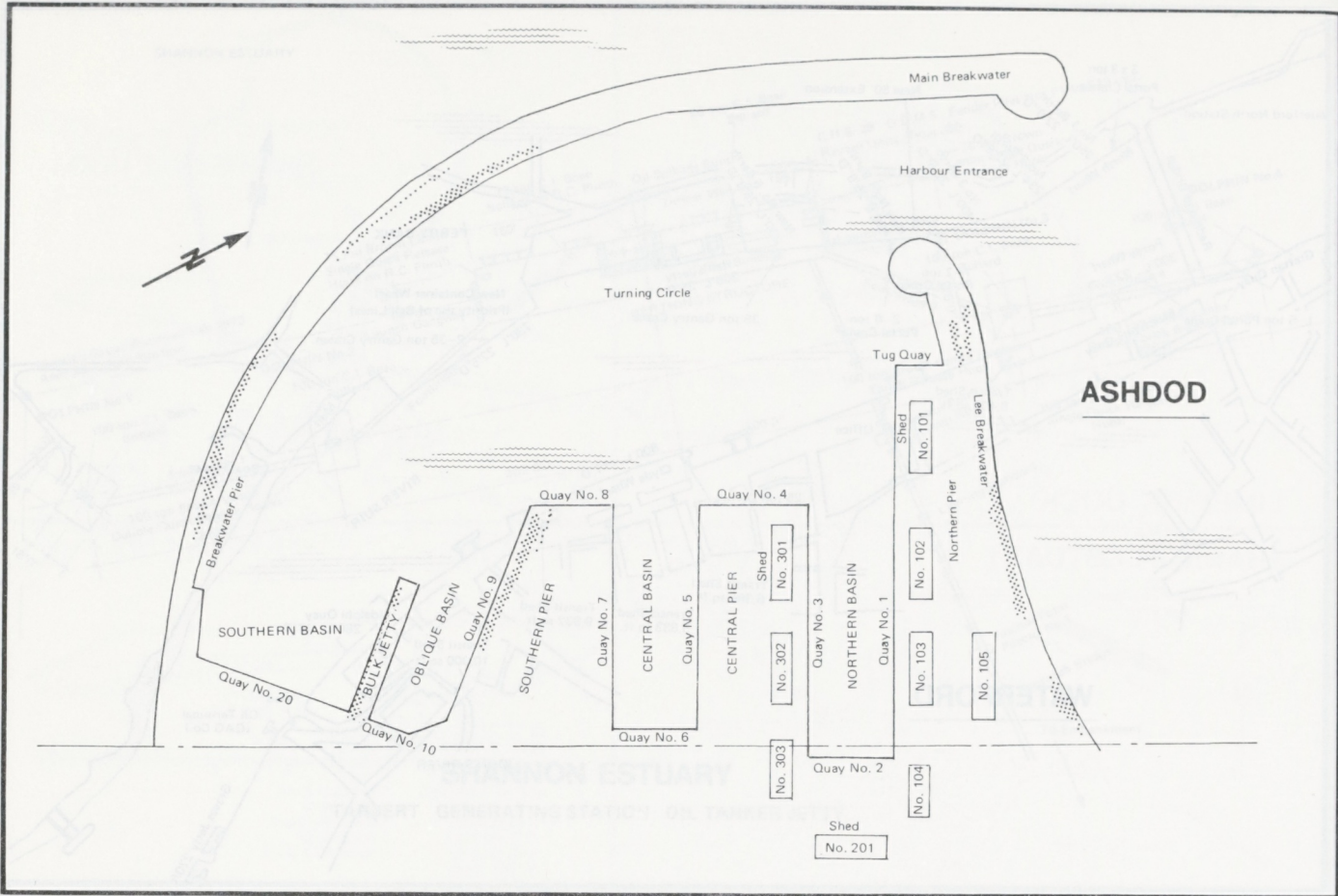
DUN LAOGHAIRE

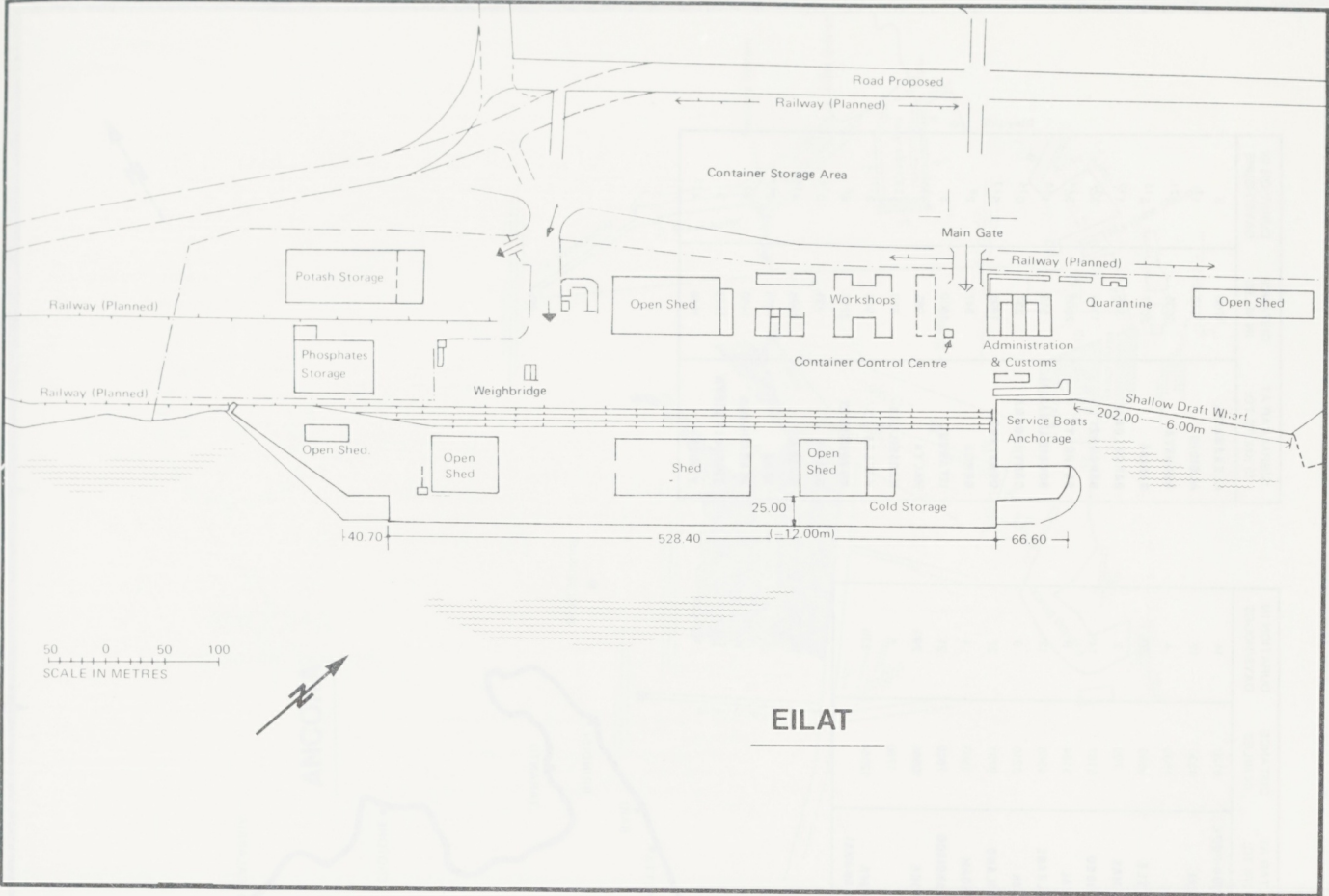




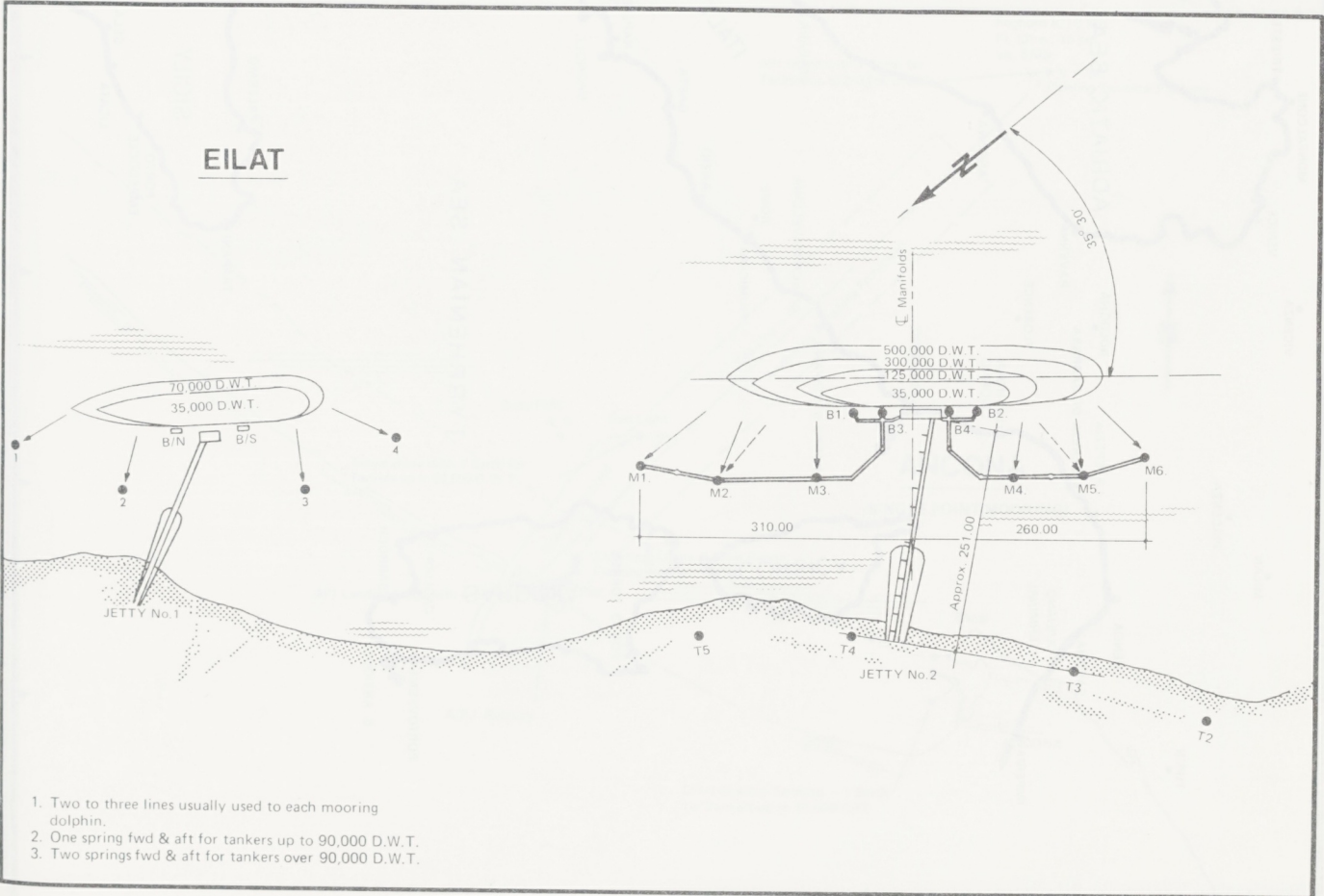








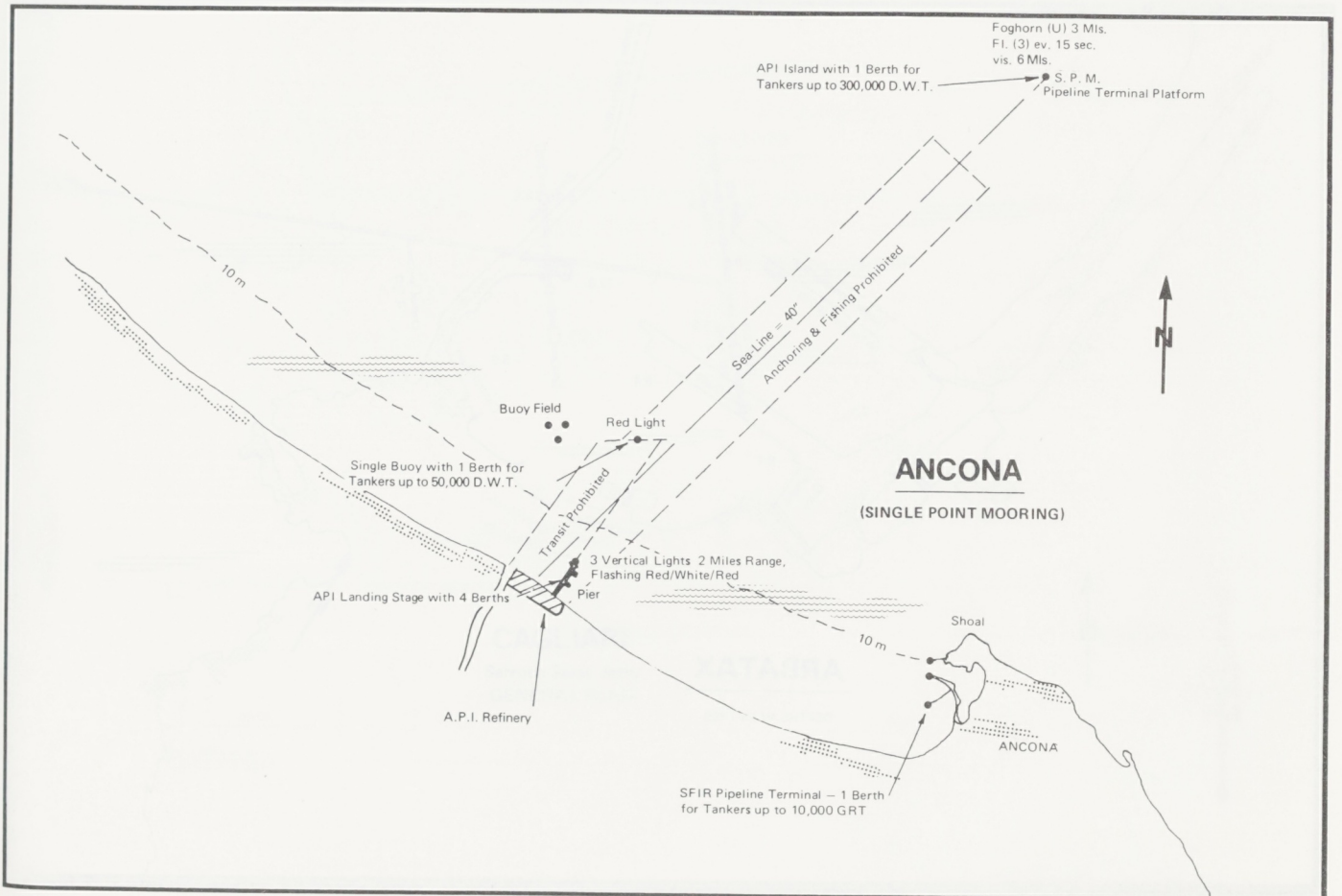
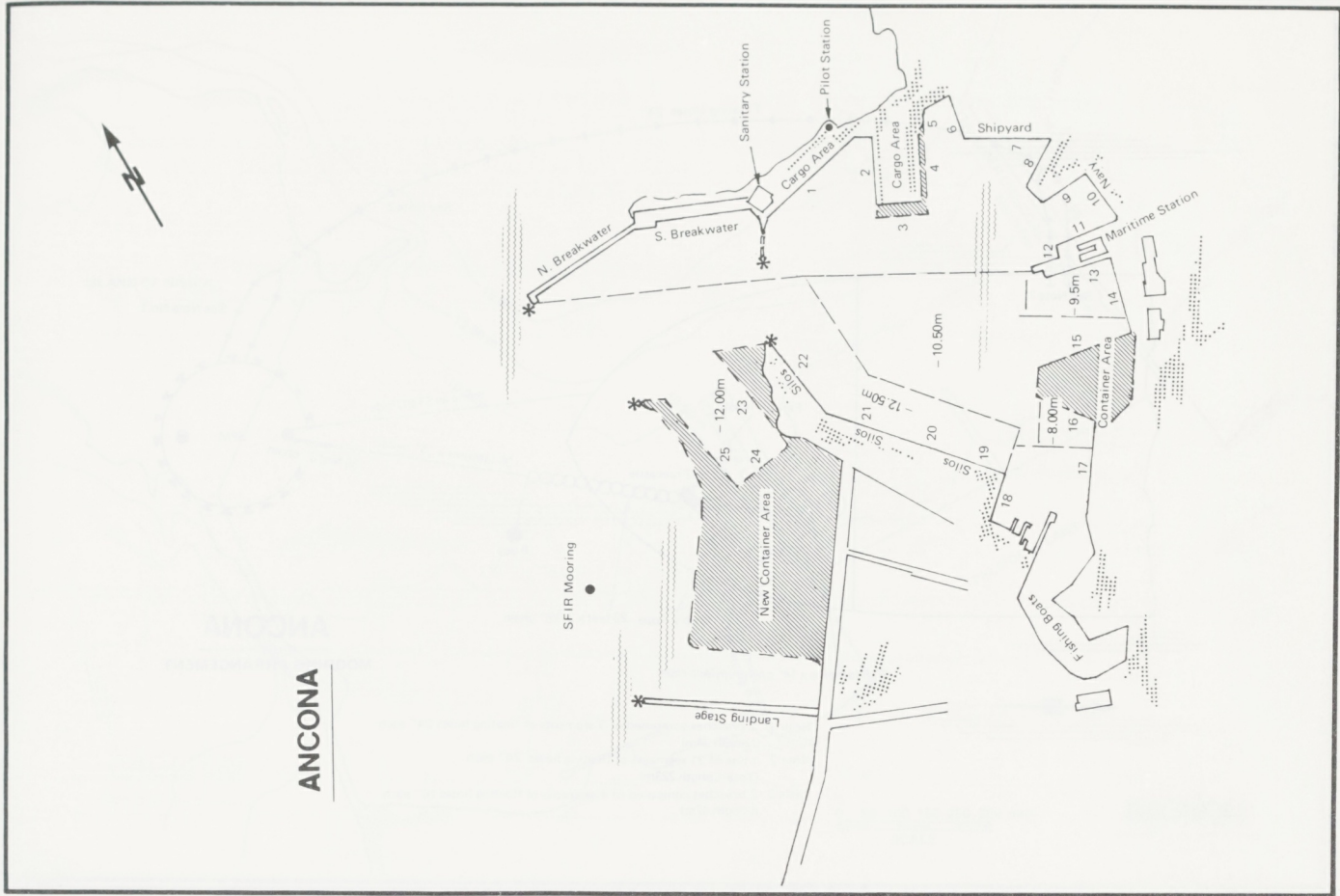
EILAT

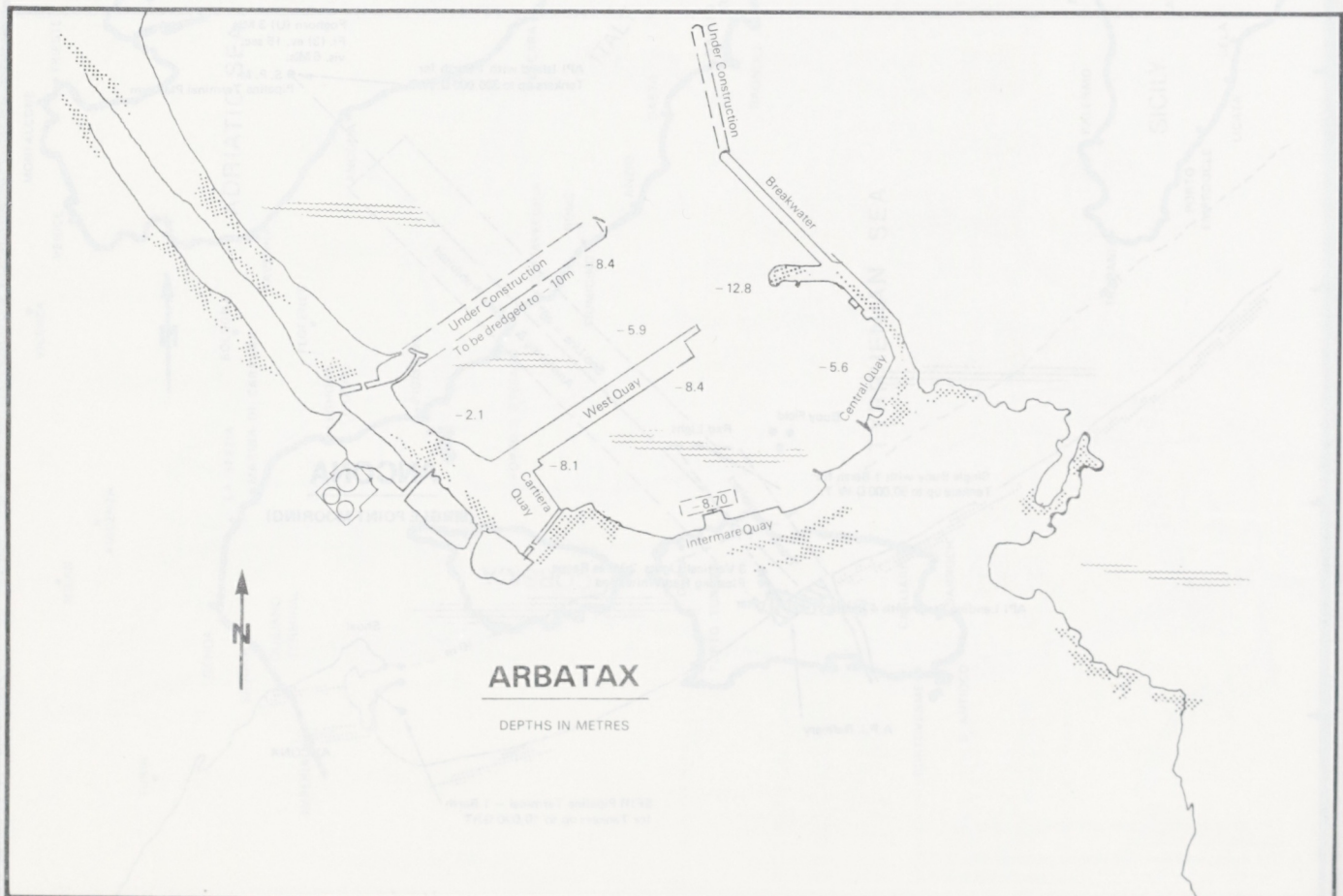
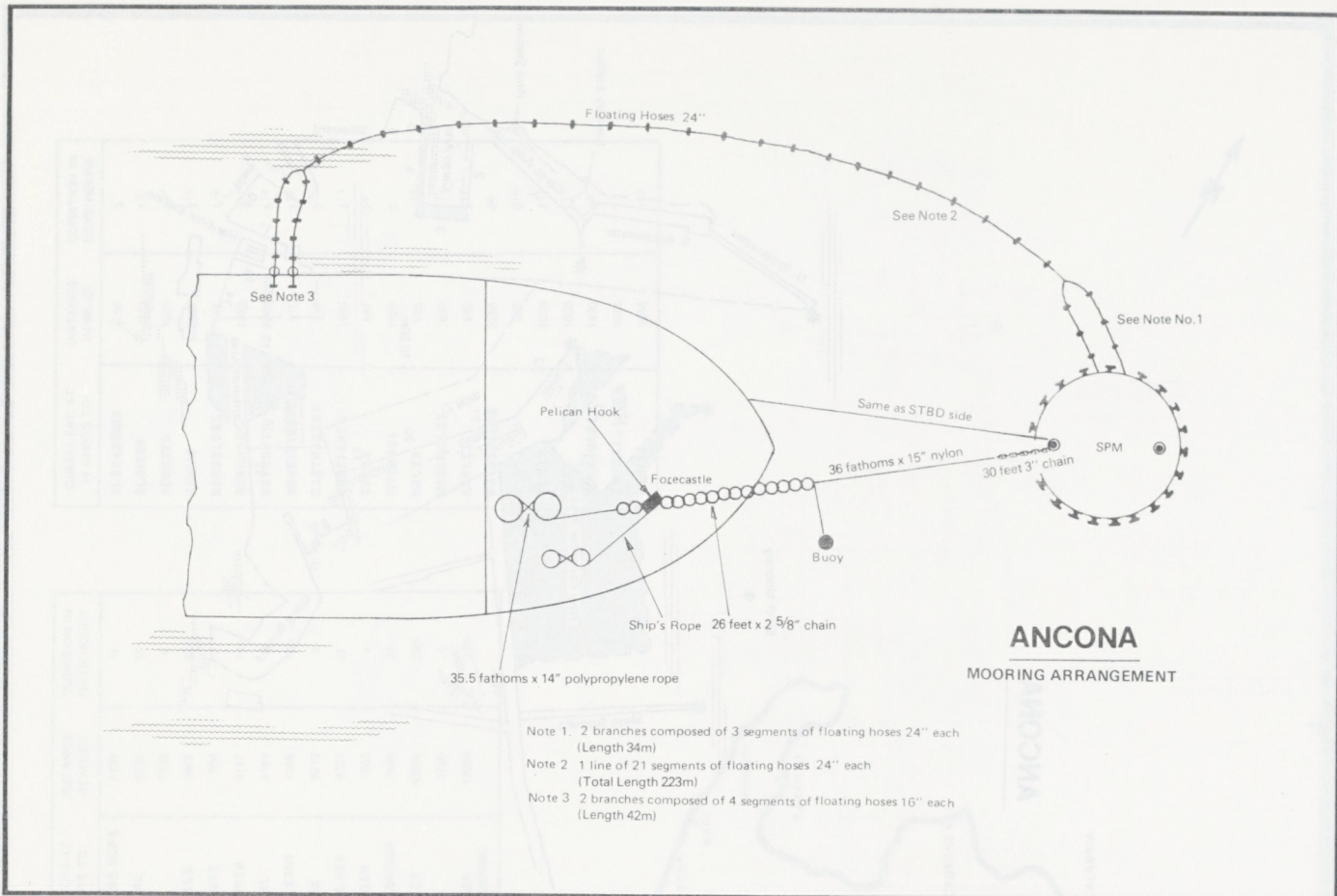


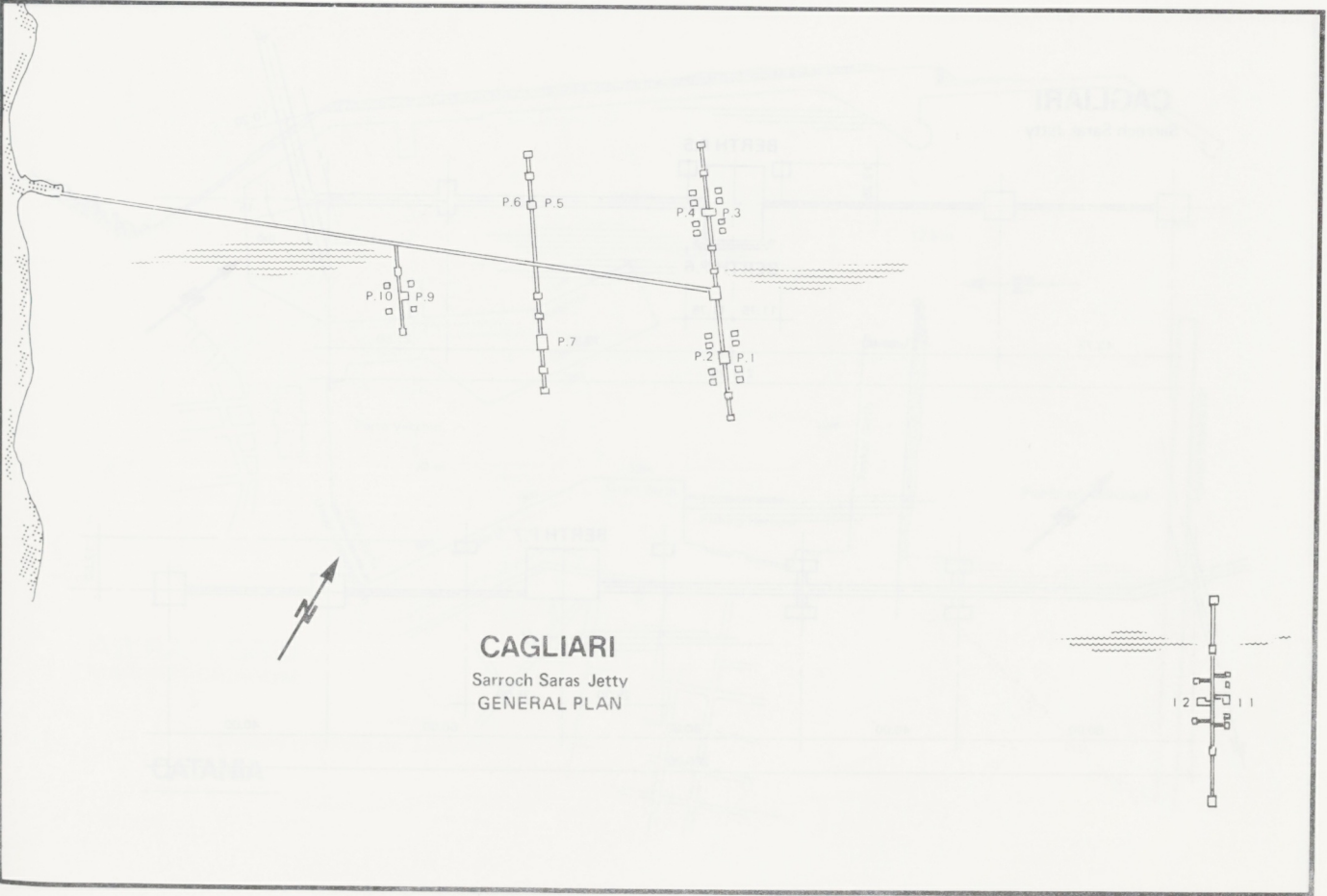
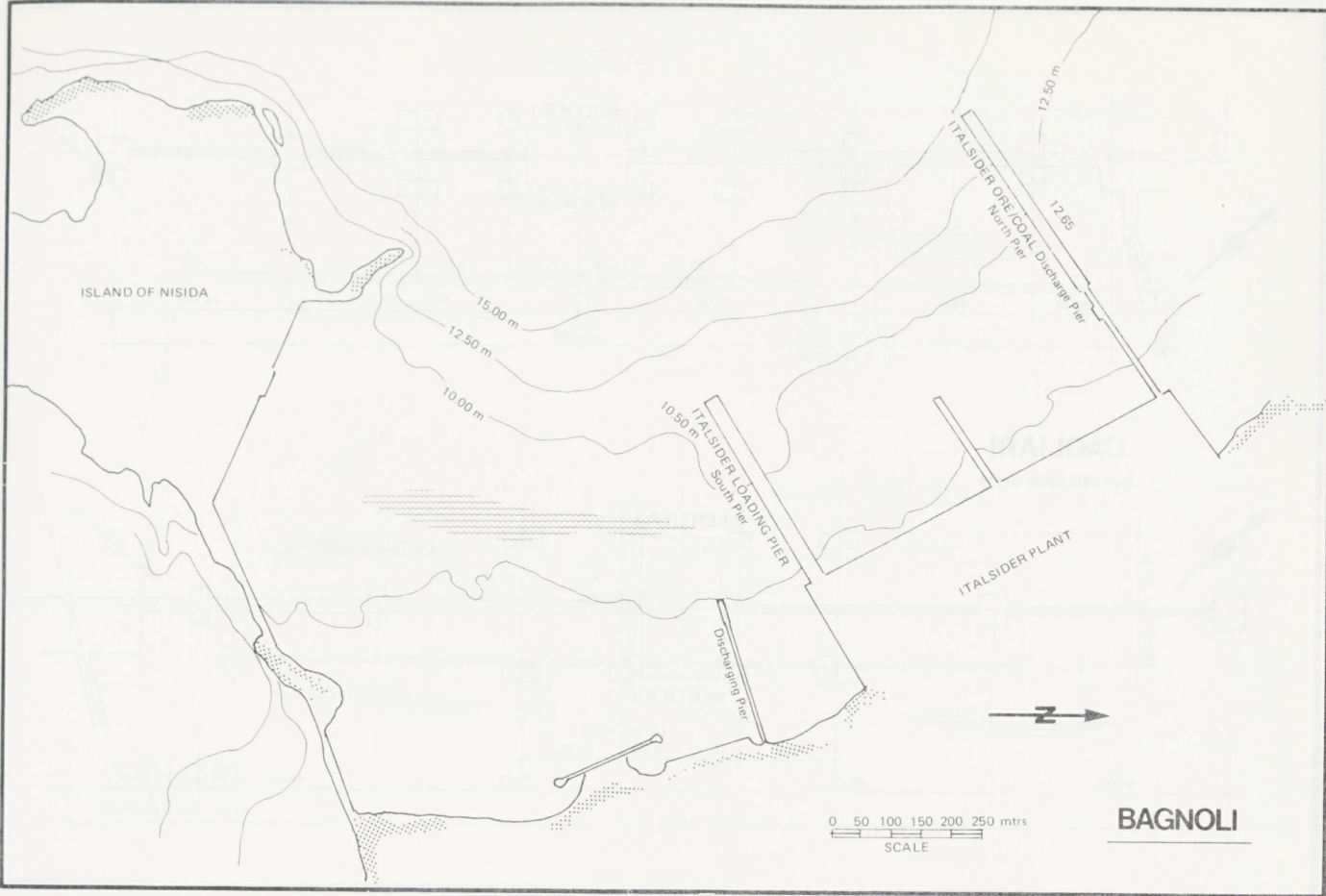


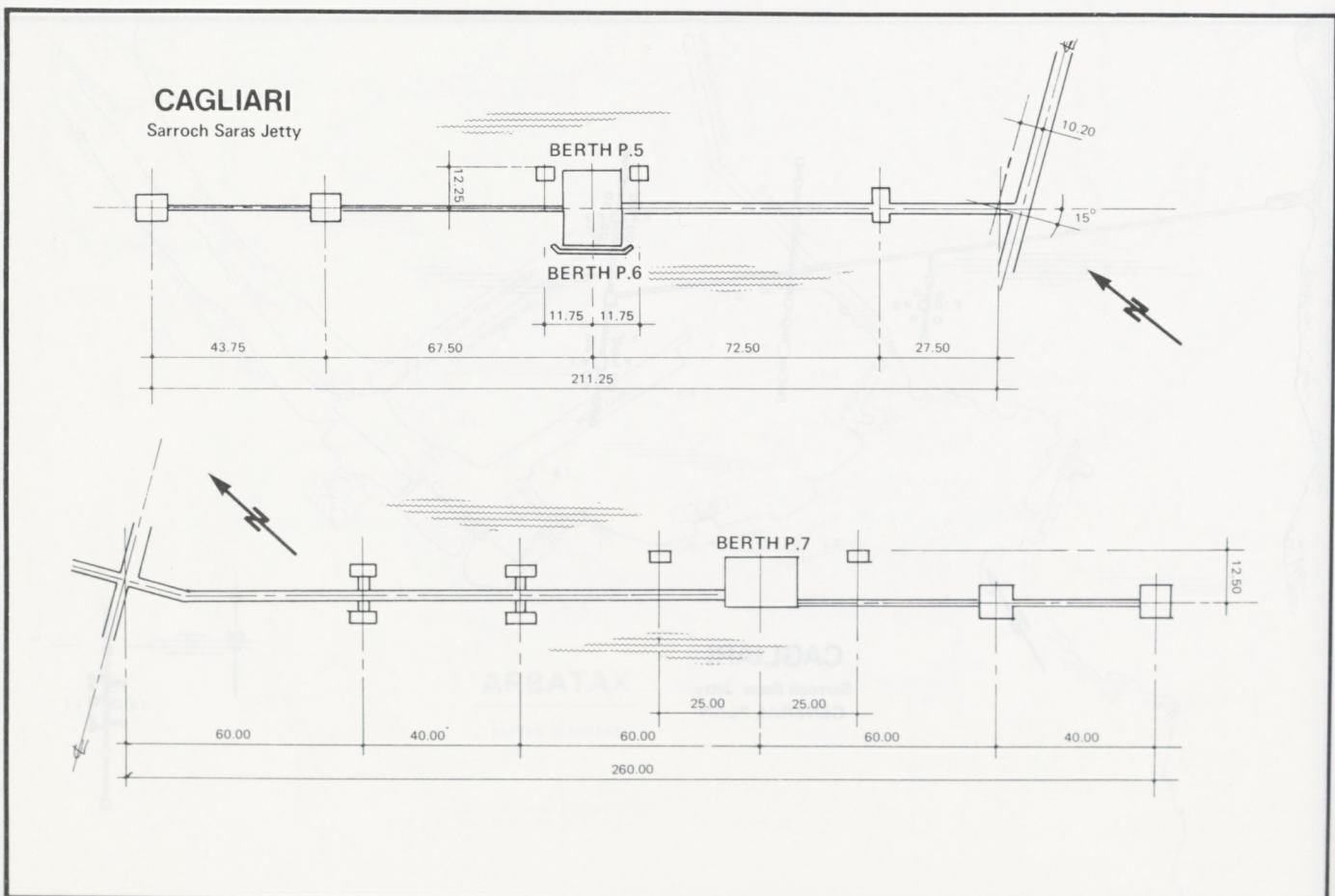
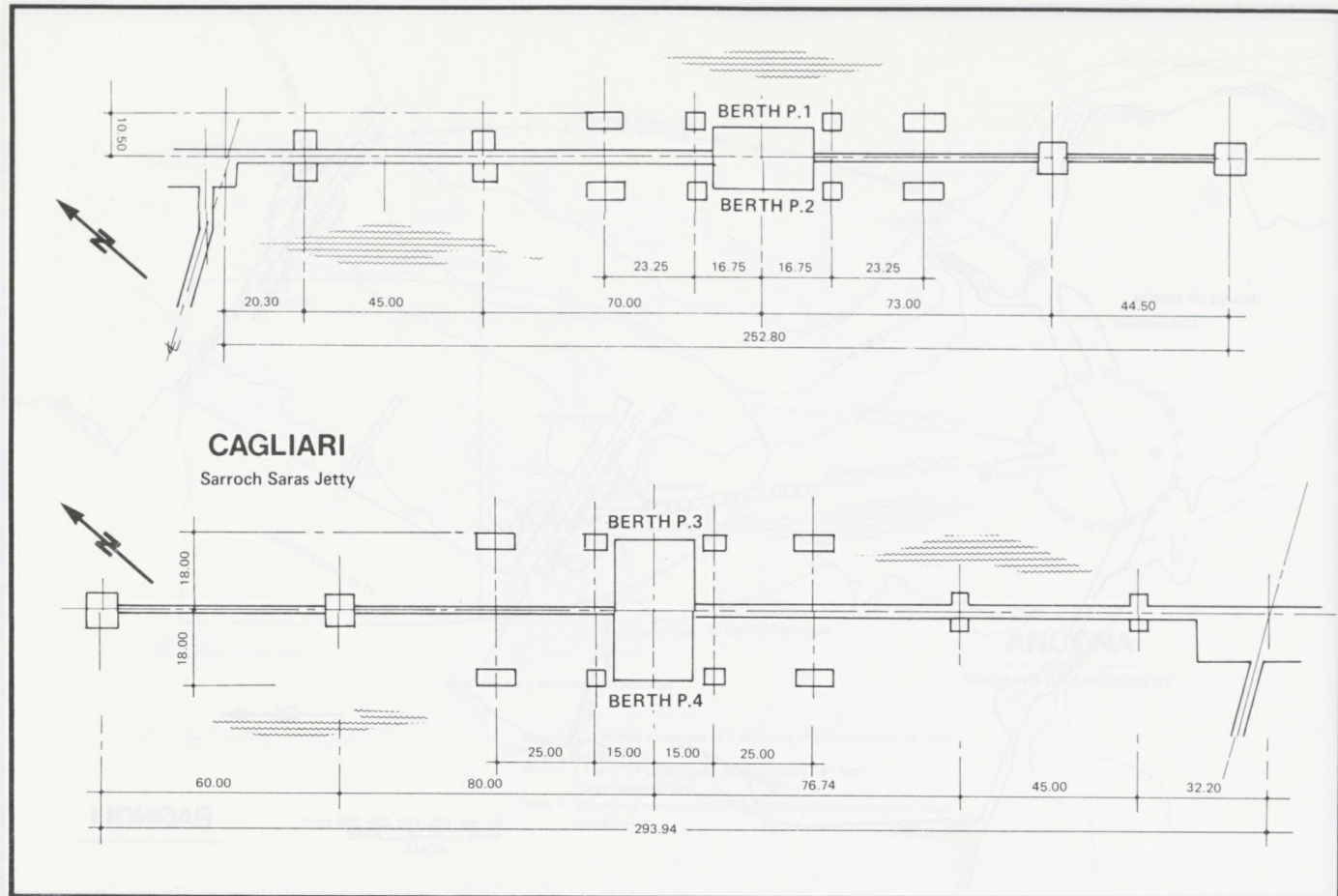
GIBALTAR AT 15 KNOTS TO:	DISTANCE IN MILES	DURATION IN DAYS/HOURS
CAPE GOOD HOPE	5120	14
CRISTOBAL	4330	12
DAKAR	1500	4
FREMANTLE	9856	27½
LAS PALMAS	700	2
MONTEVIDEO	5187	14½
MONTREAL	3184	9
NEW ORLEANS	4568	12½
NEW YORK	3210	9
QUOIN ISLAND	9731	27
ROTTERDAM	1363	4
SAN FRANCISCO	7620	21
SINGAPORE	10686	29½
SKAW	1760	5
YOKOHAMA (VIA PANAMA)	12054	33½

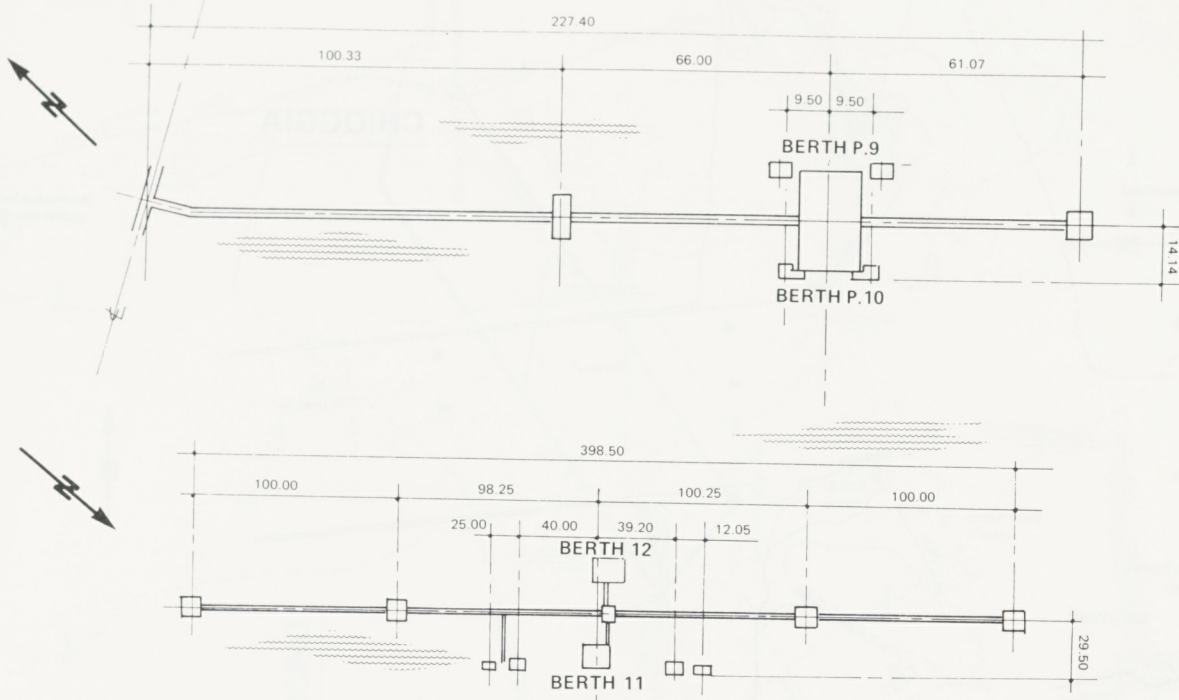
GIBALTAR AT 15 KNOTS TO:	DISTANCE IN MILES	DURATION IN DAYS/HOURS
ALEXANDRIA	1798	5
ALGIERS	412	13
AUGUSTA	1035	221
BANIAS	2017	515
BARCELONA	515	110
BENGHAZI	1333	317
BEYRUTH	2005	514
BOUGIE (BEJAIA)	515	110
CARTHAGENA	237	016
CONSTANZA	1995	513
GENOA	847	28
ISTANBUL	1800	5
MALTA	985	218
MARSEILLES	690	122
NAPLES	980	217
NOVOROSSISK	2255	66
ORAN	235	016
RIJEKA	1608	411
SFAX	1005	219
SKARAMANGA	1490	43
TRIPOLI-LIBYA	1075	3
VENICE	1658	415





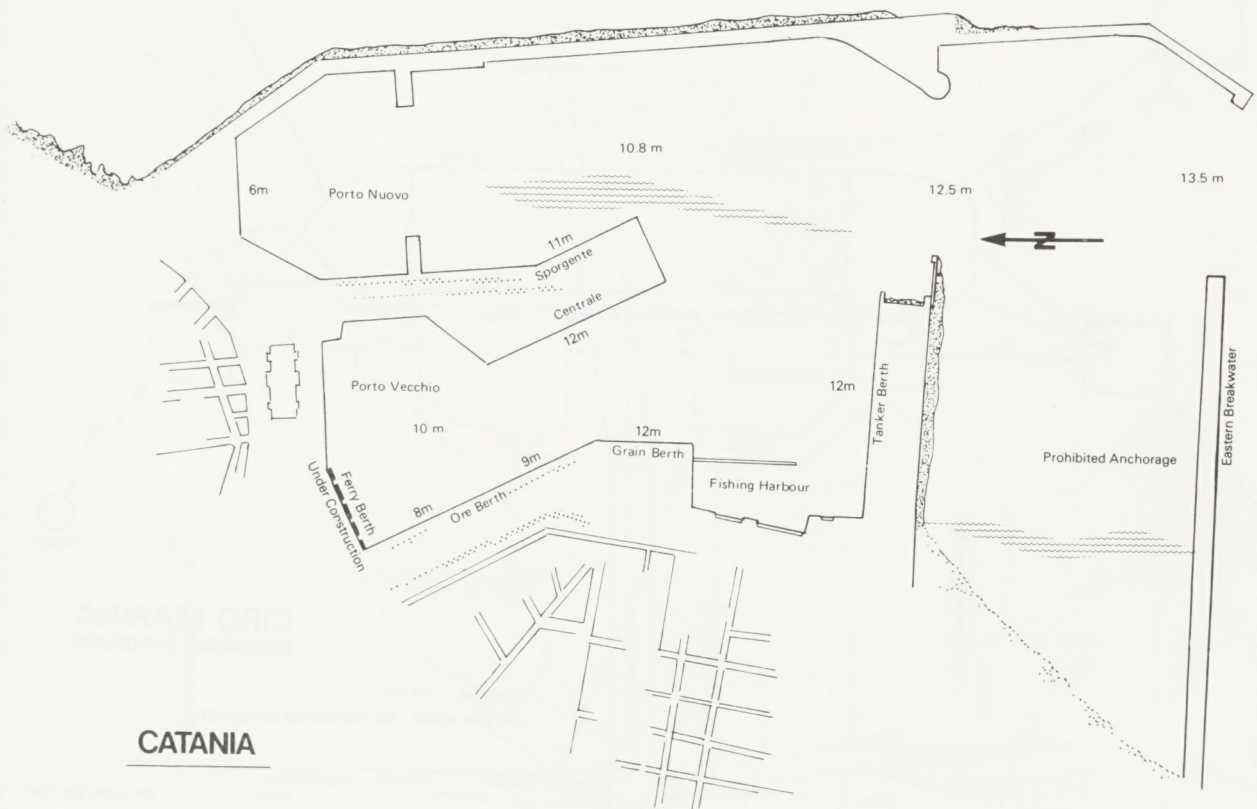




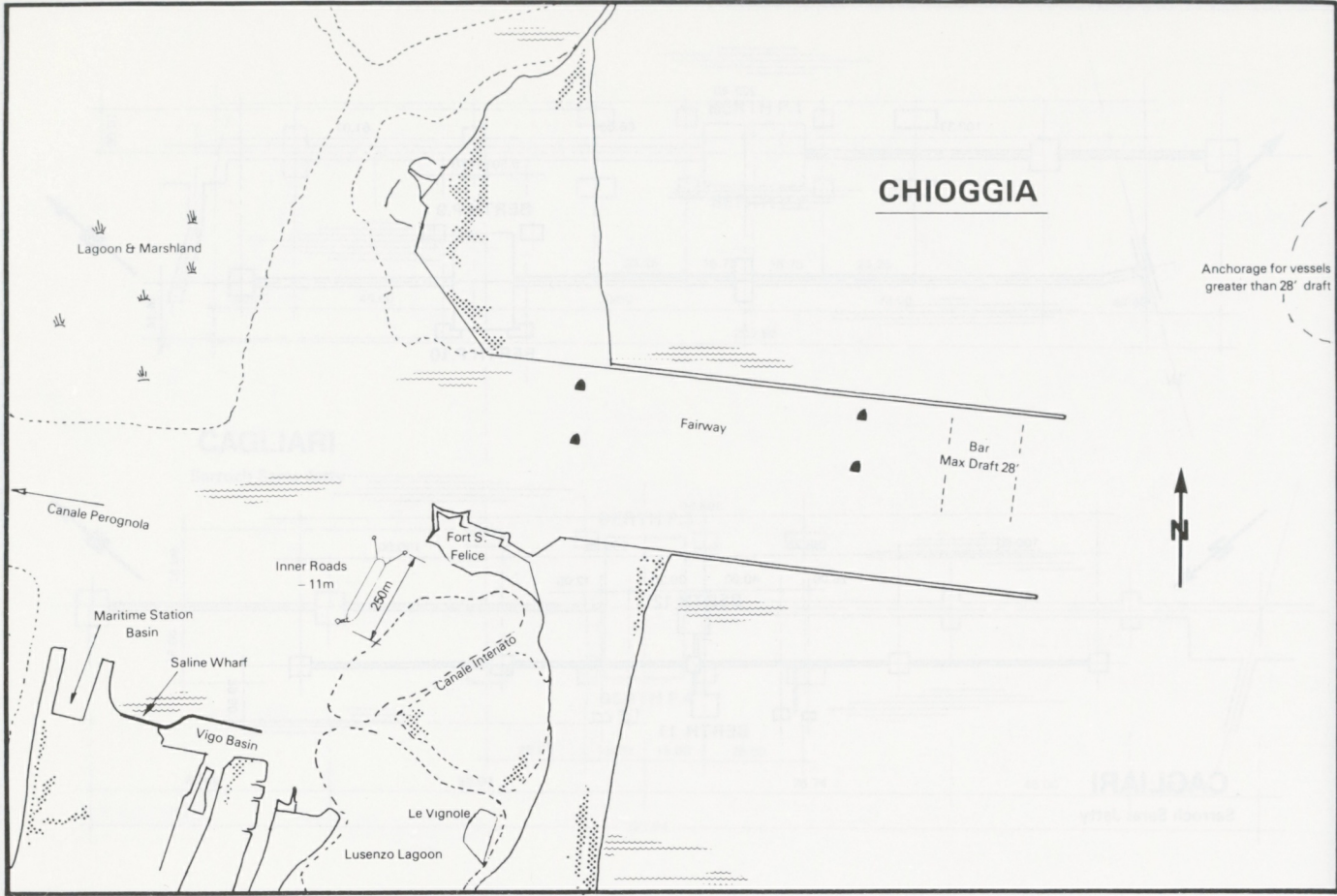


CAGLIARI

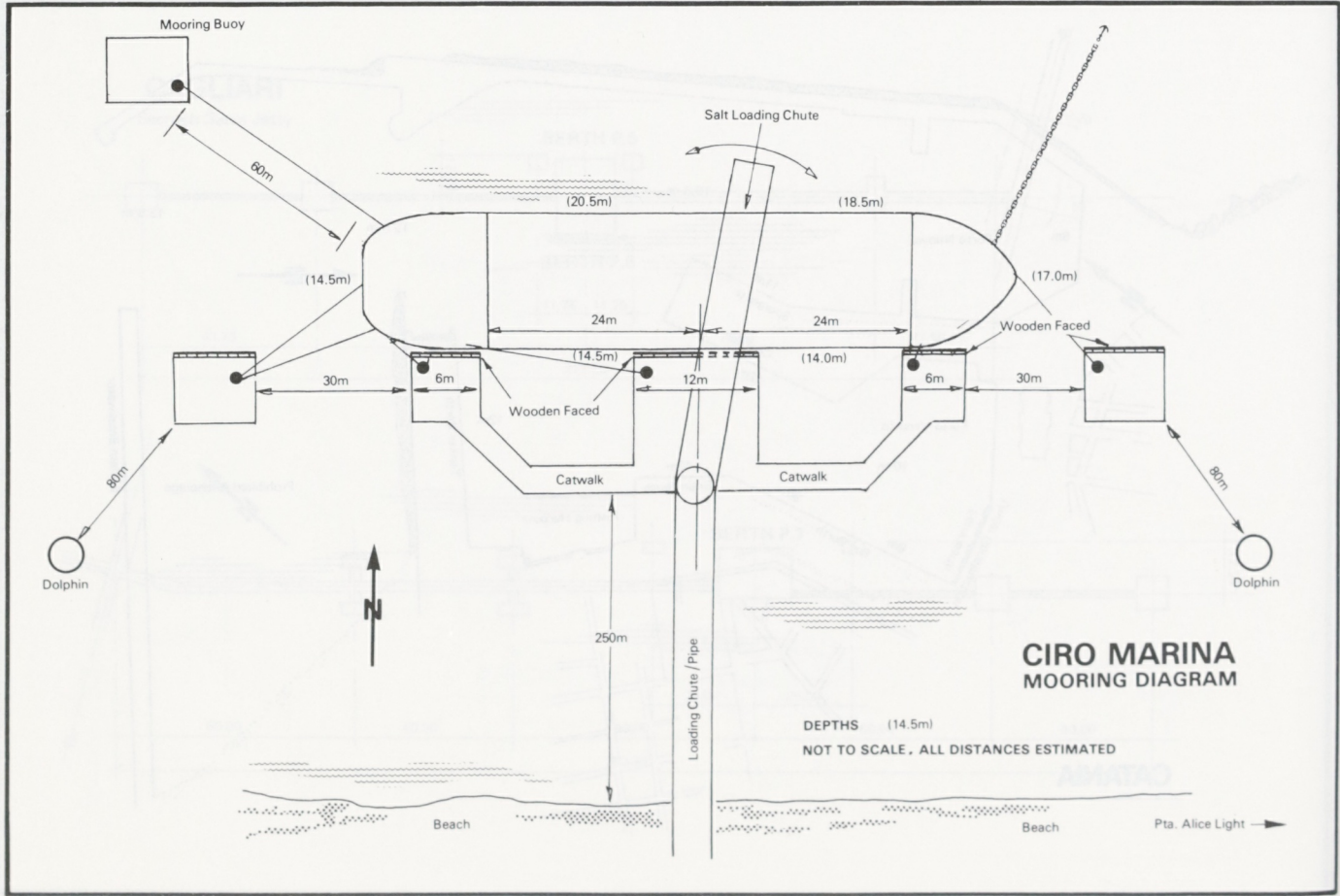
Sarroch Saras Jetty



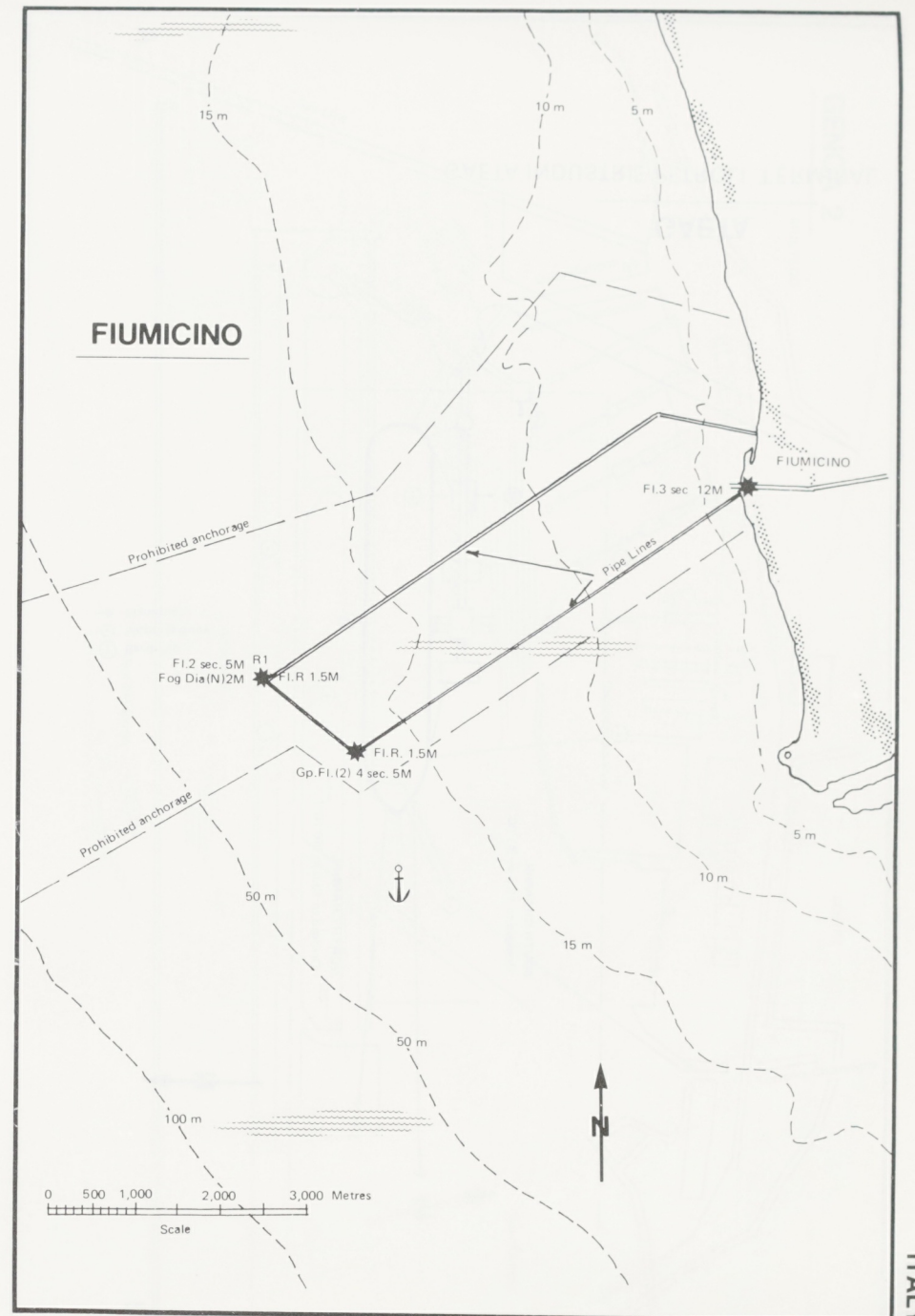
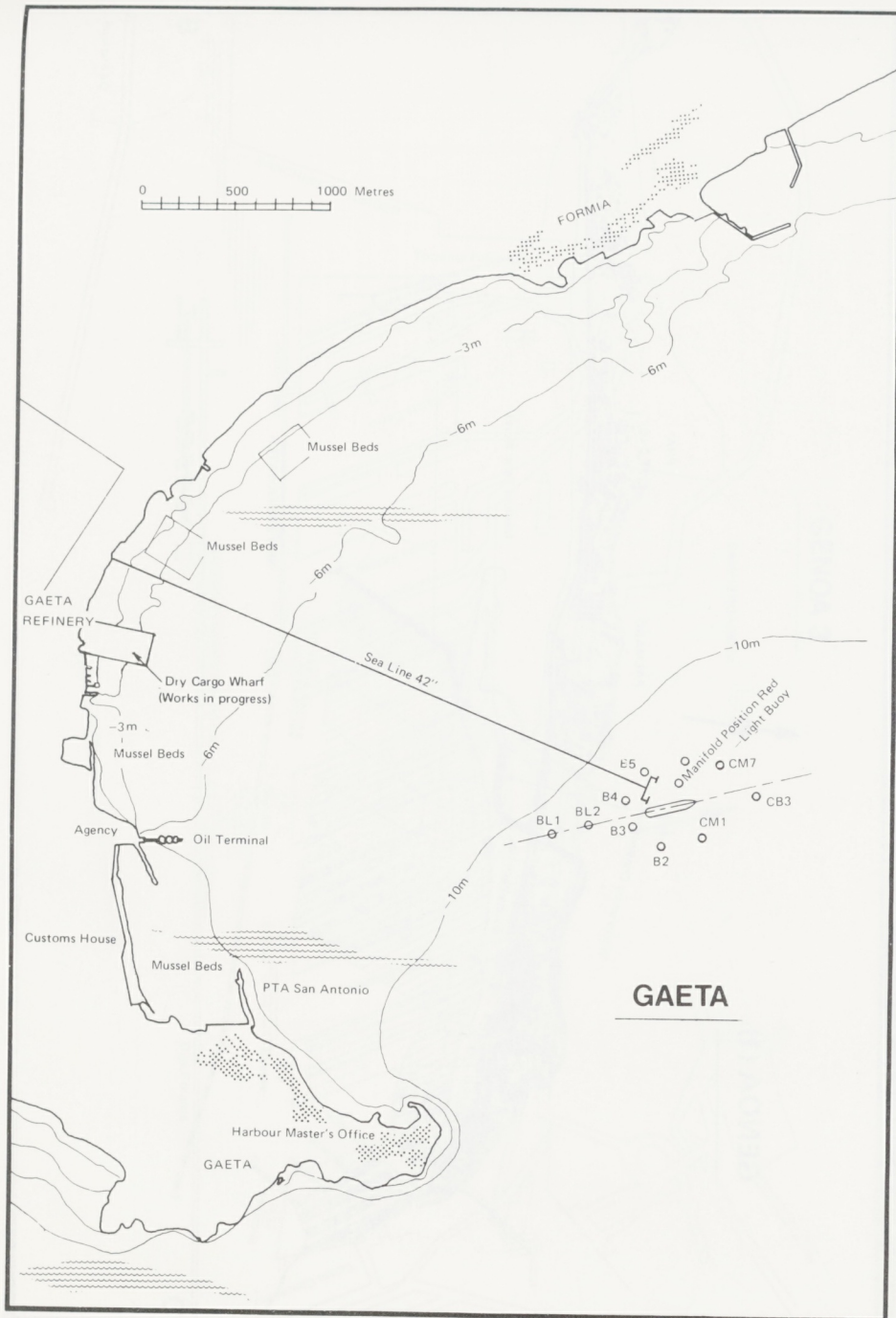
CATANIA

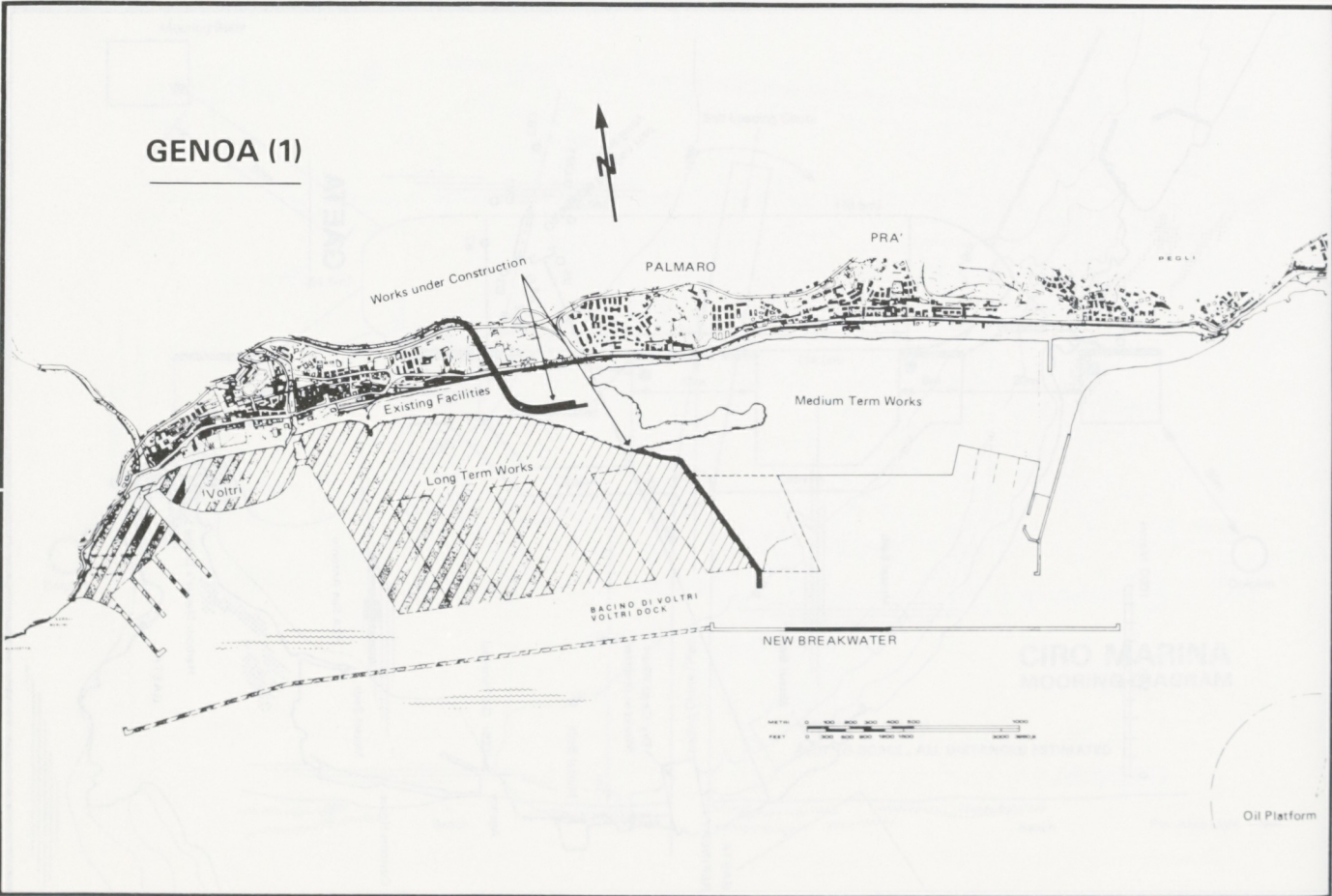
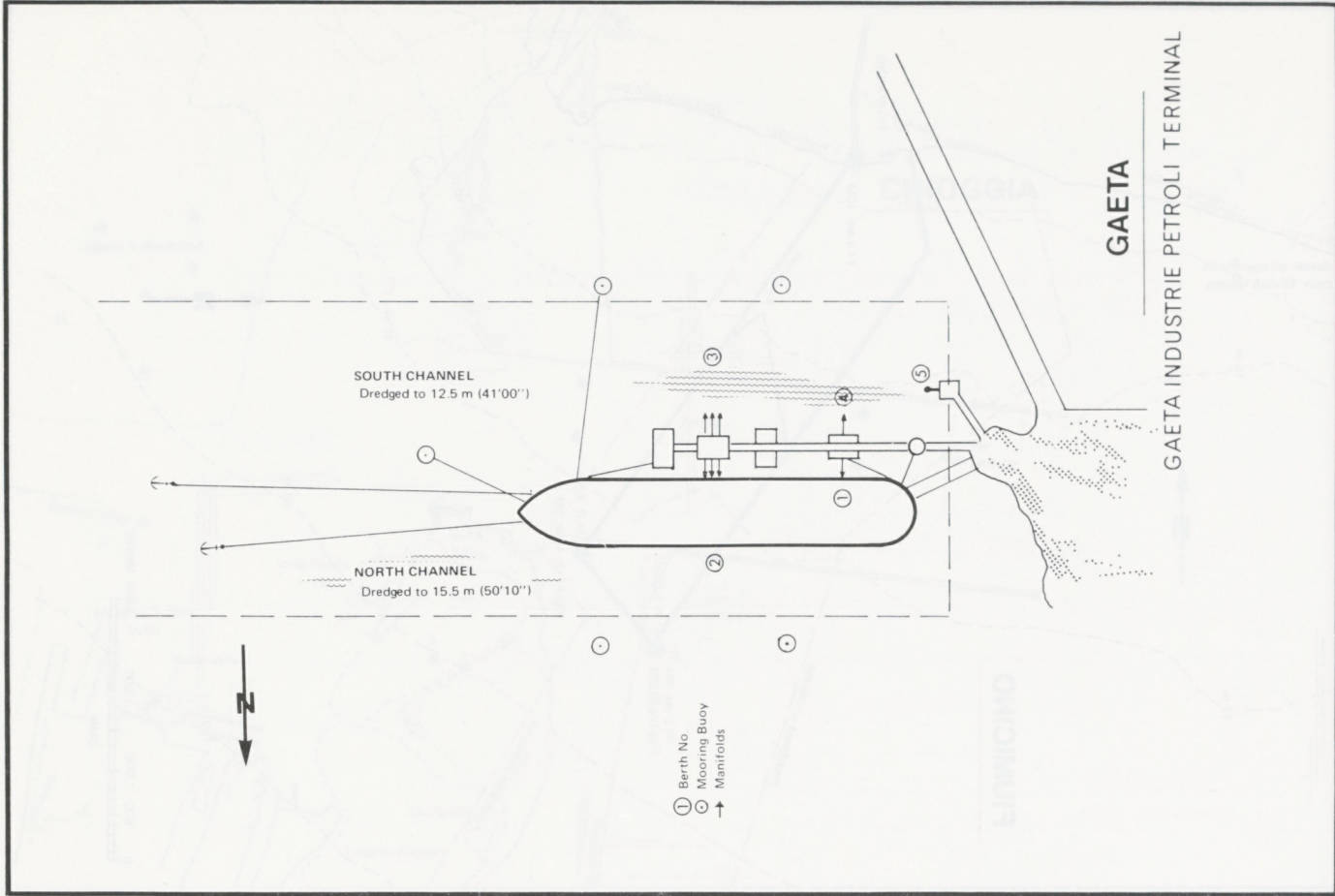


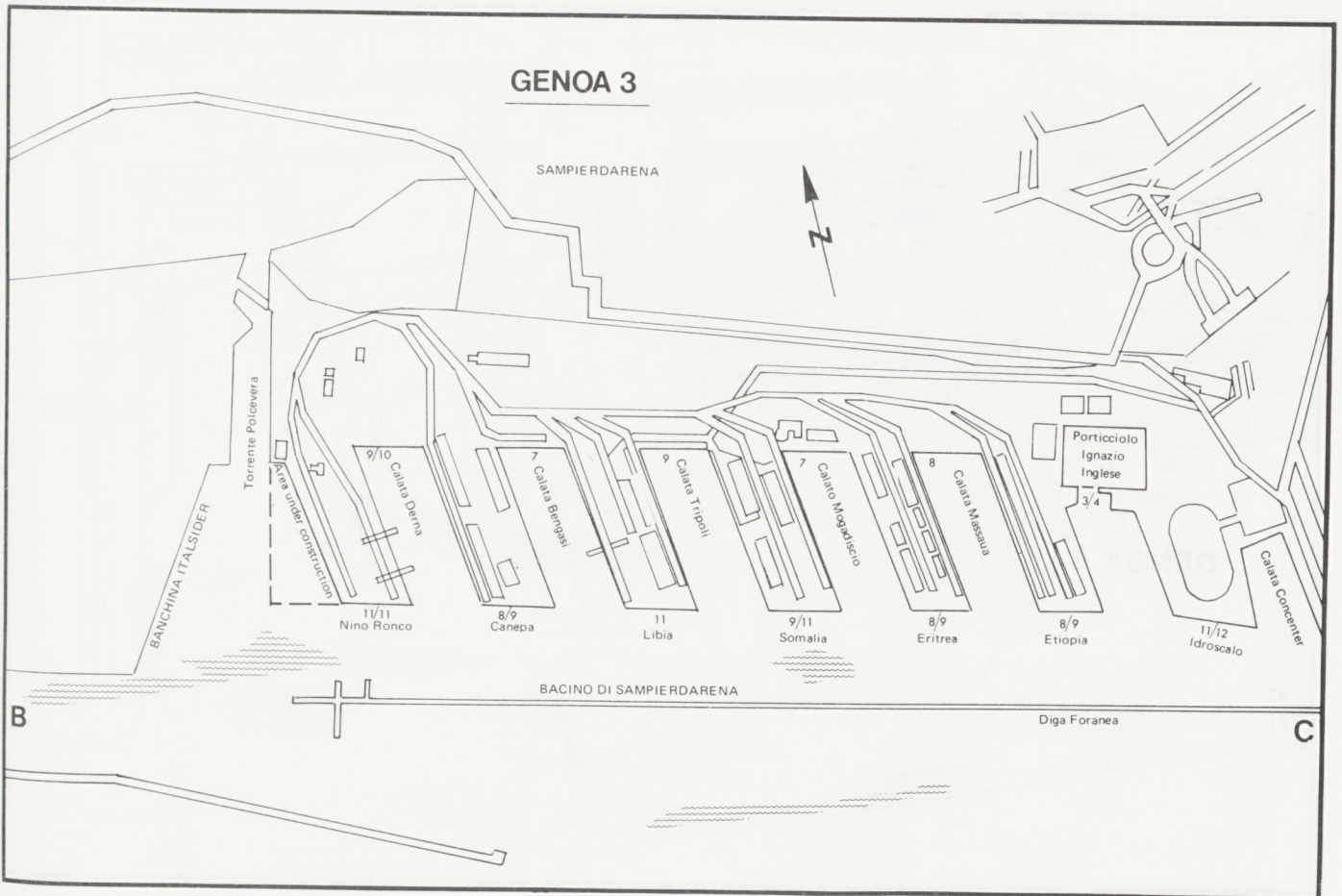
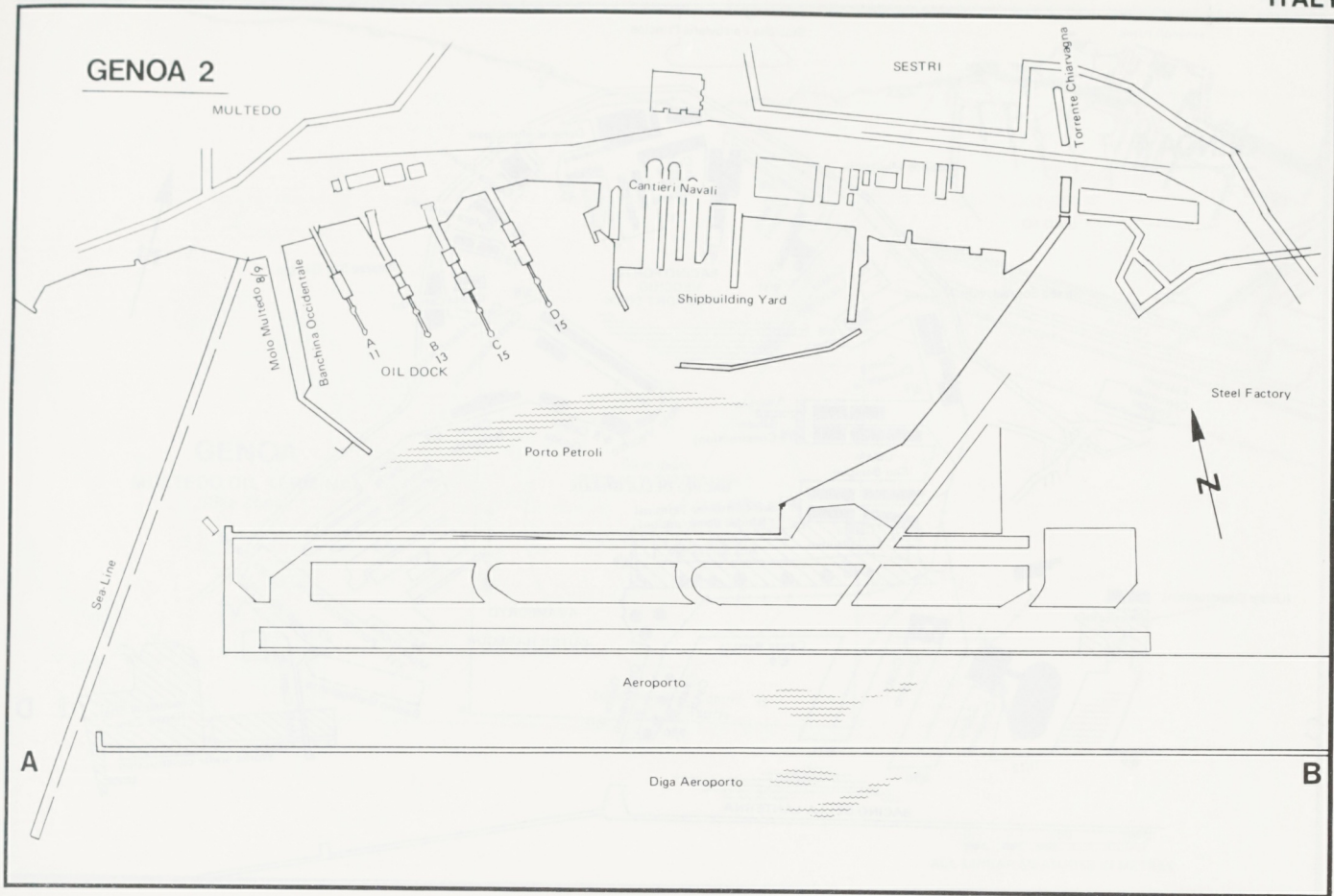
"Plan supplied by Ship's Master"



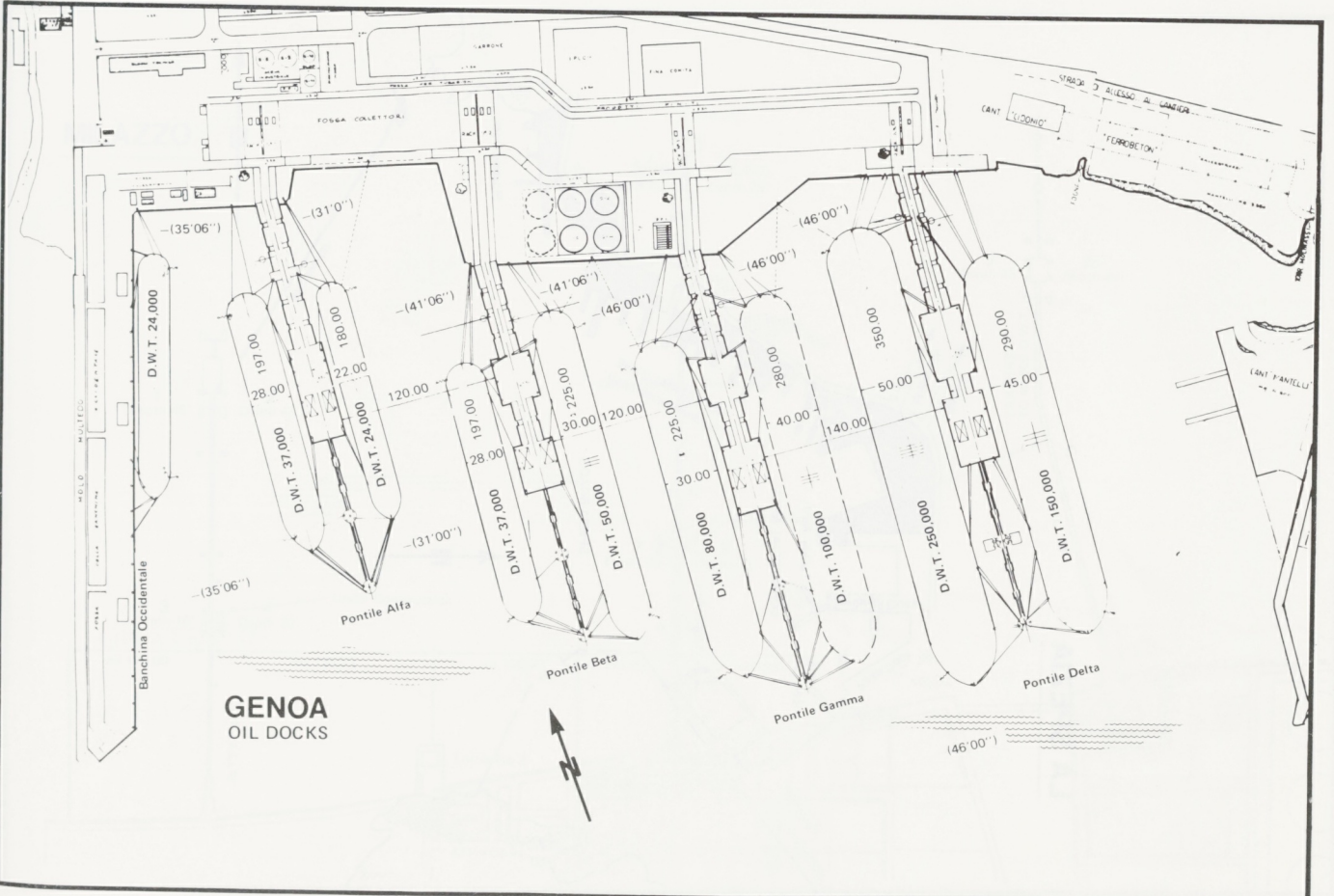
"Plan supplied by Ship's Master"

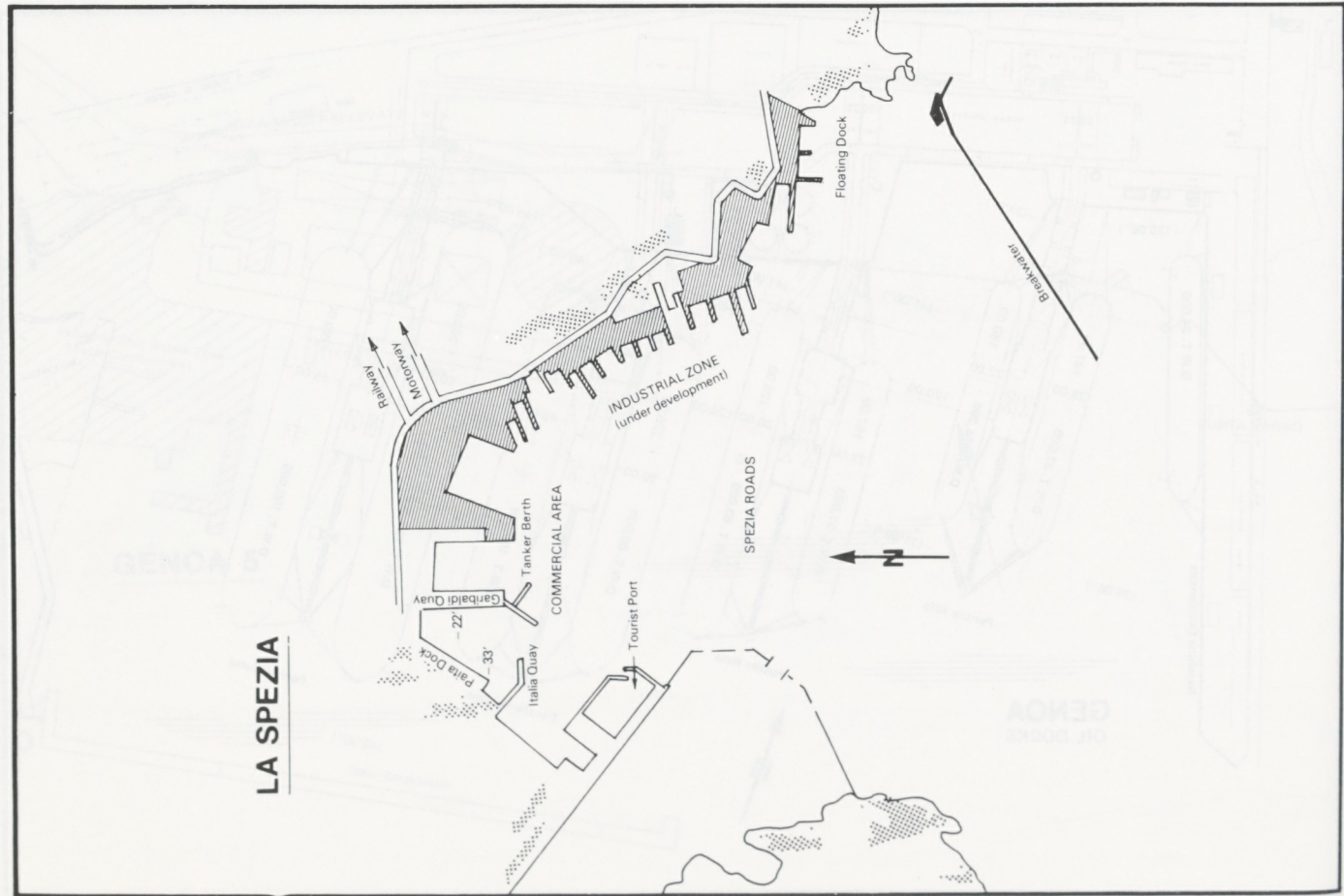
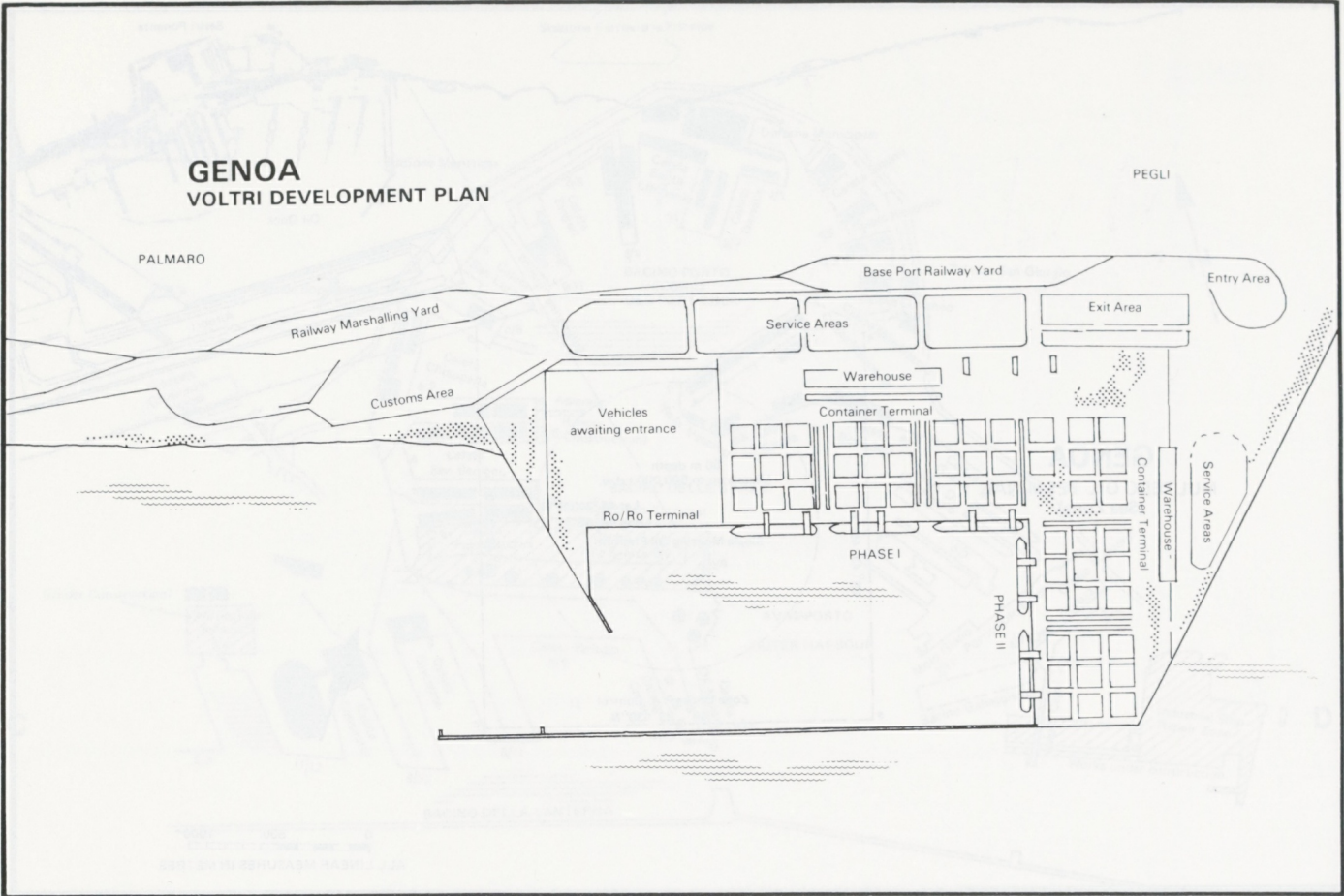


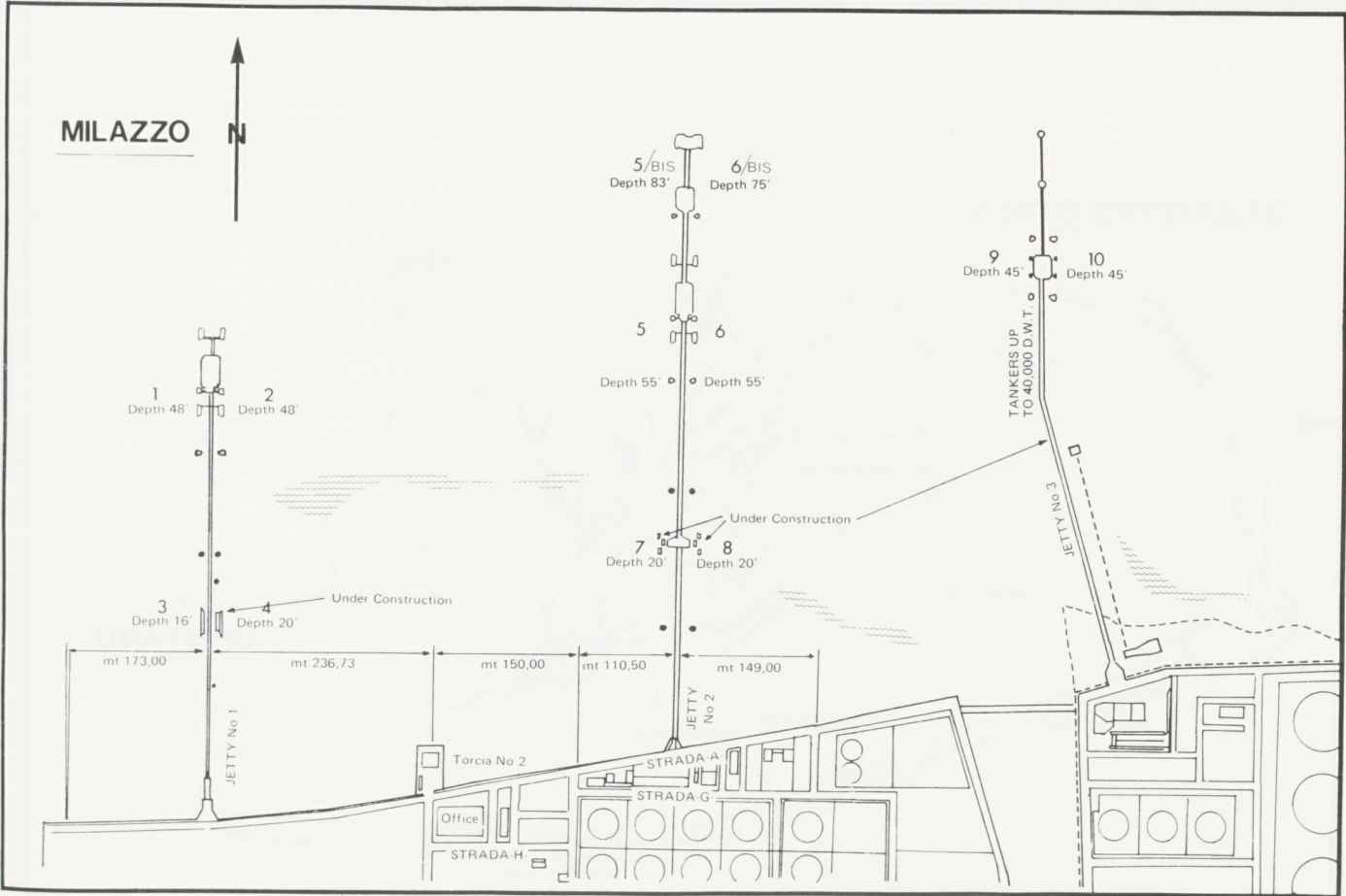
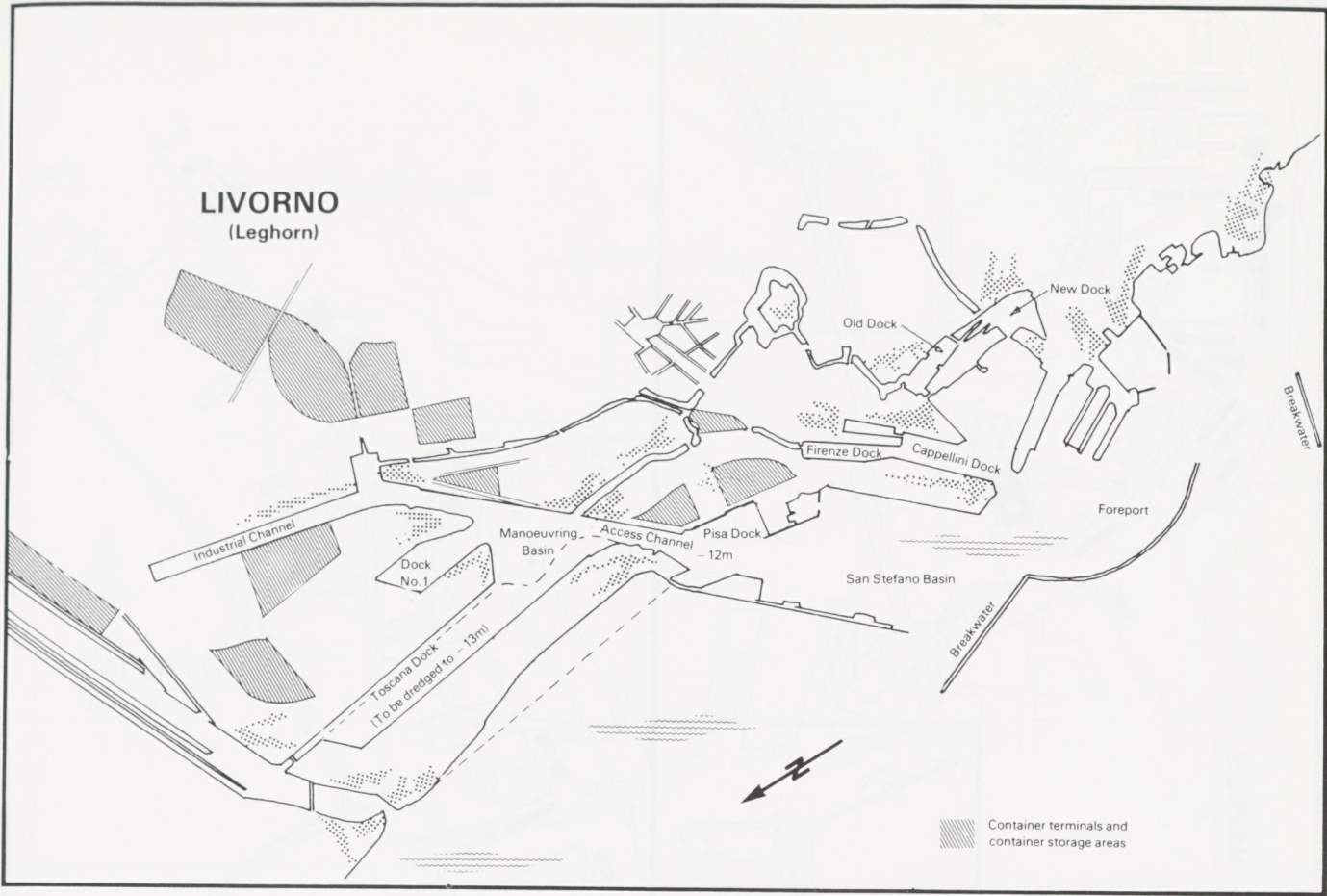


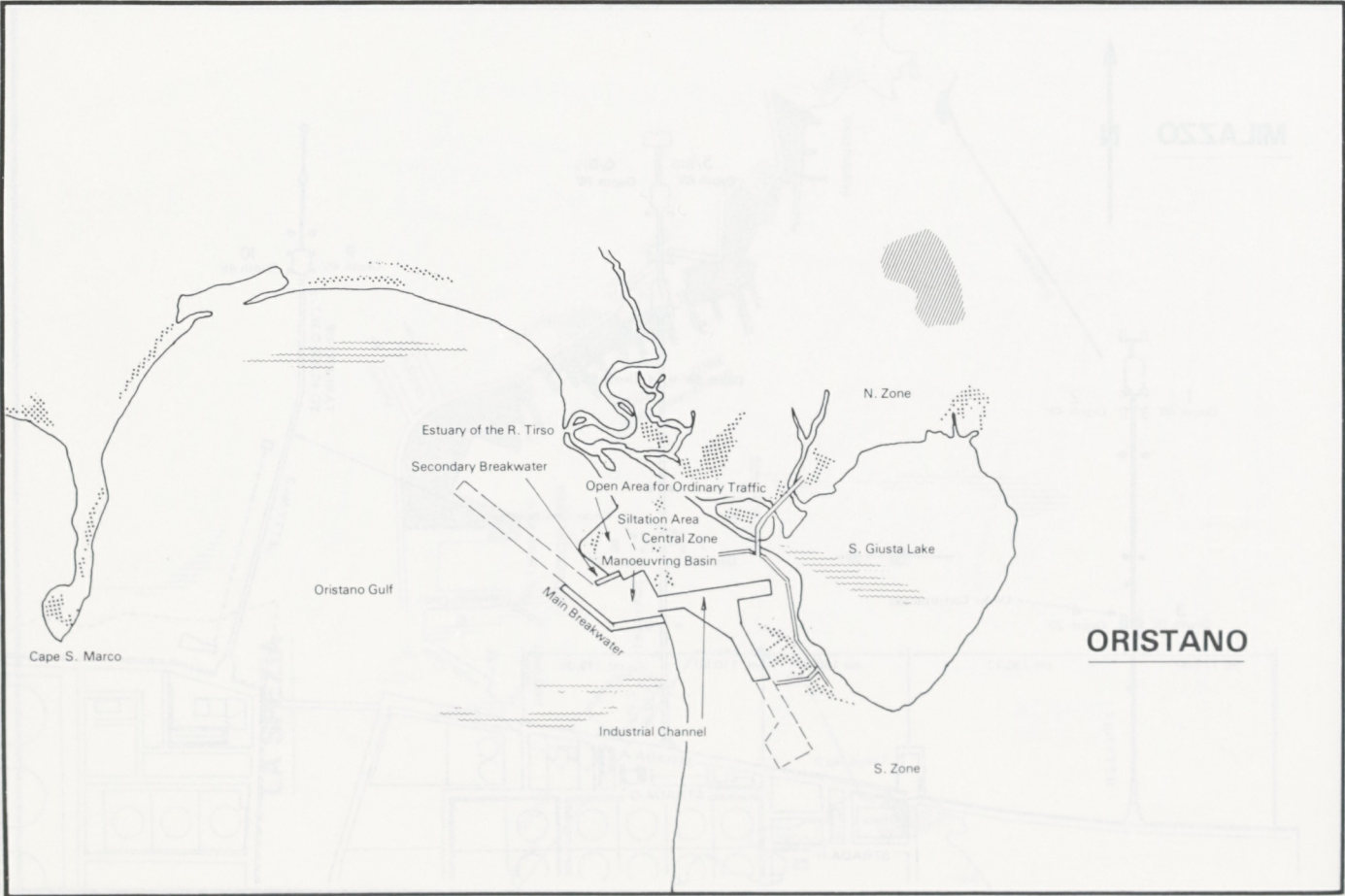
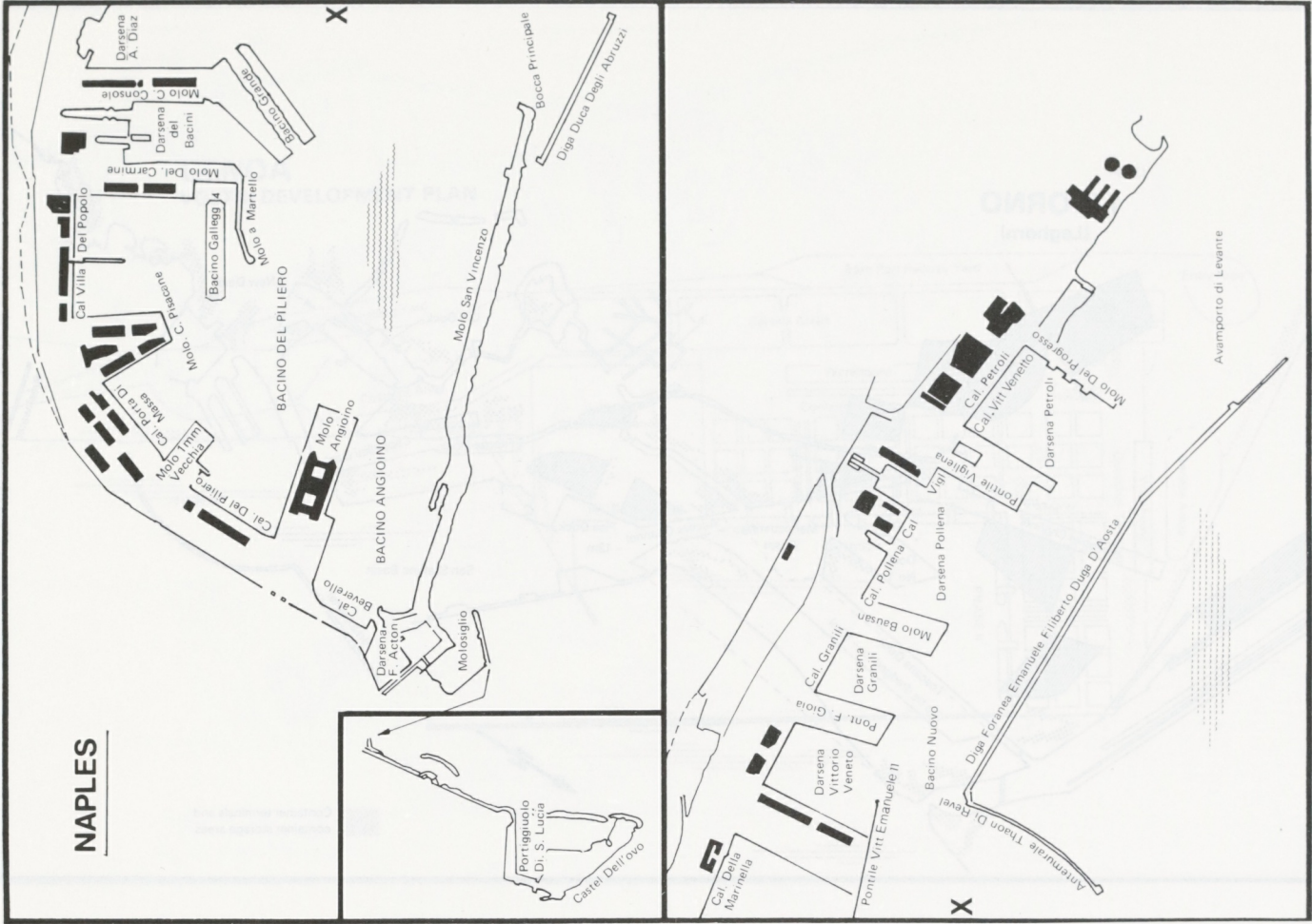


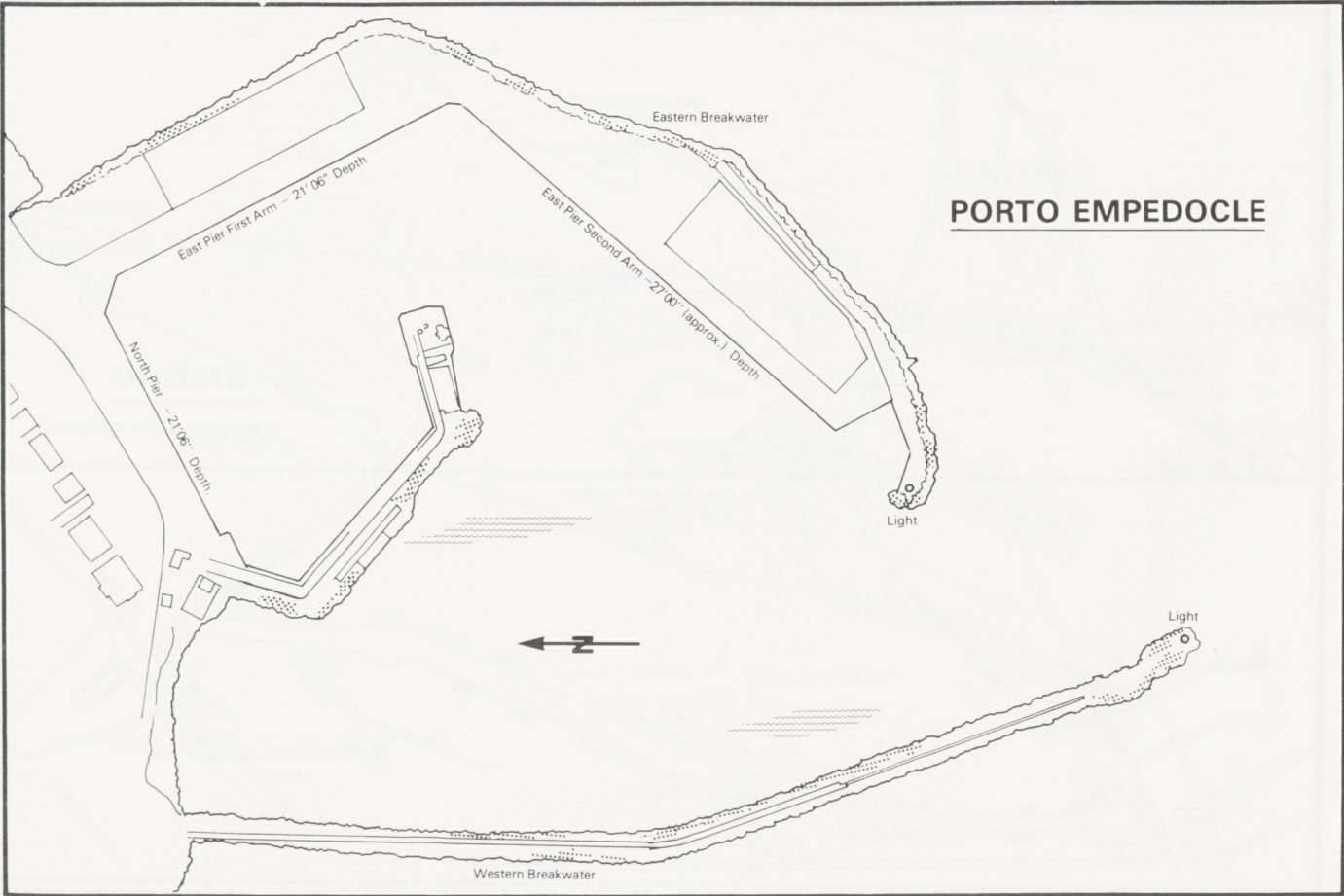
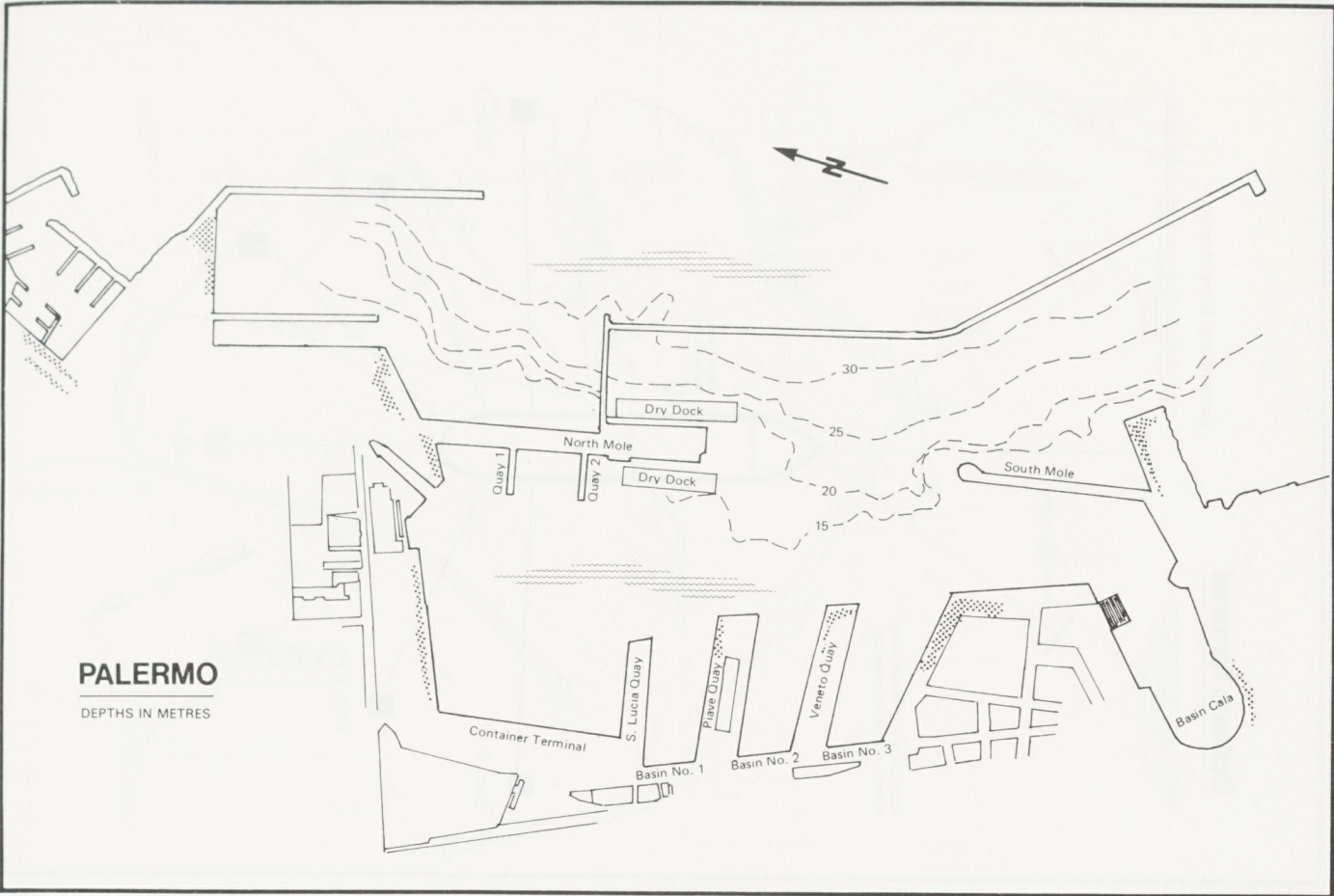


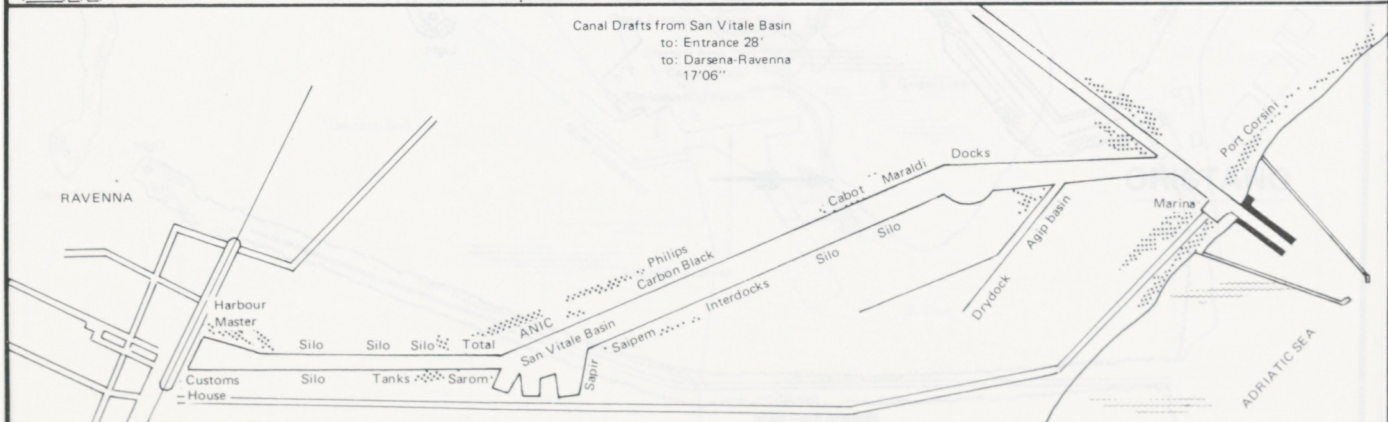
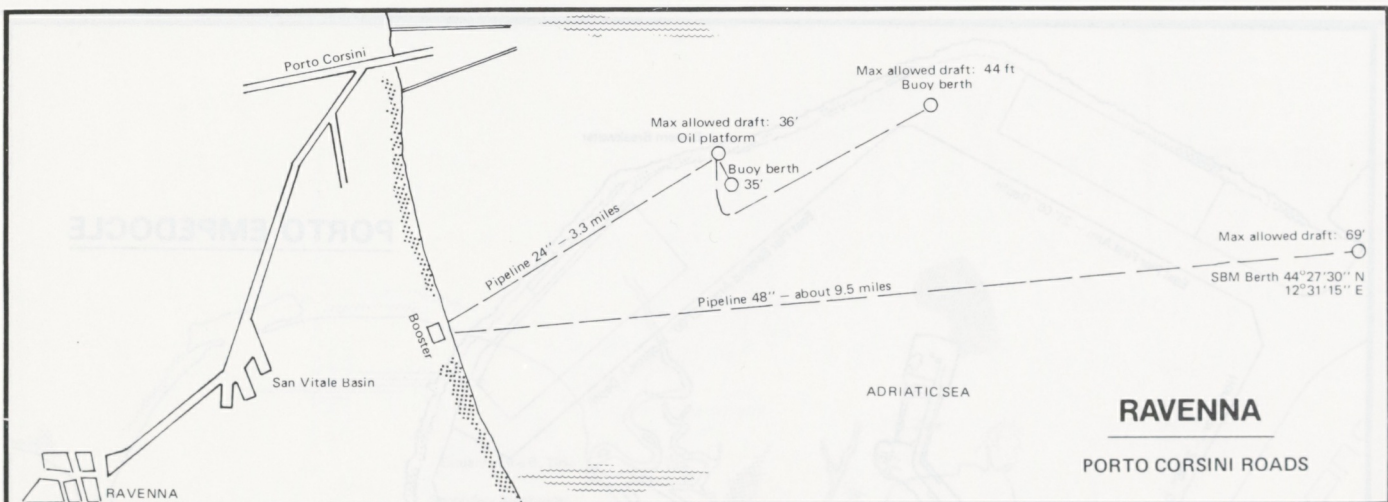
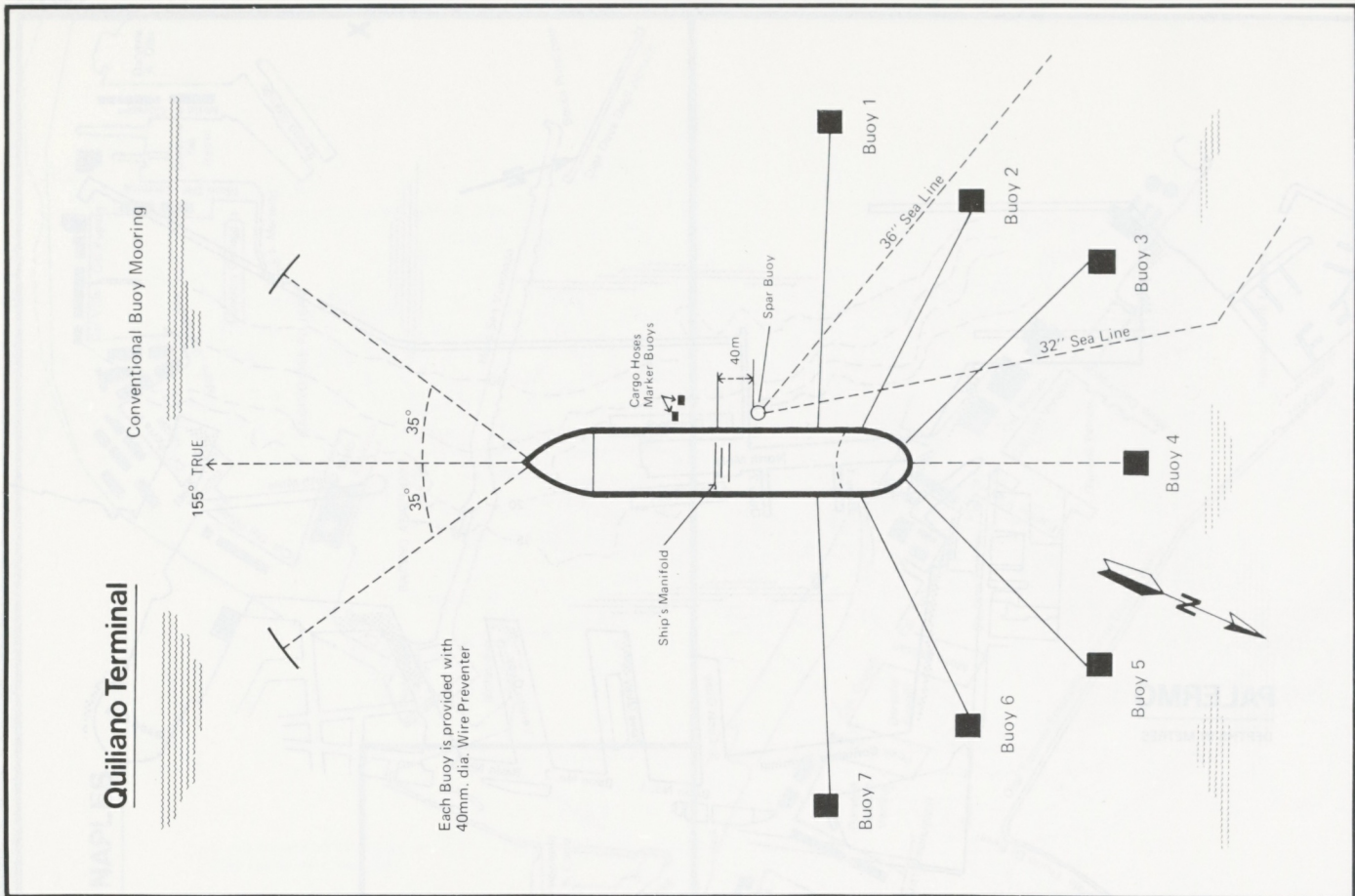


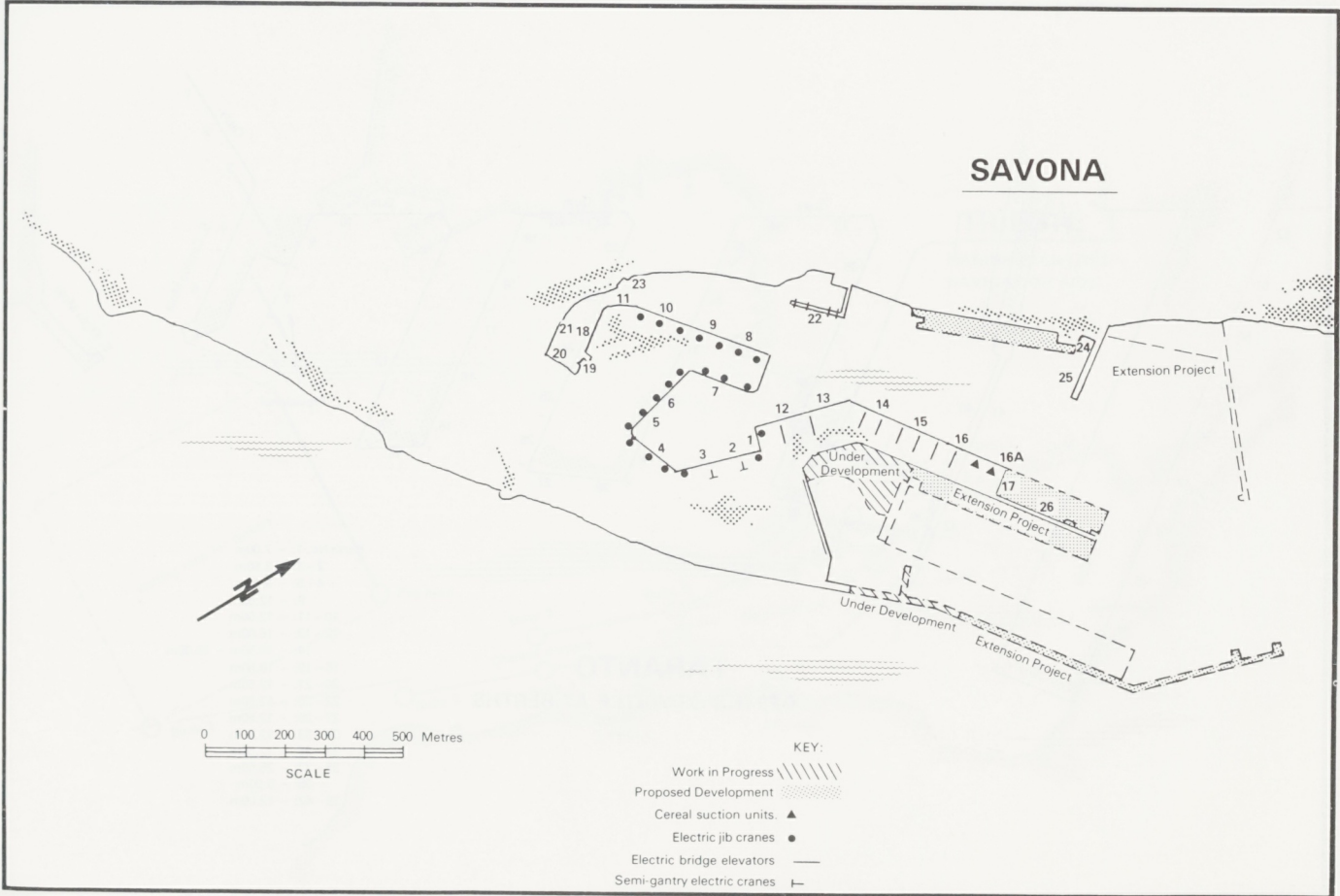
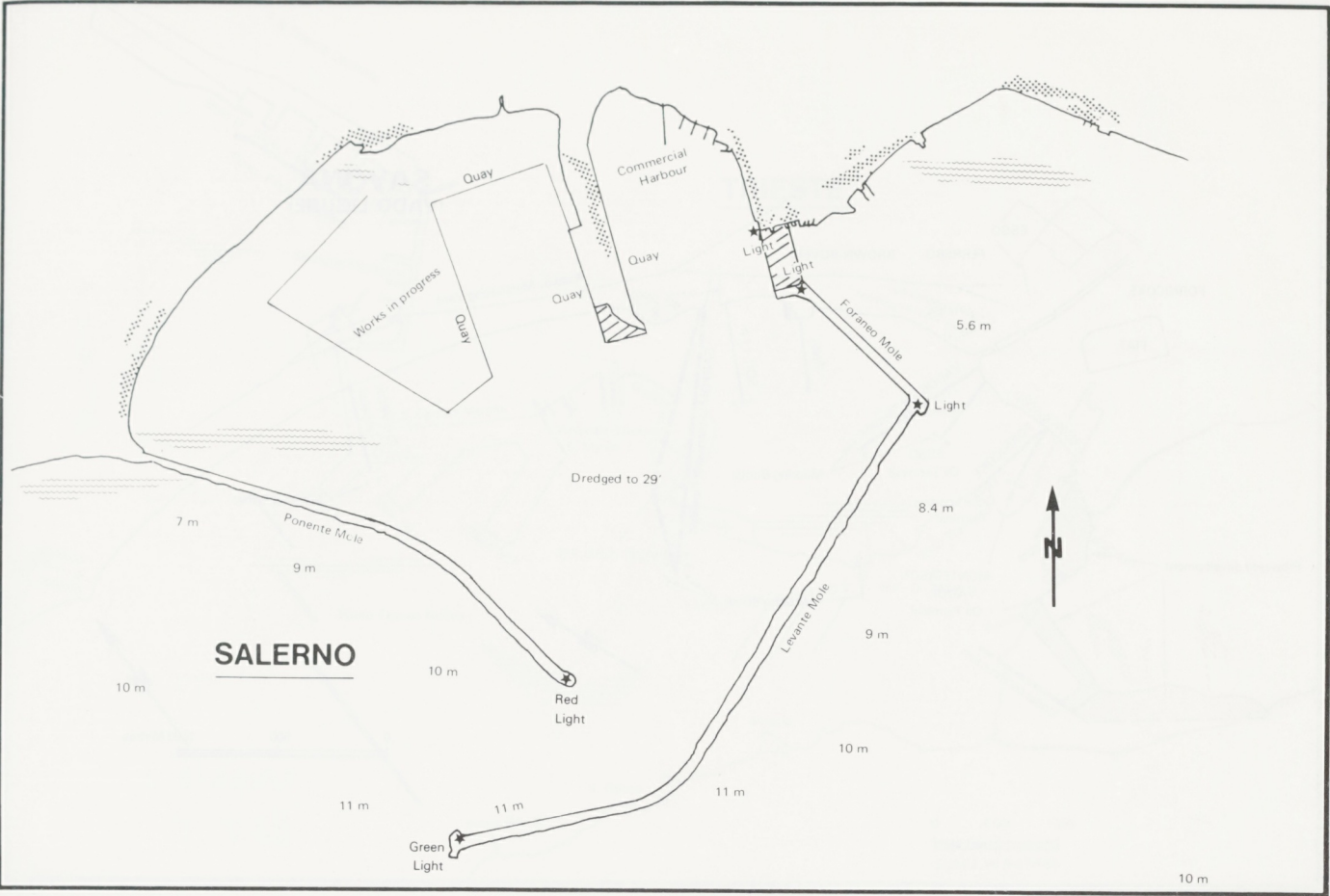


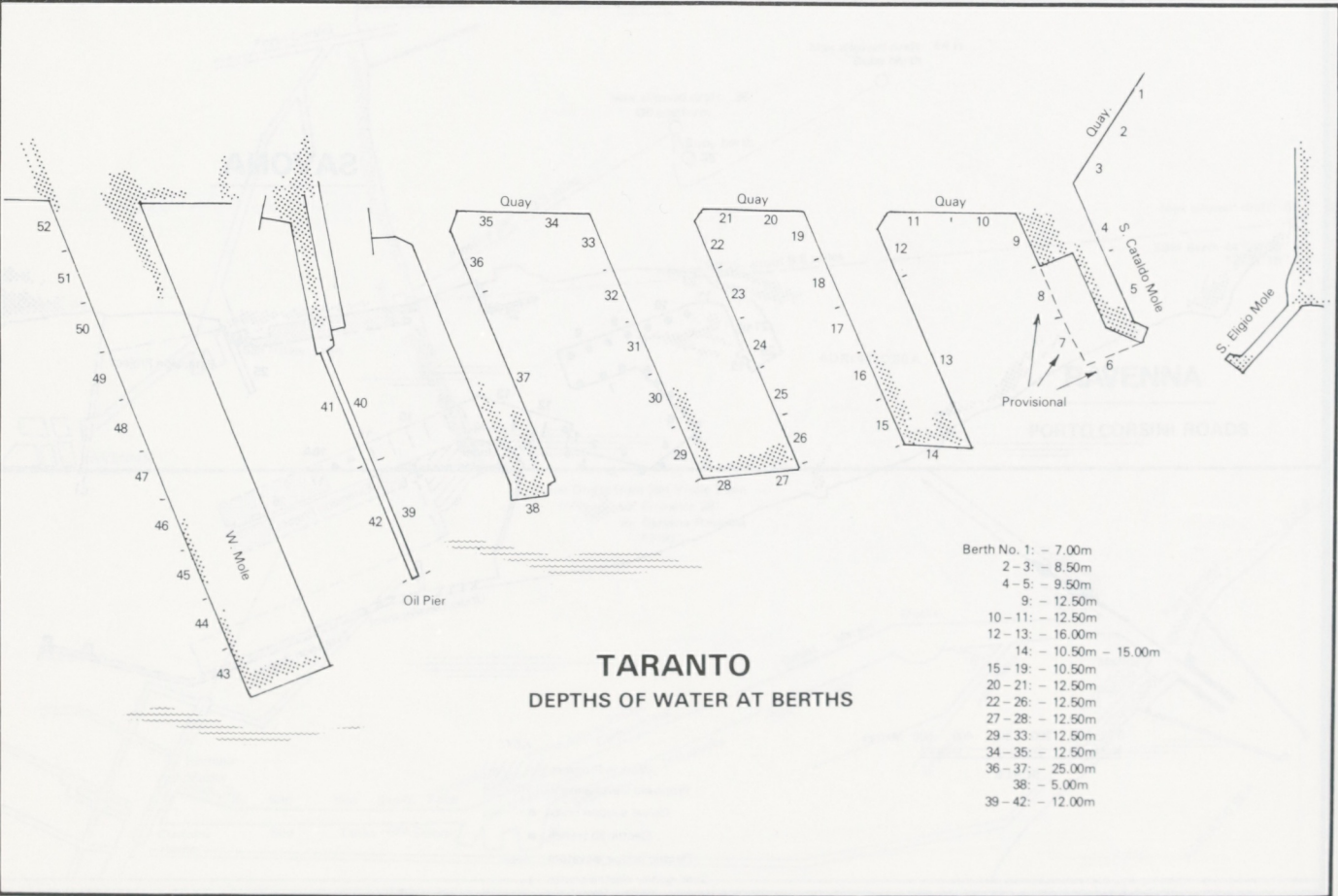
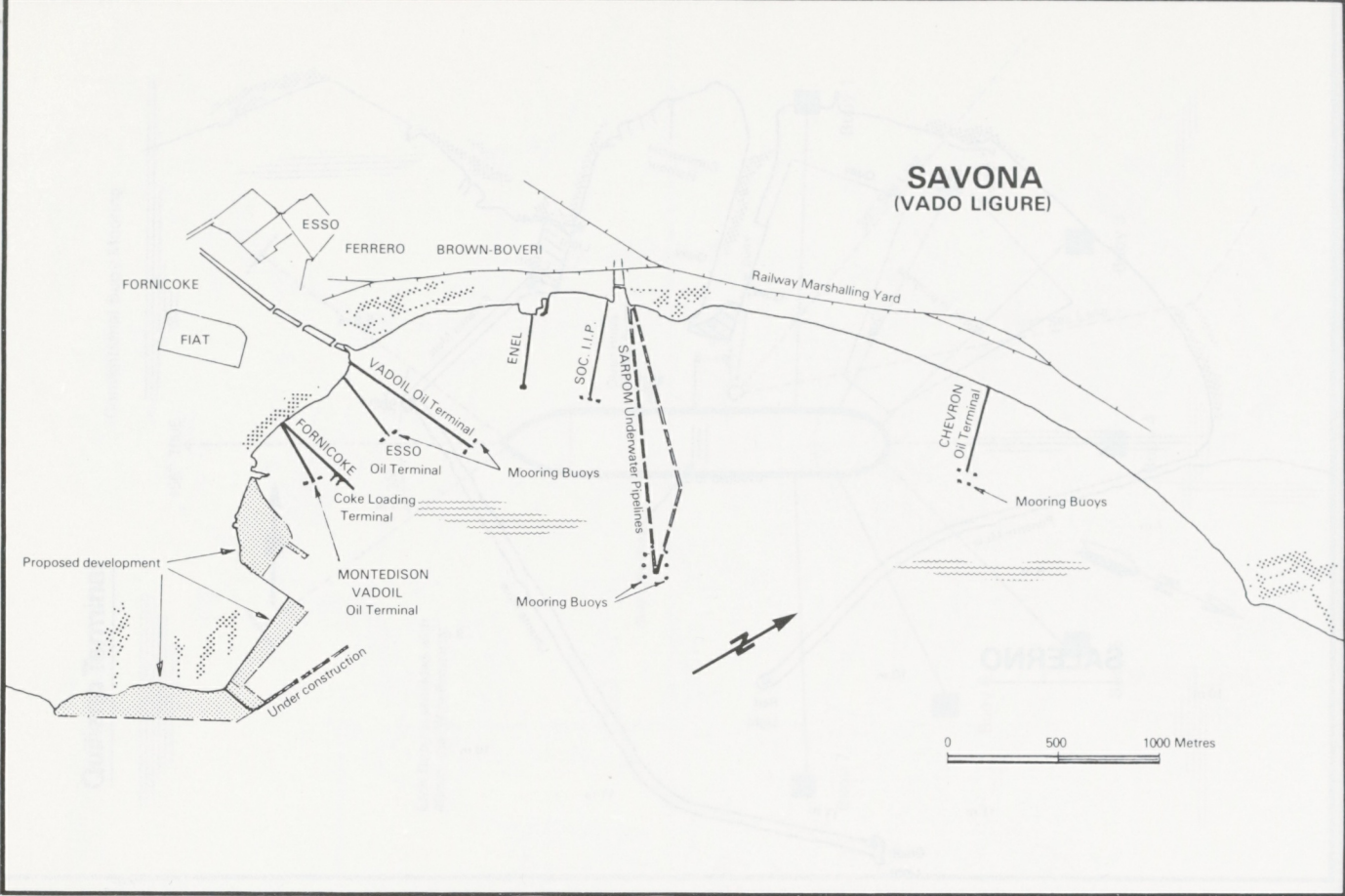


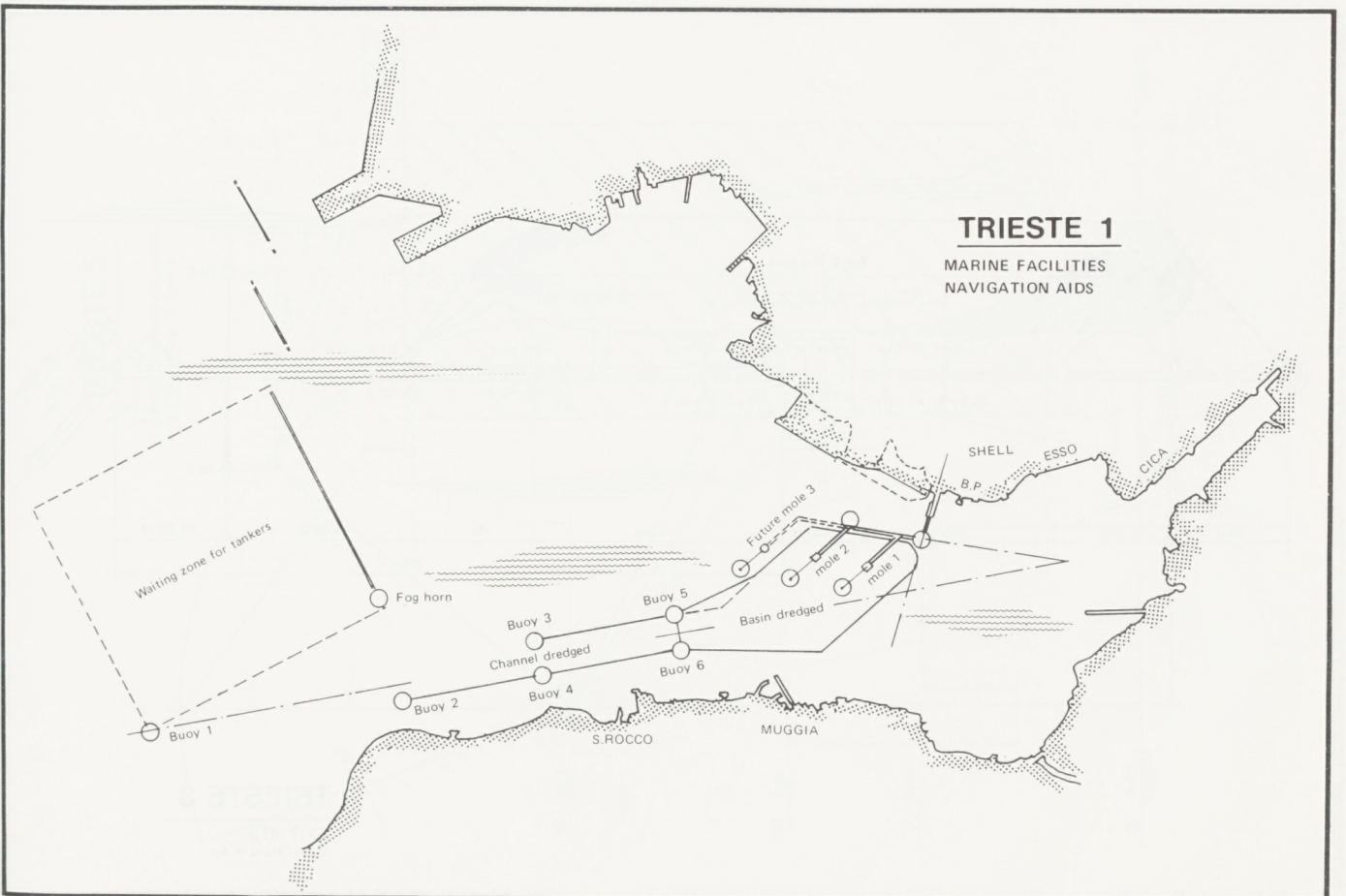
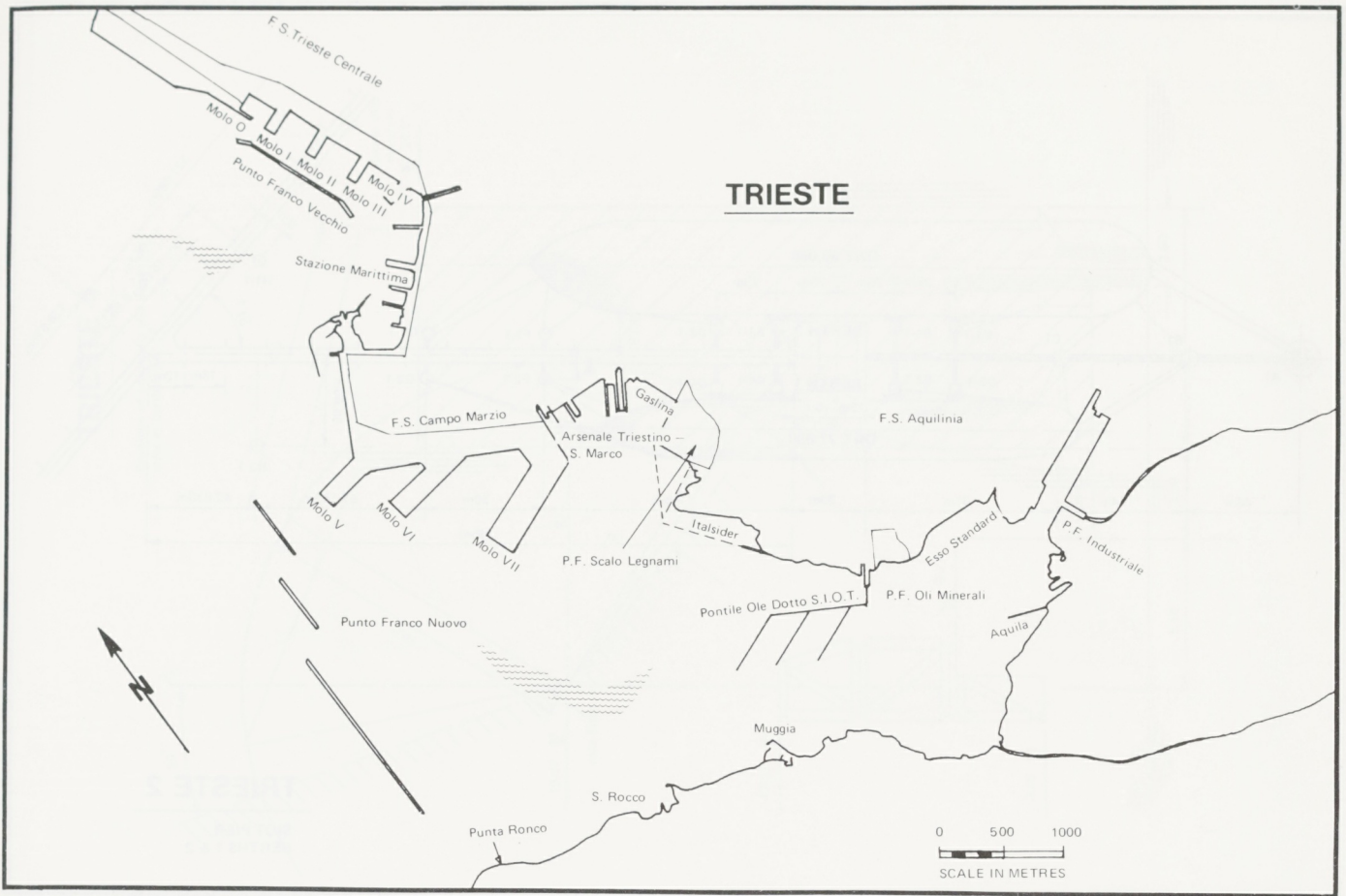


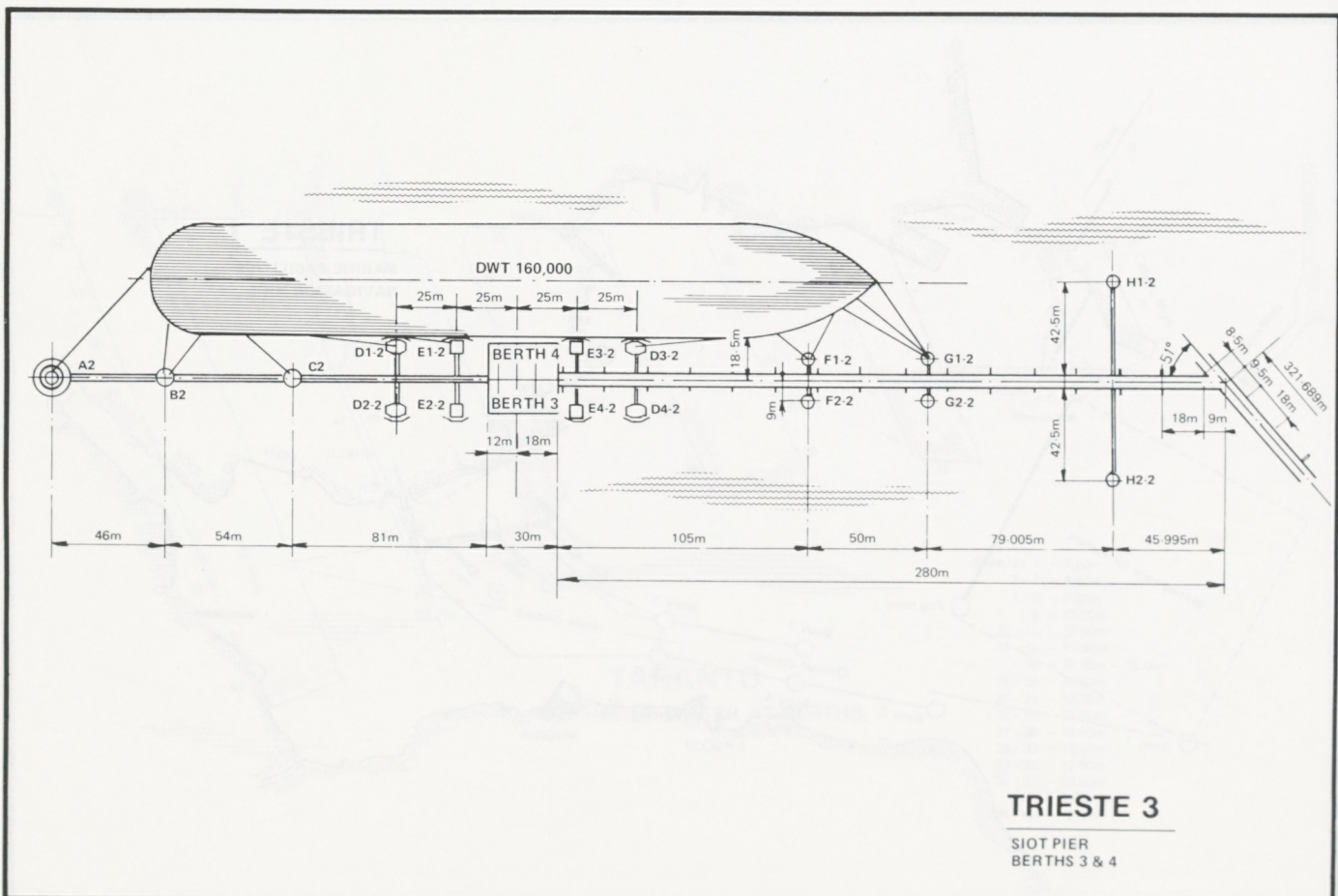
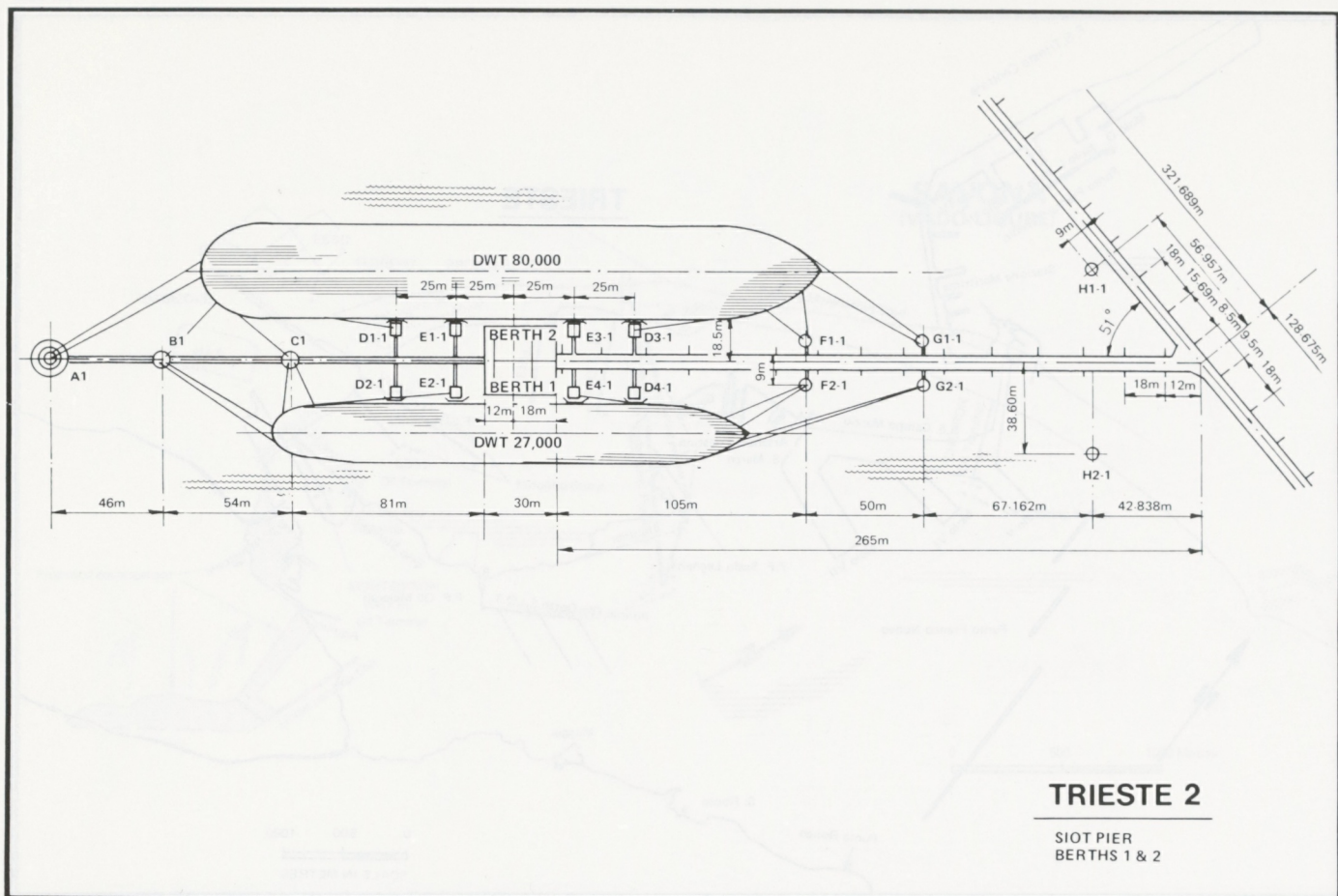




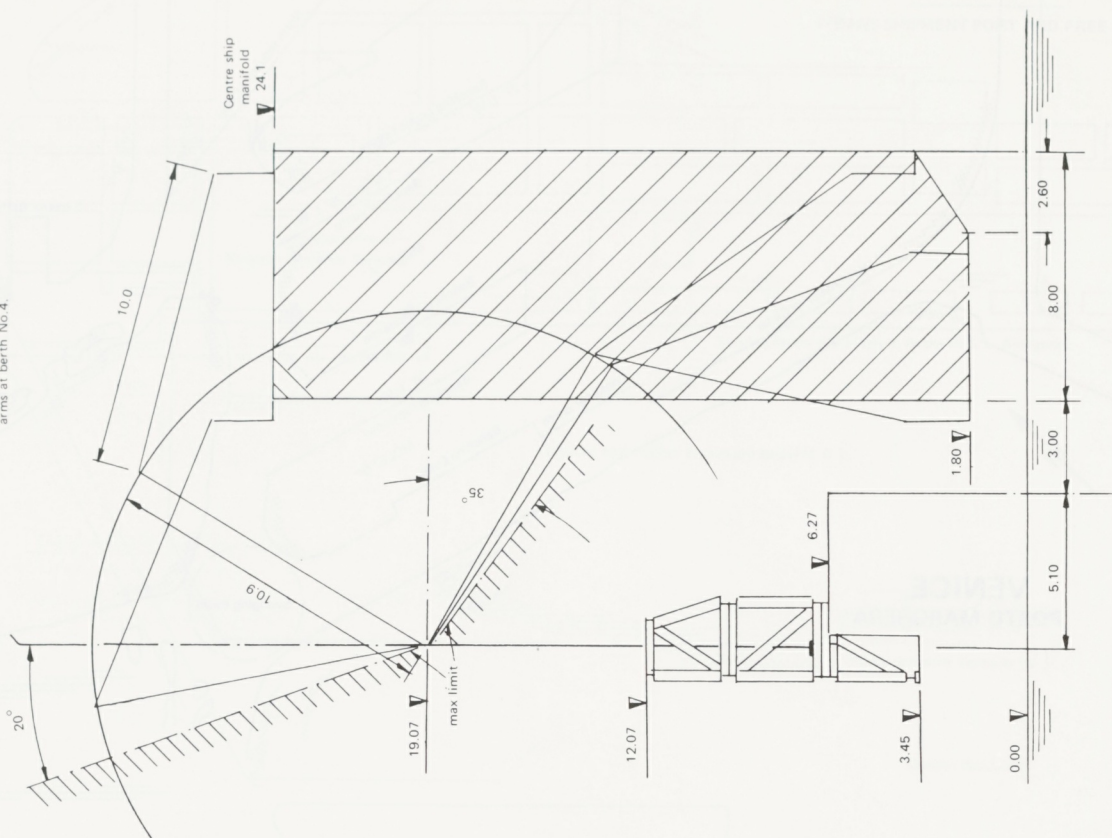






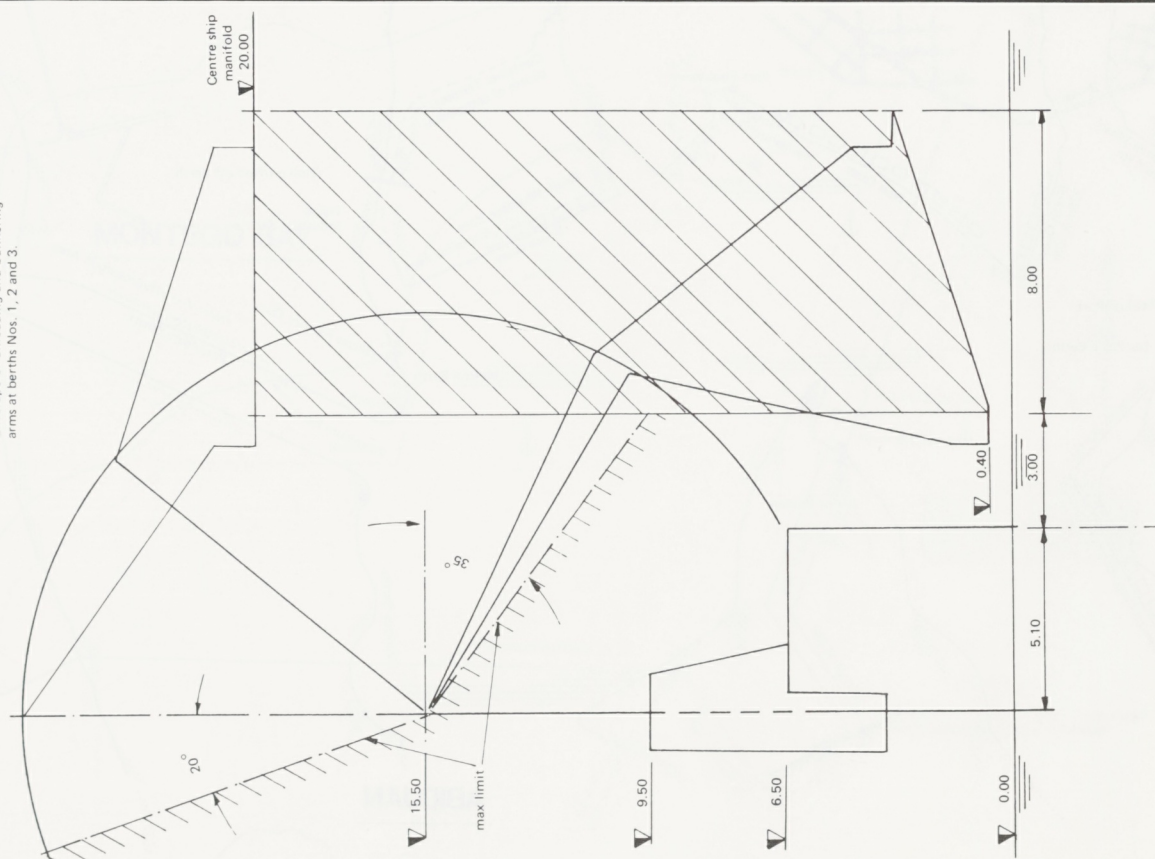


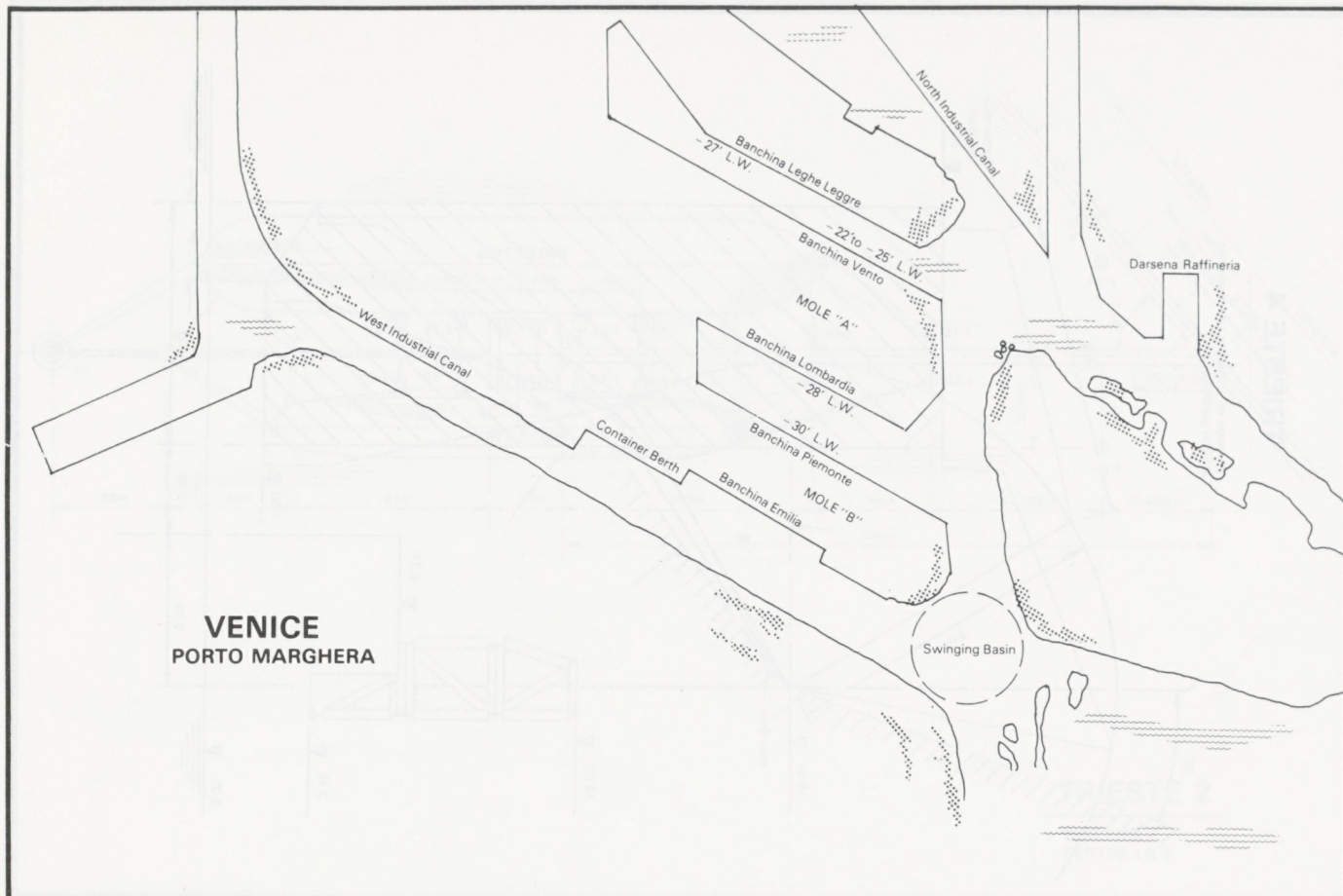
Envelope of unloading and bunkering
arms at berth No.4.



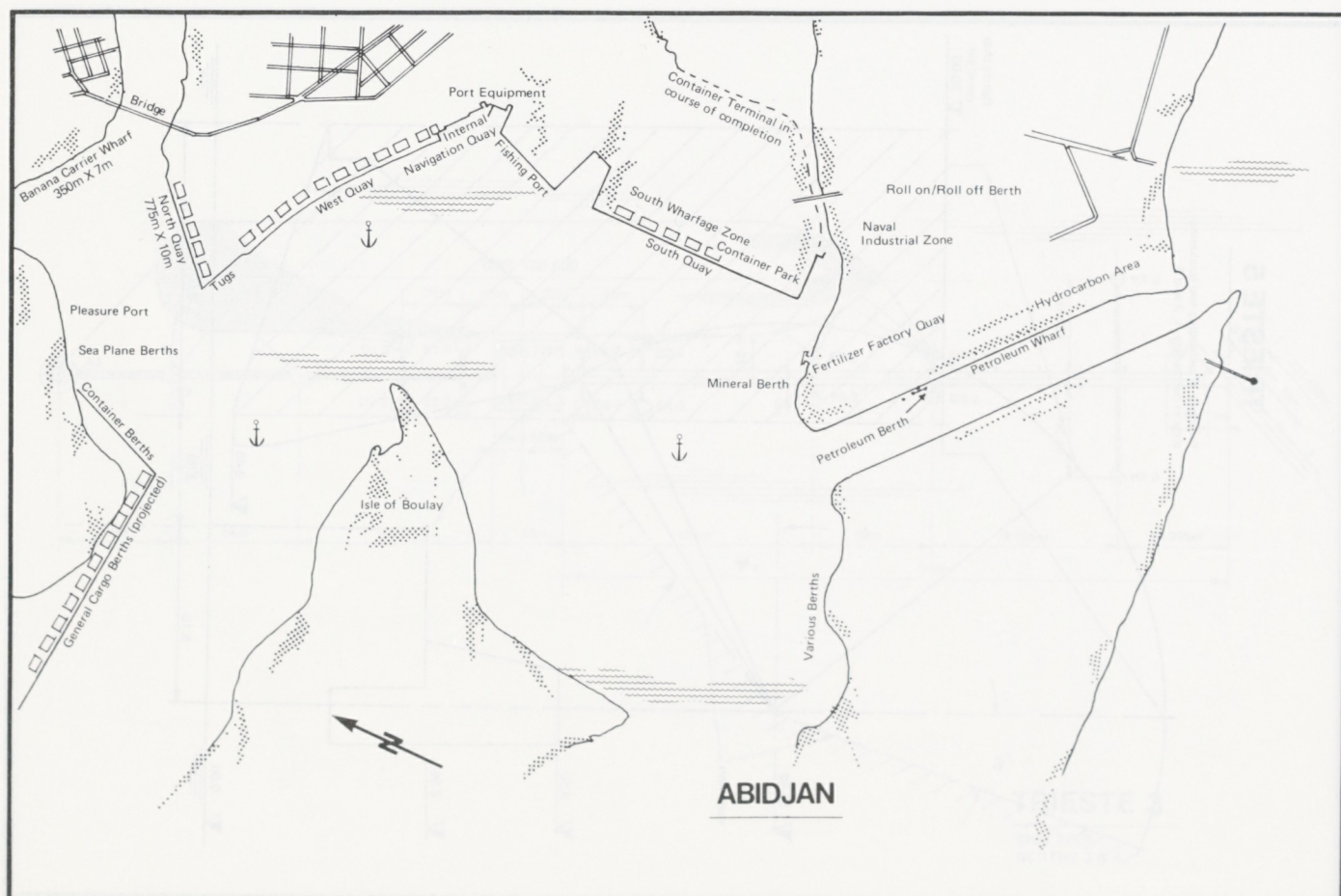
TRIESTE 5

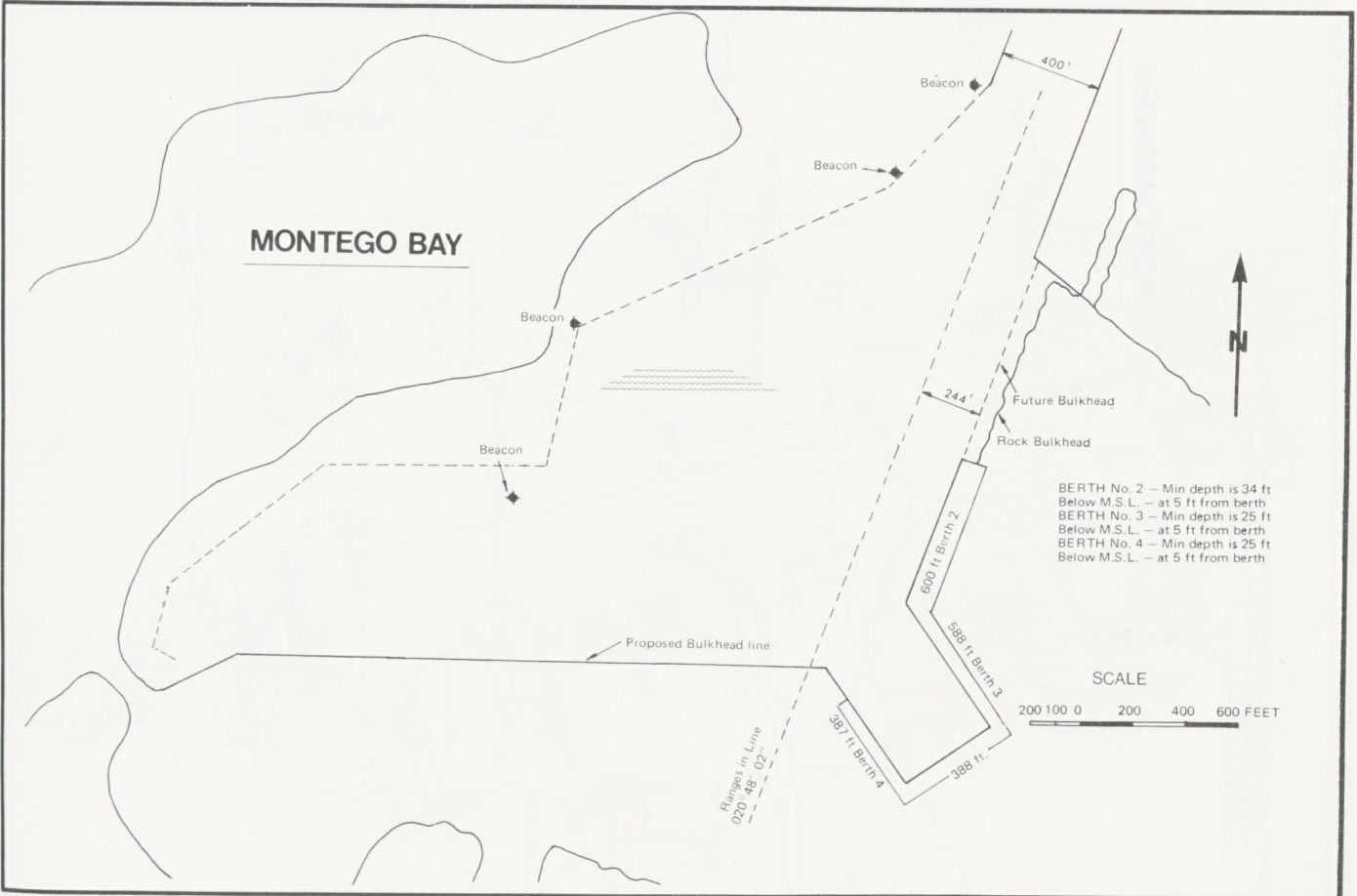
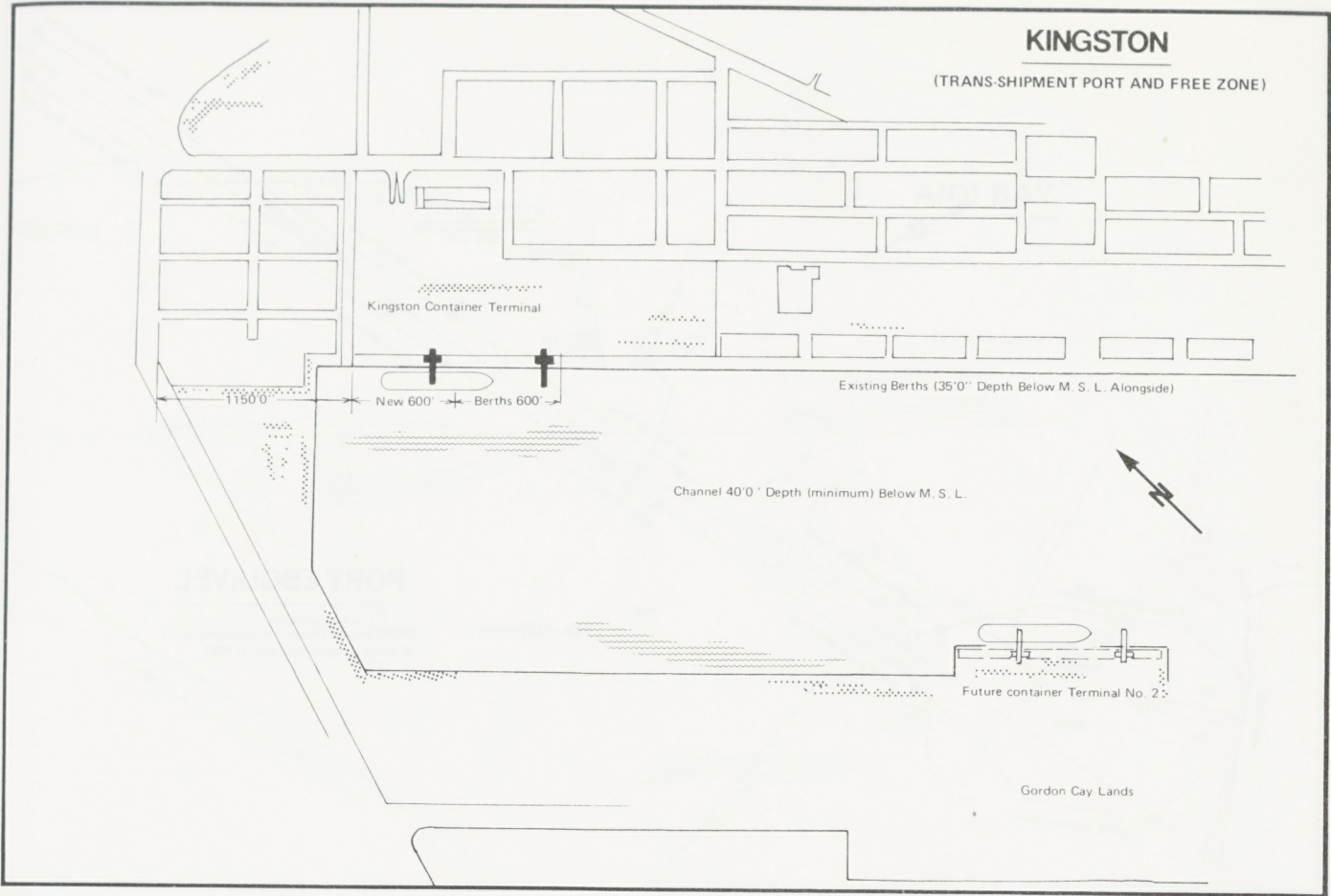
Envelope of unloading and bunkering
arms at berths Nos. 1, 2 and 3.

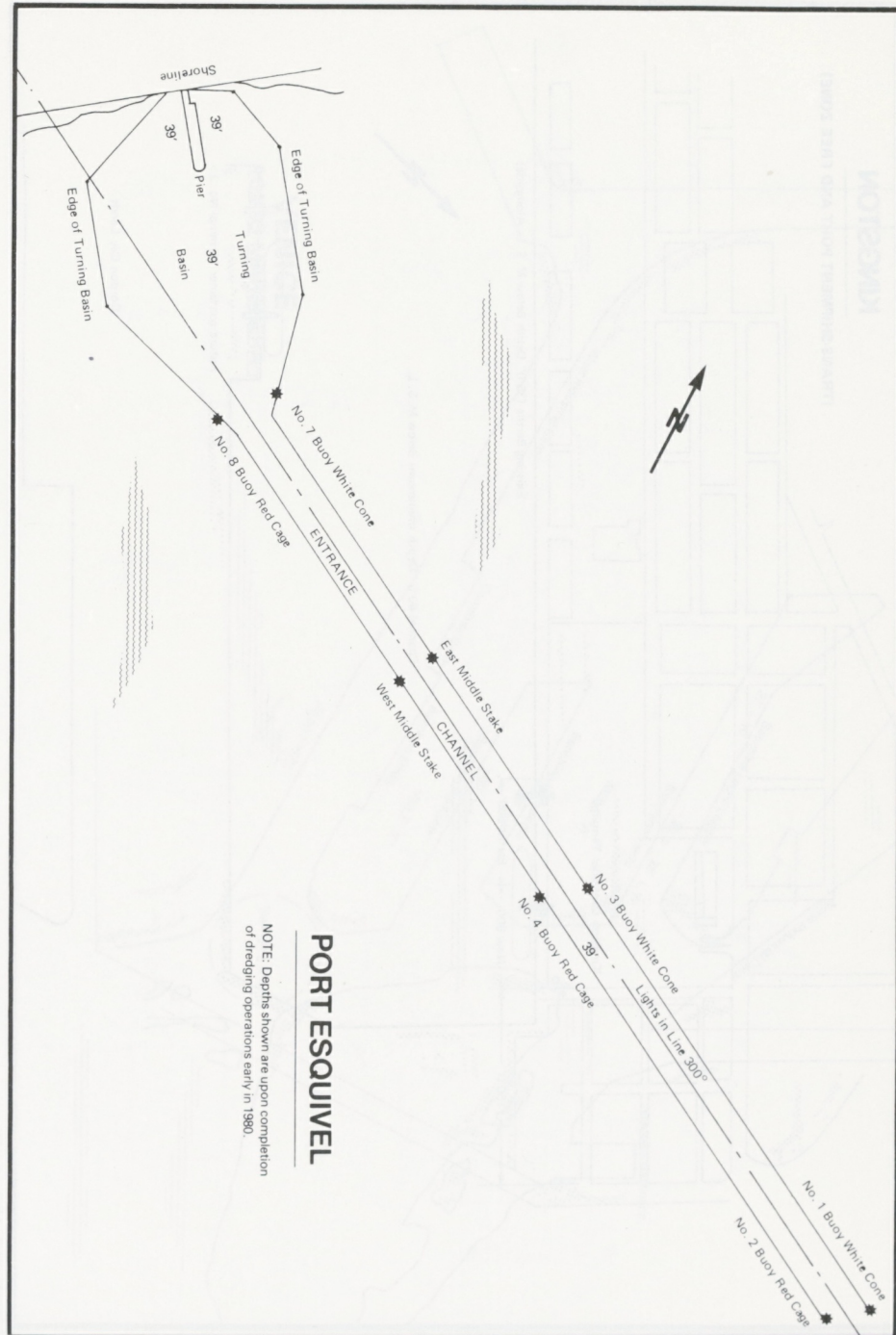




"Plan supplied by Ship's Master"

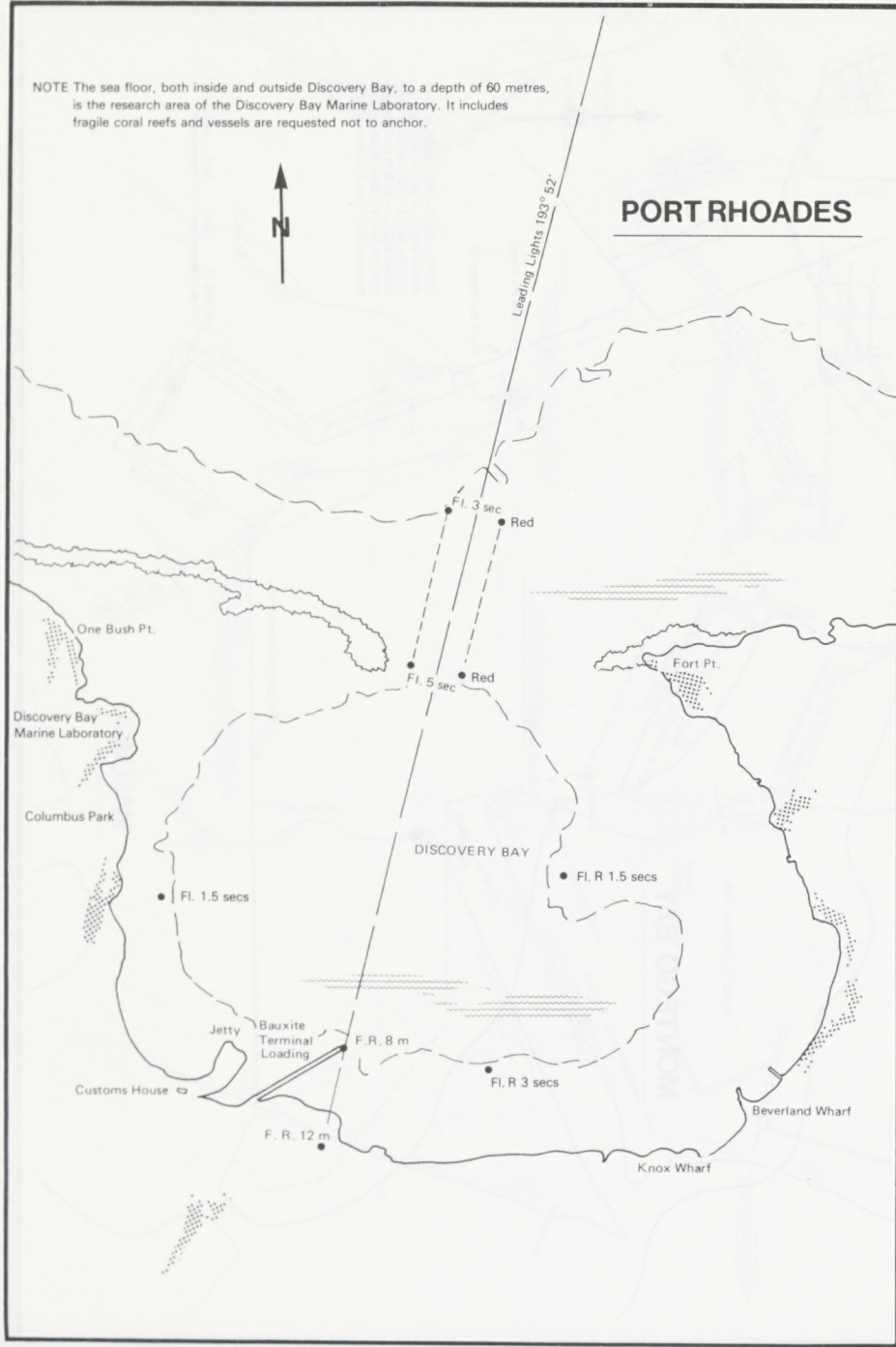




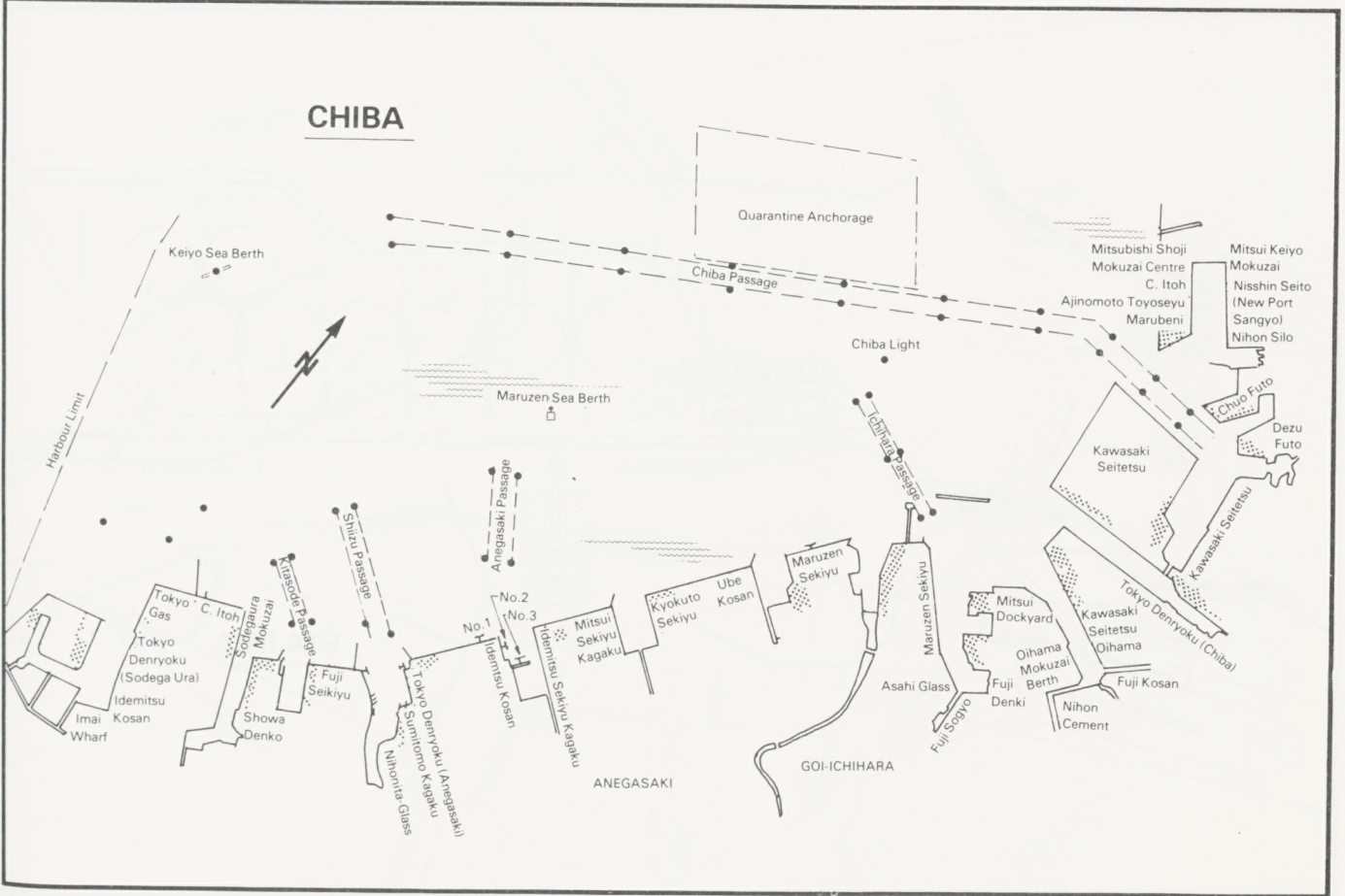
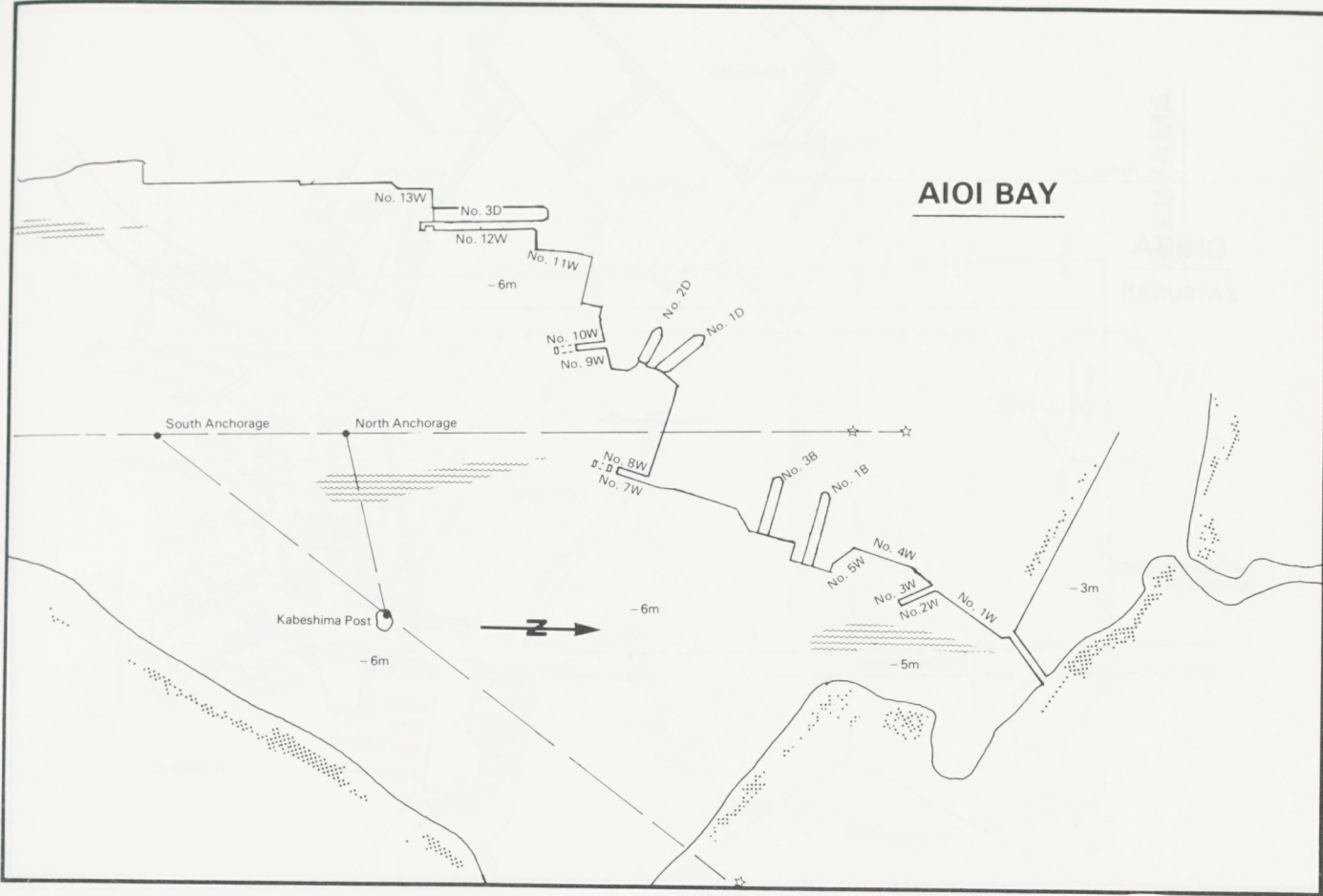


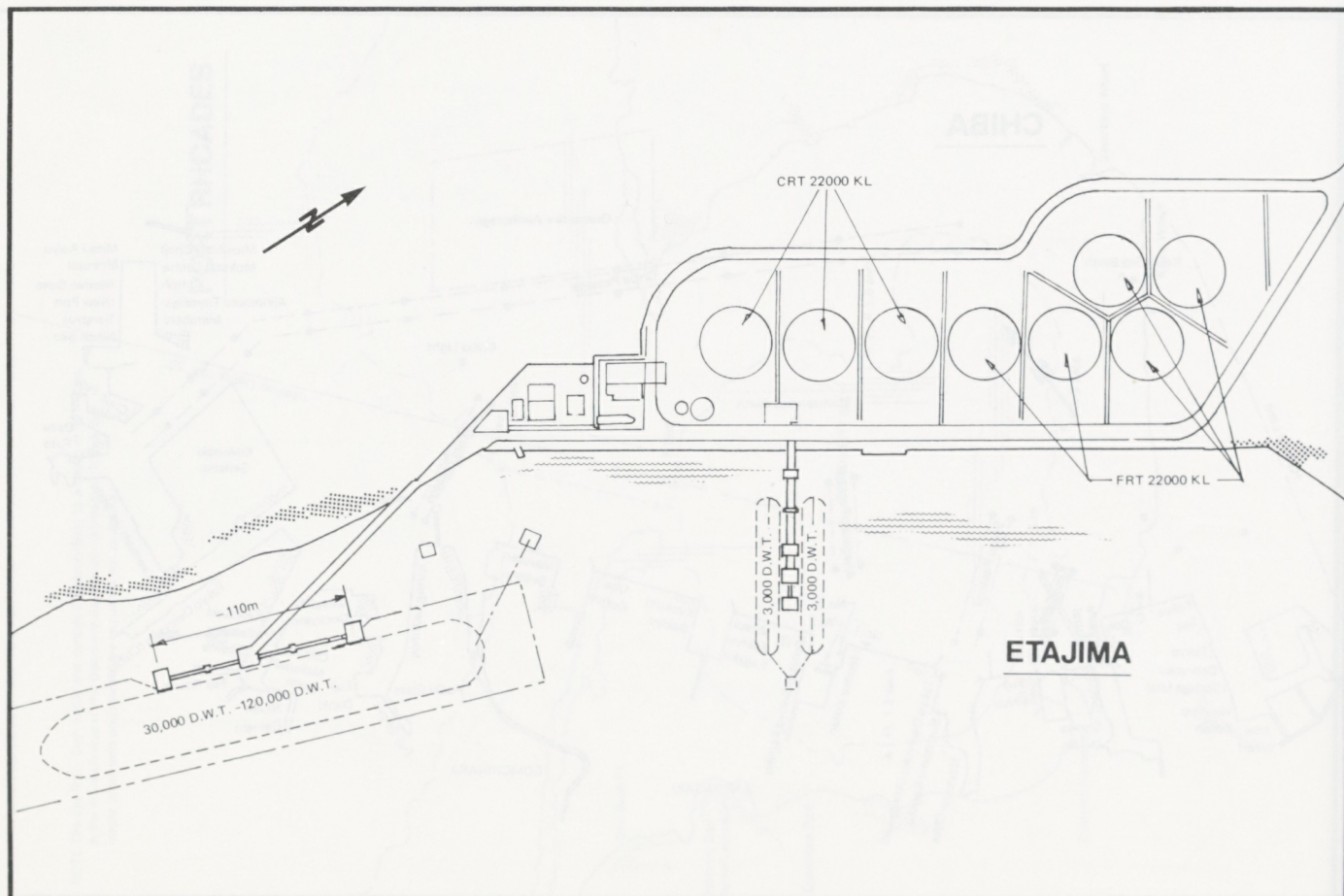
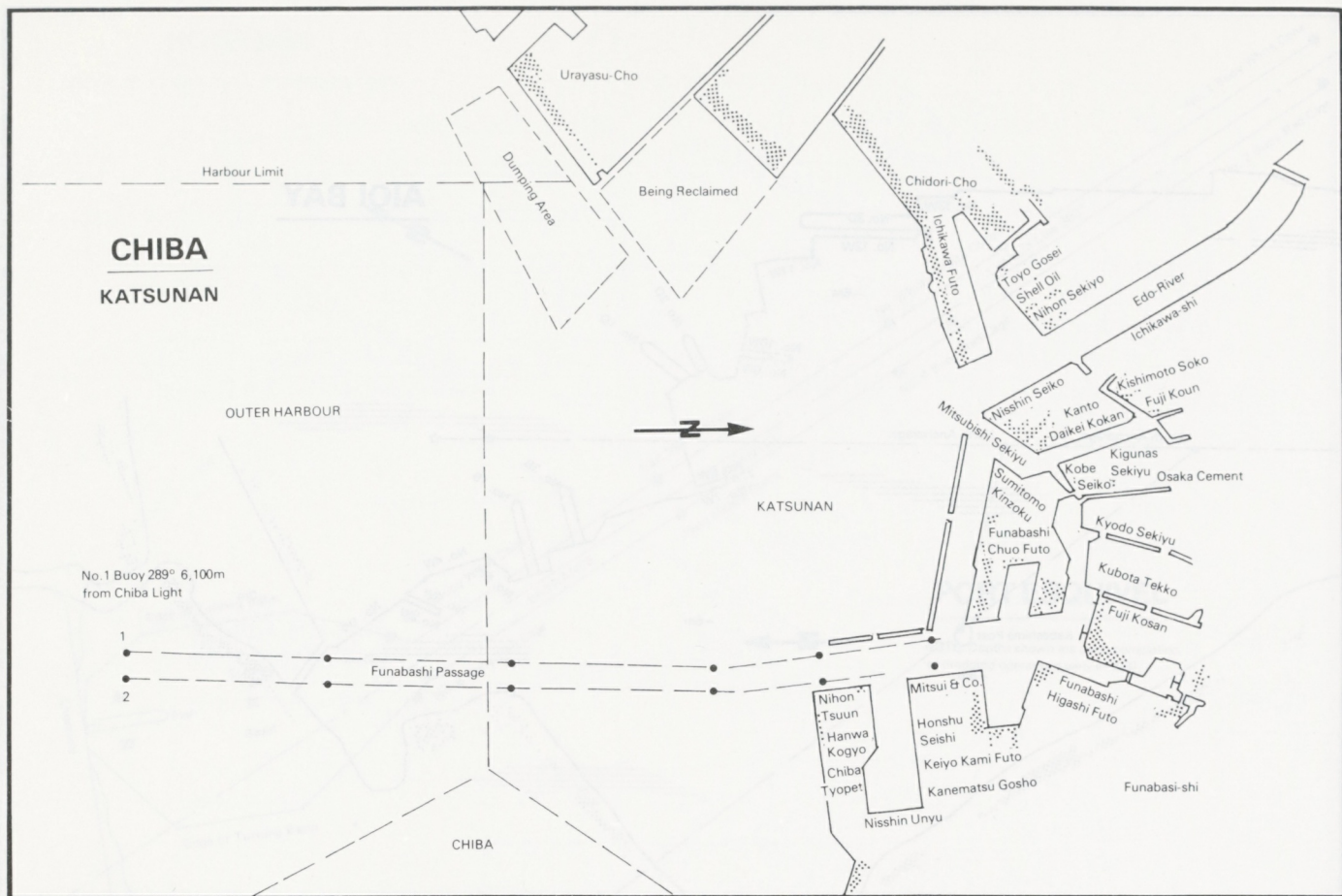
PORT ESQUIVEL

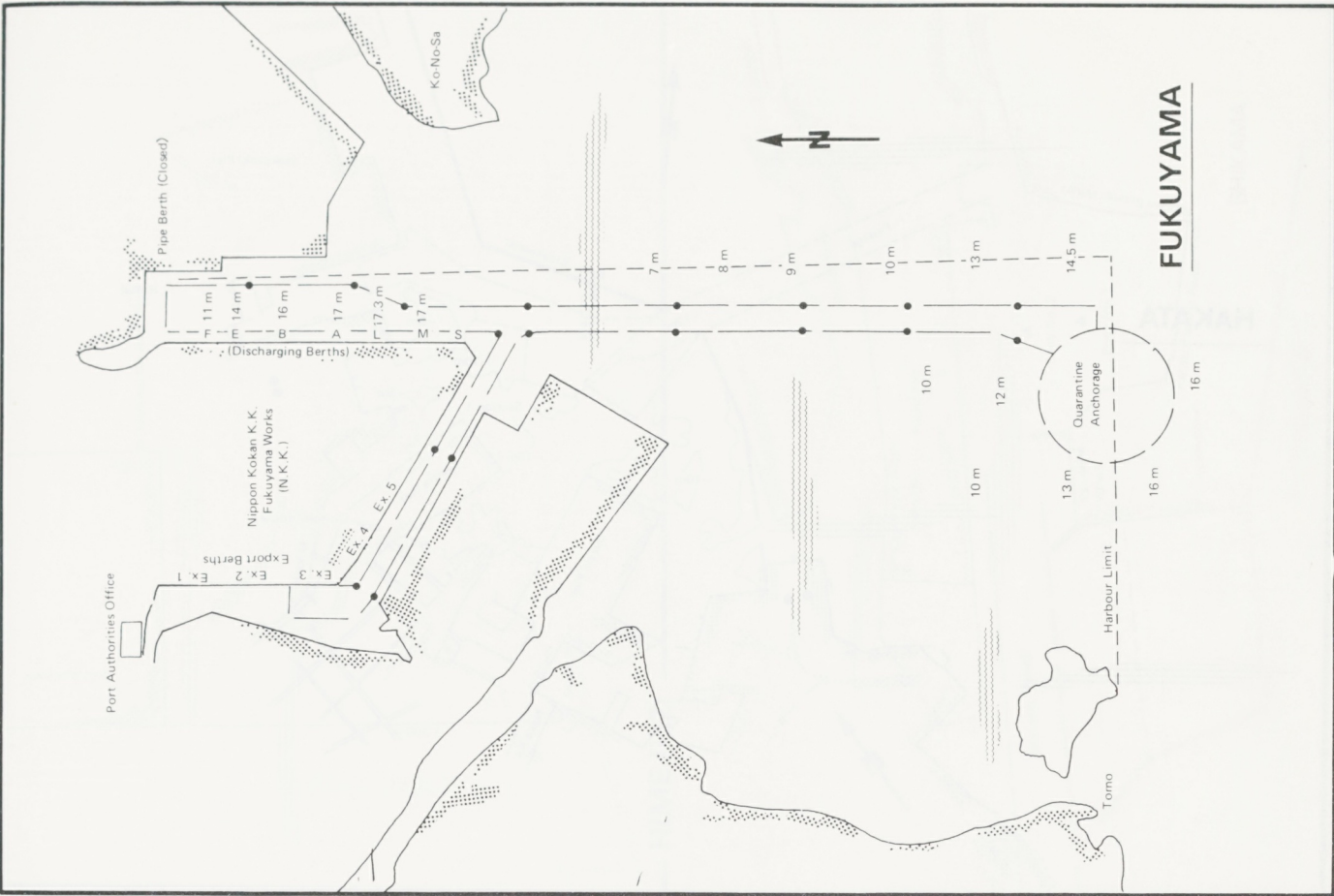
NOTE: Depths shown are upon completion of dredging operations early in 1980.

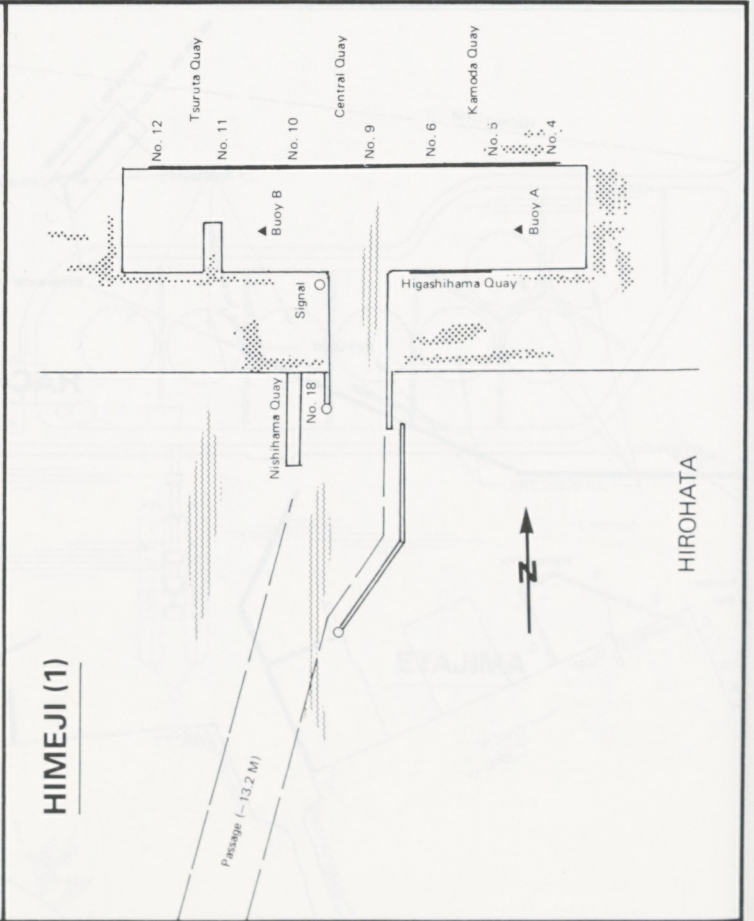
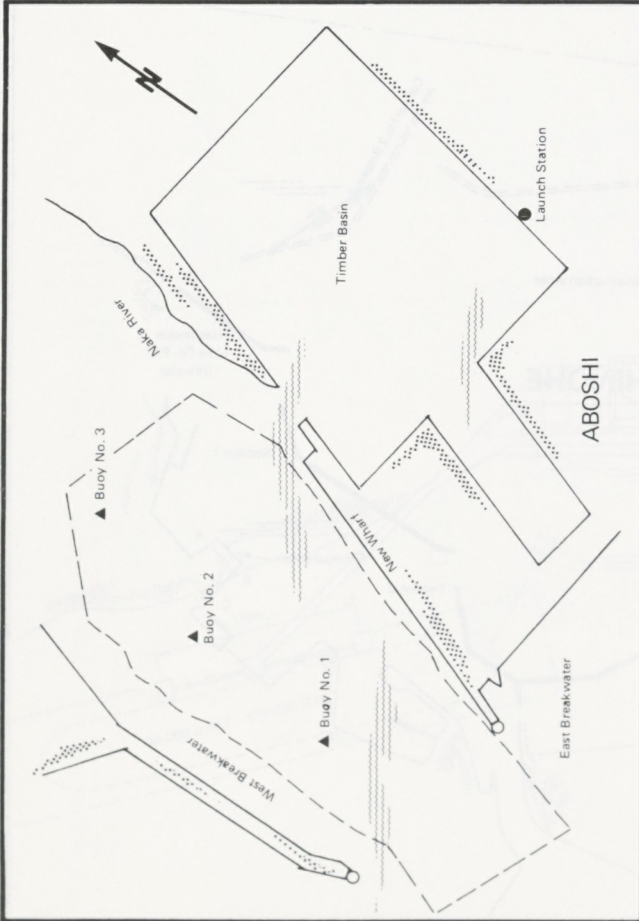
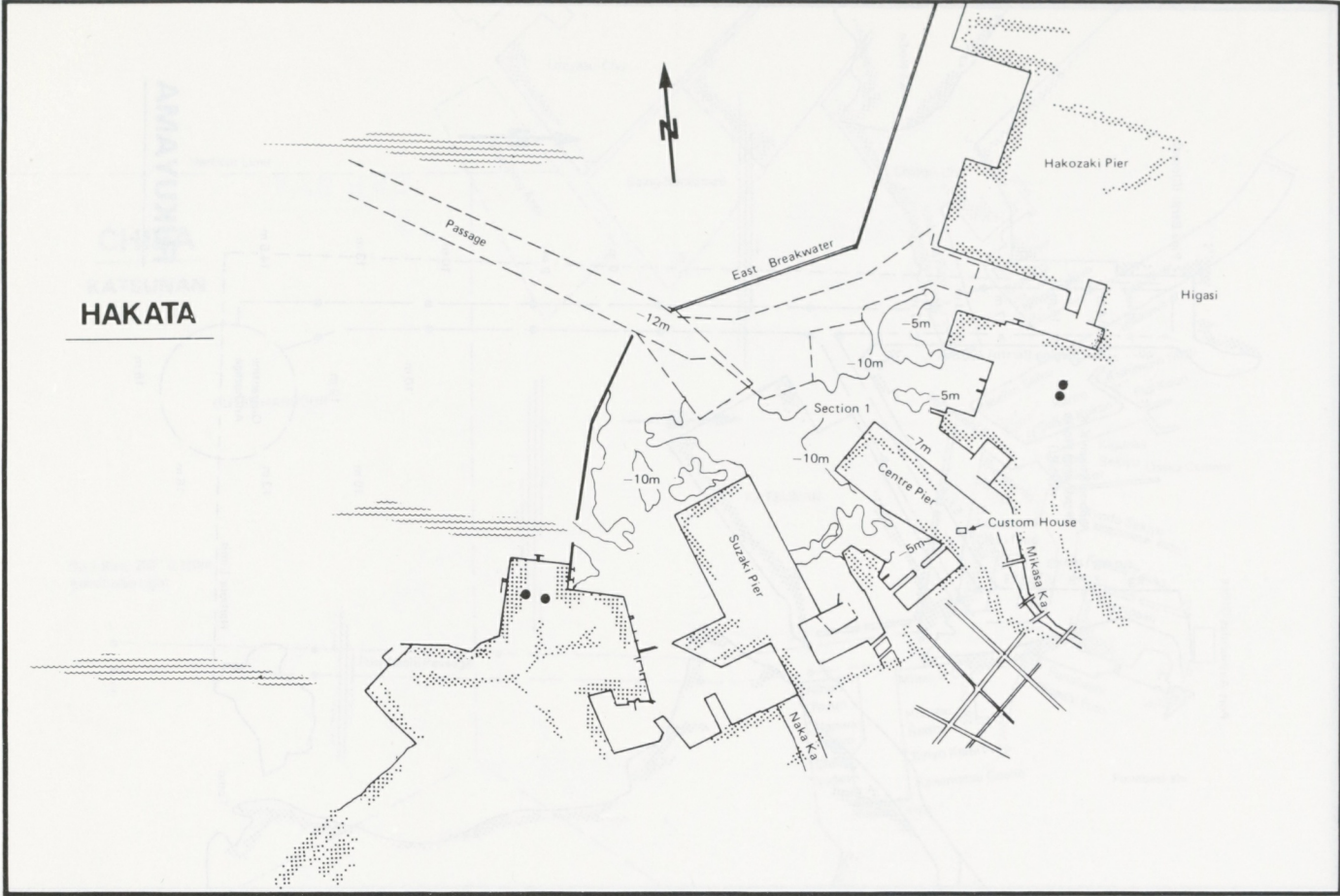


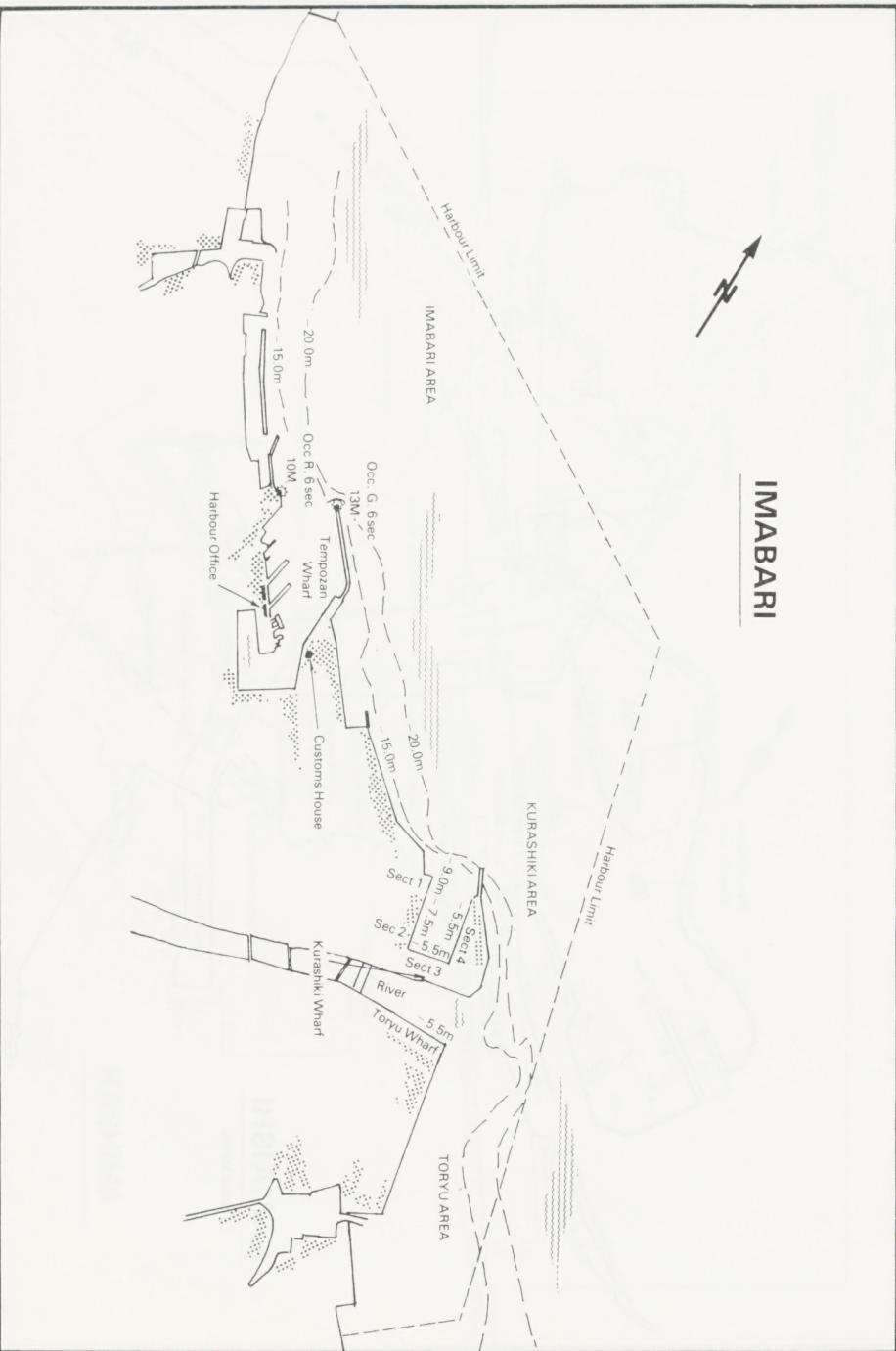
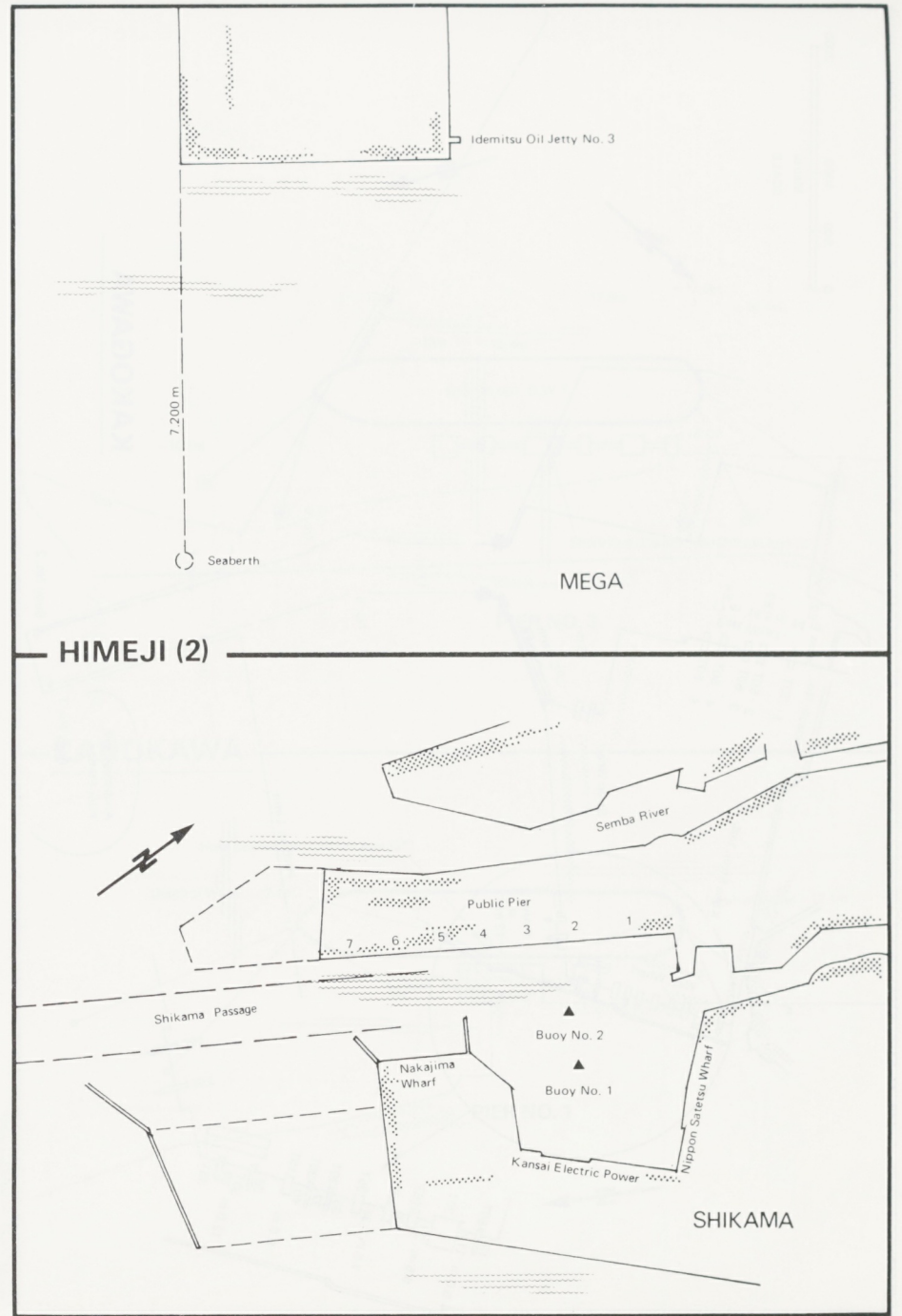
PORT RHOADES

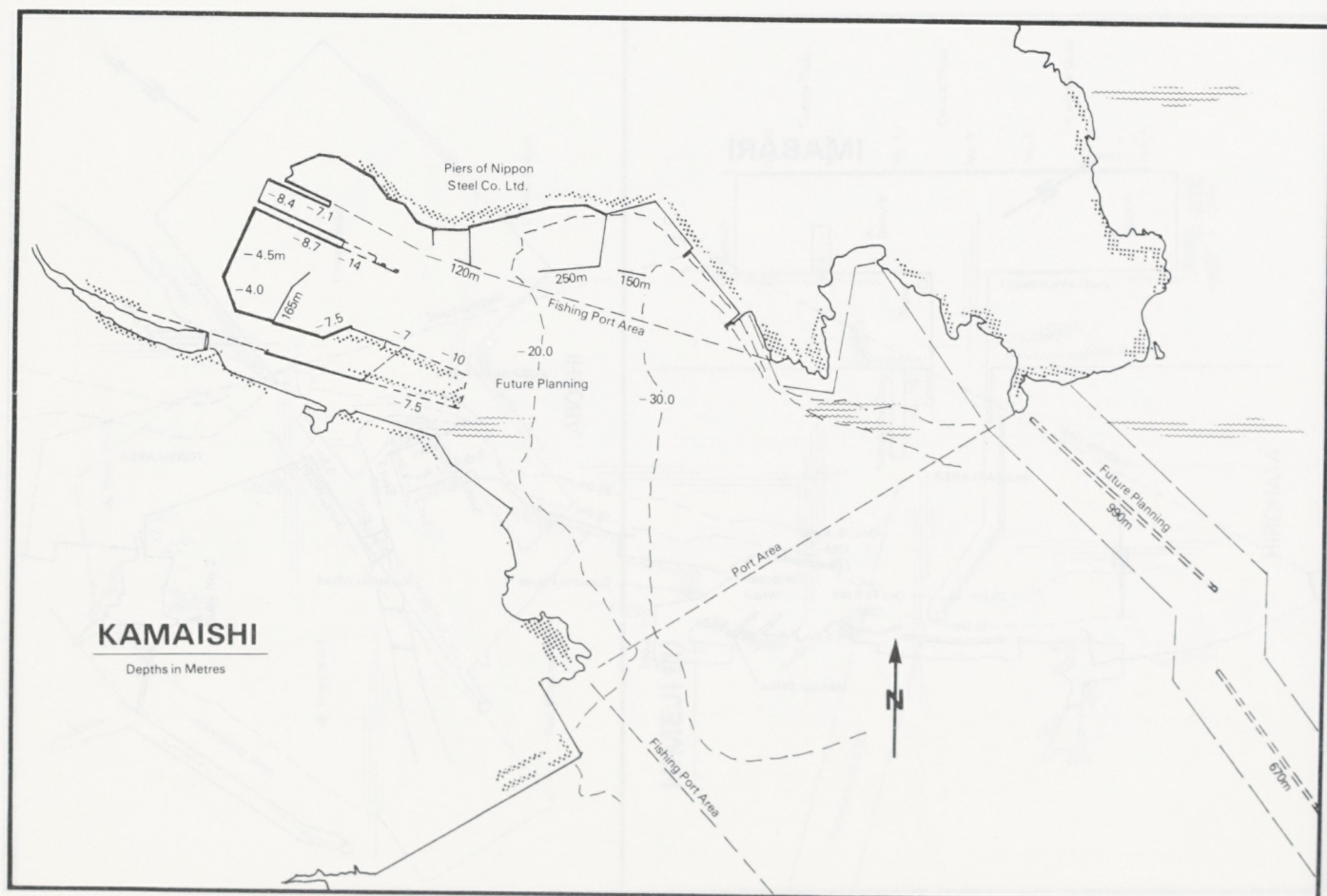
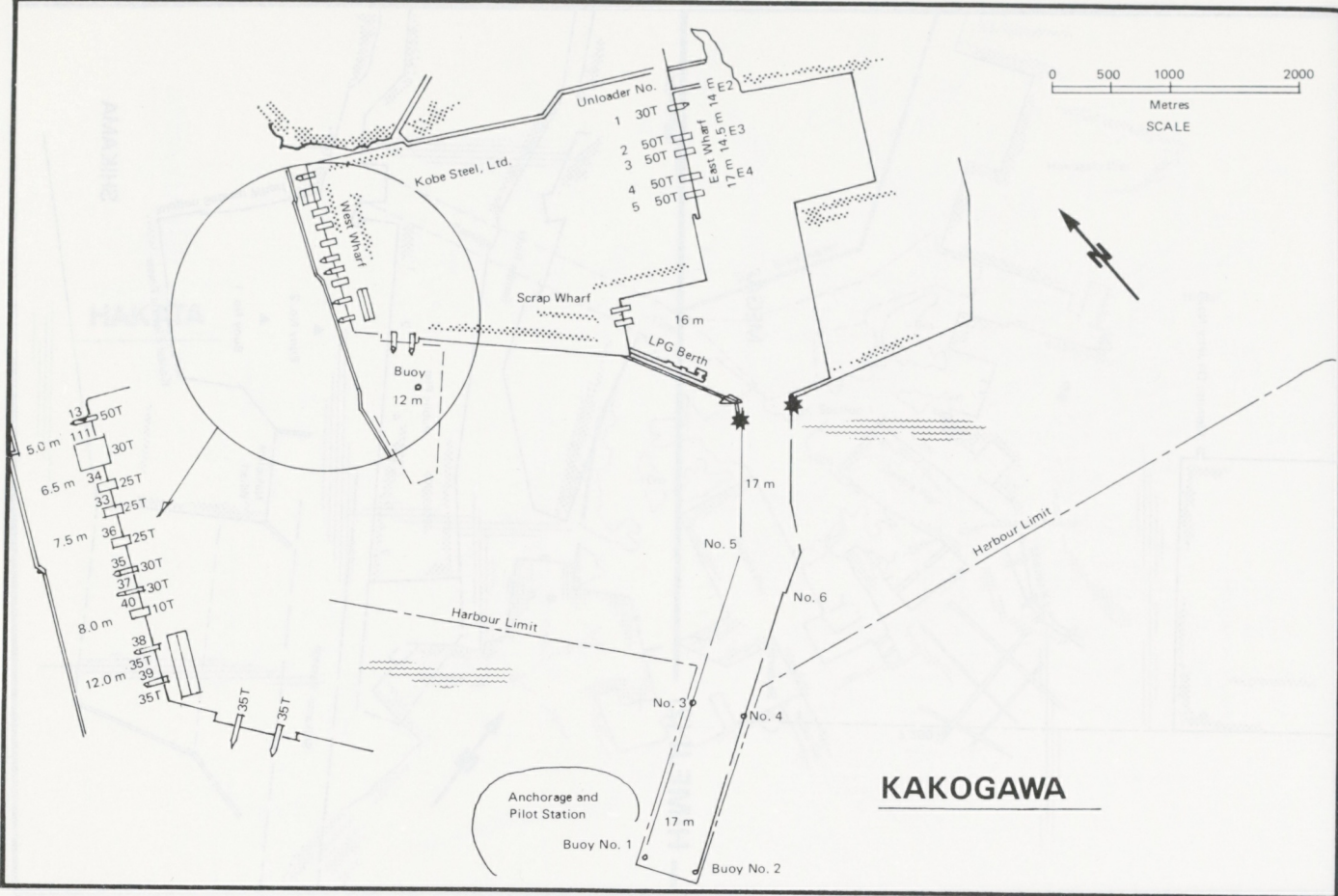


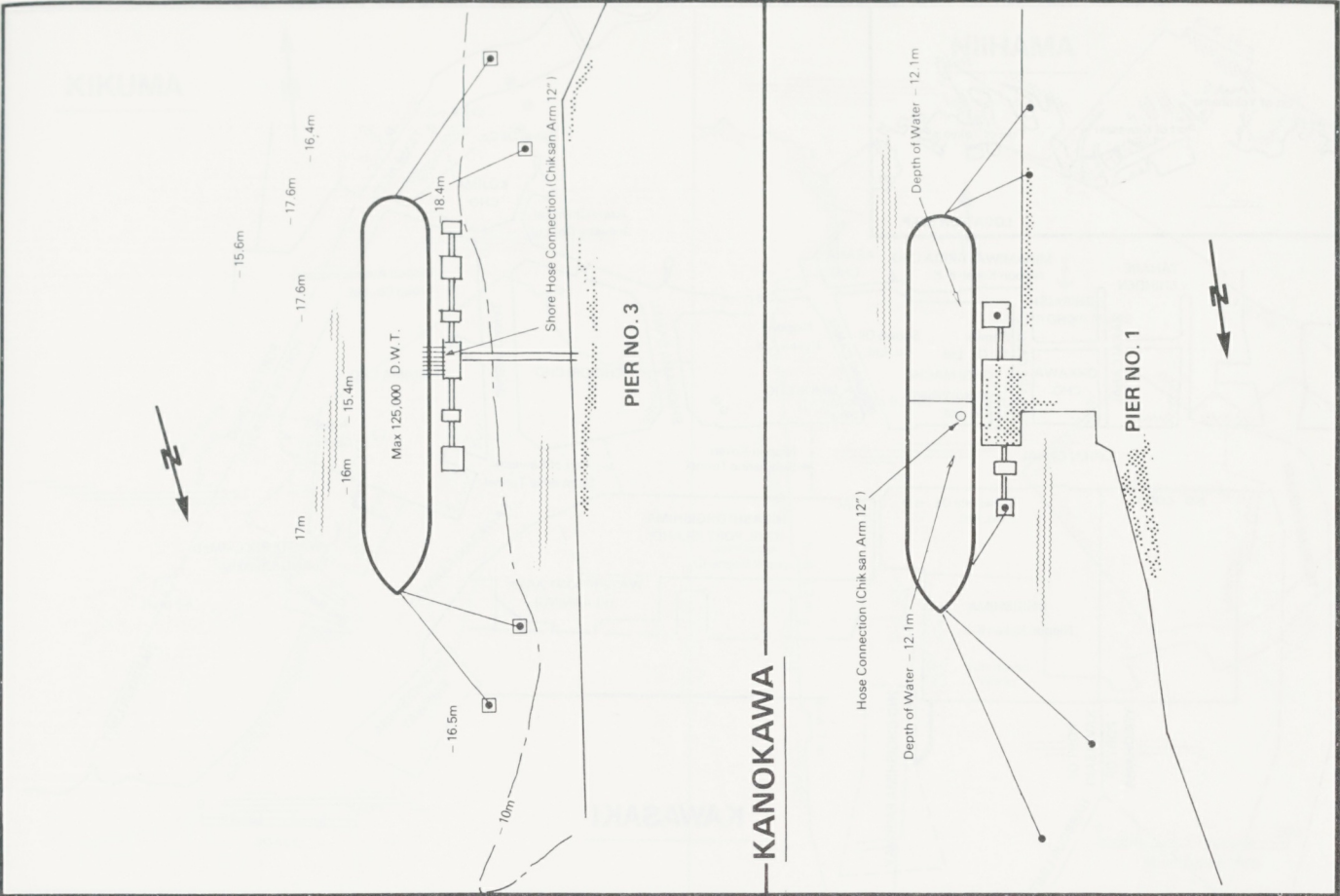




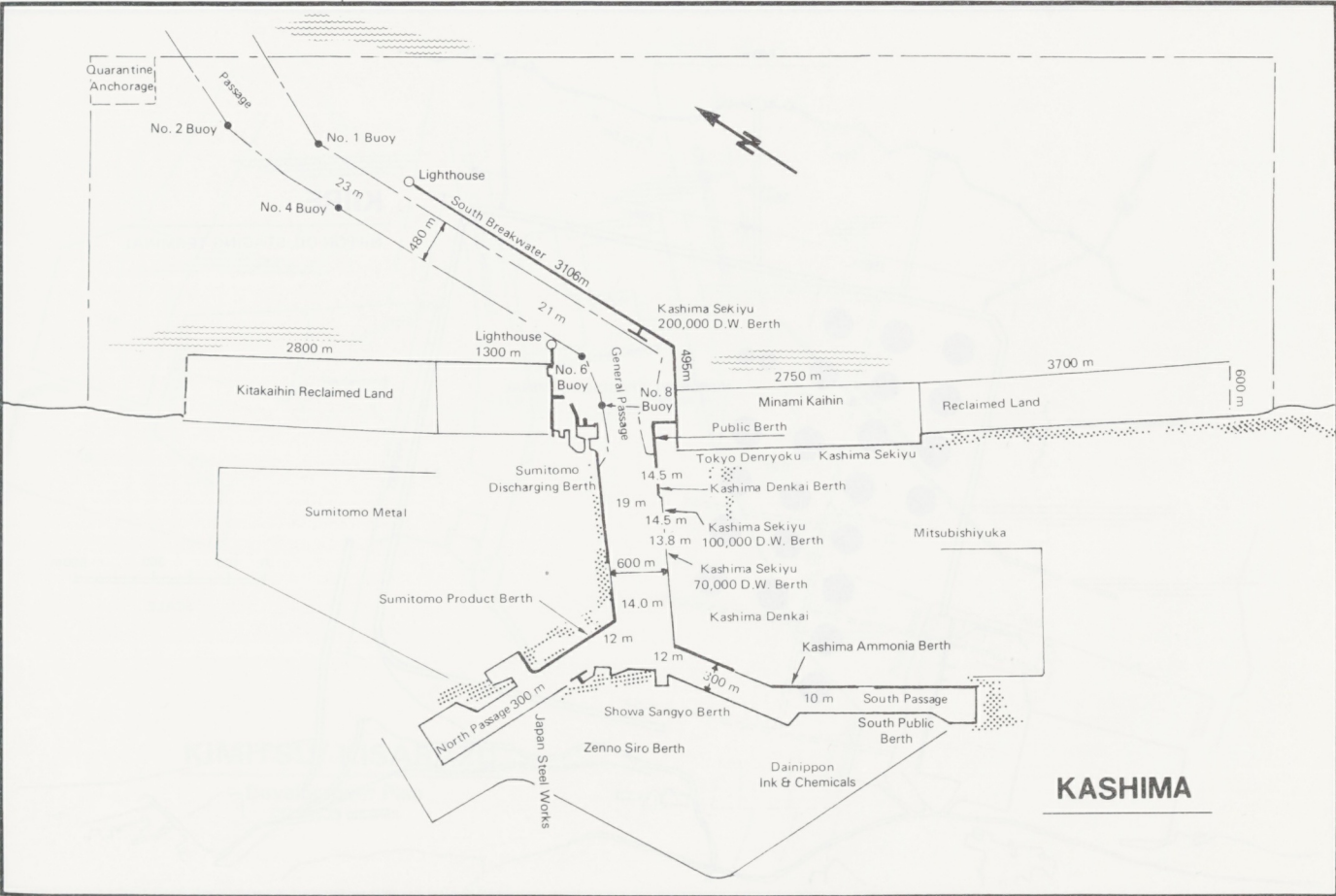


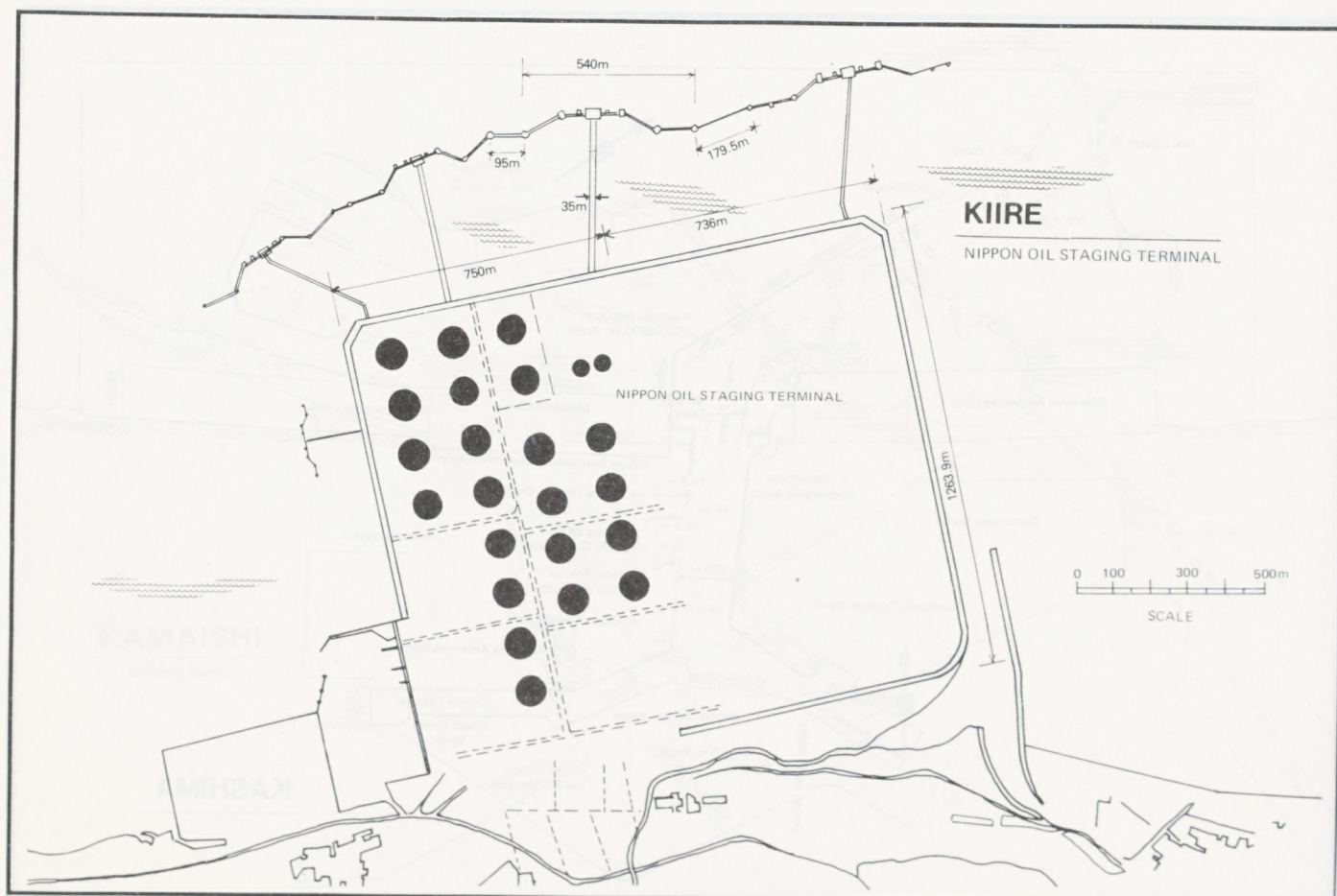


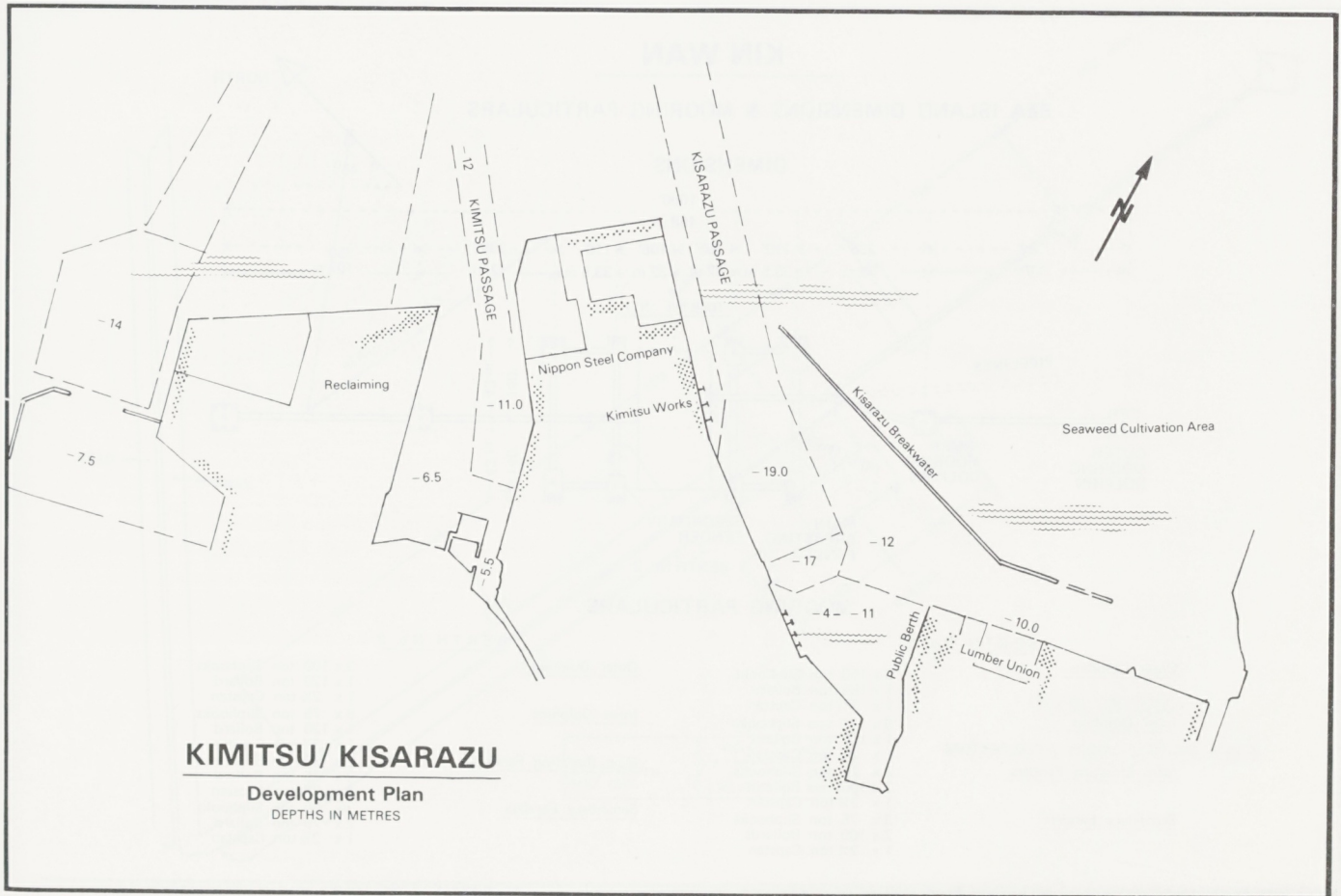
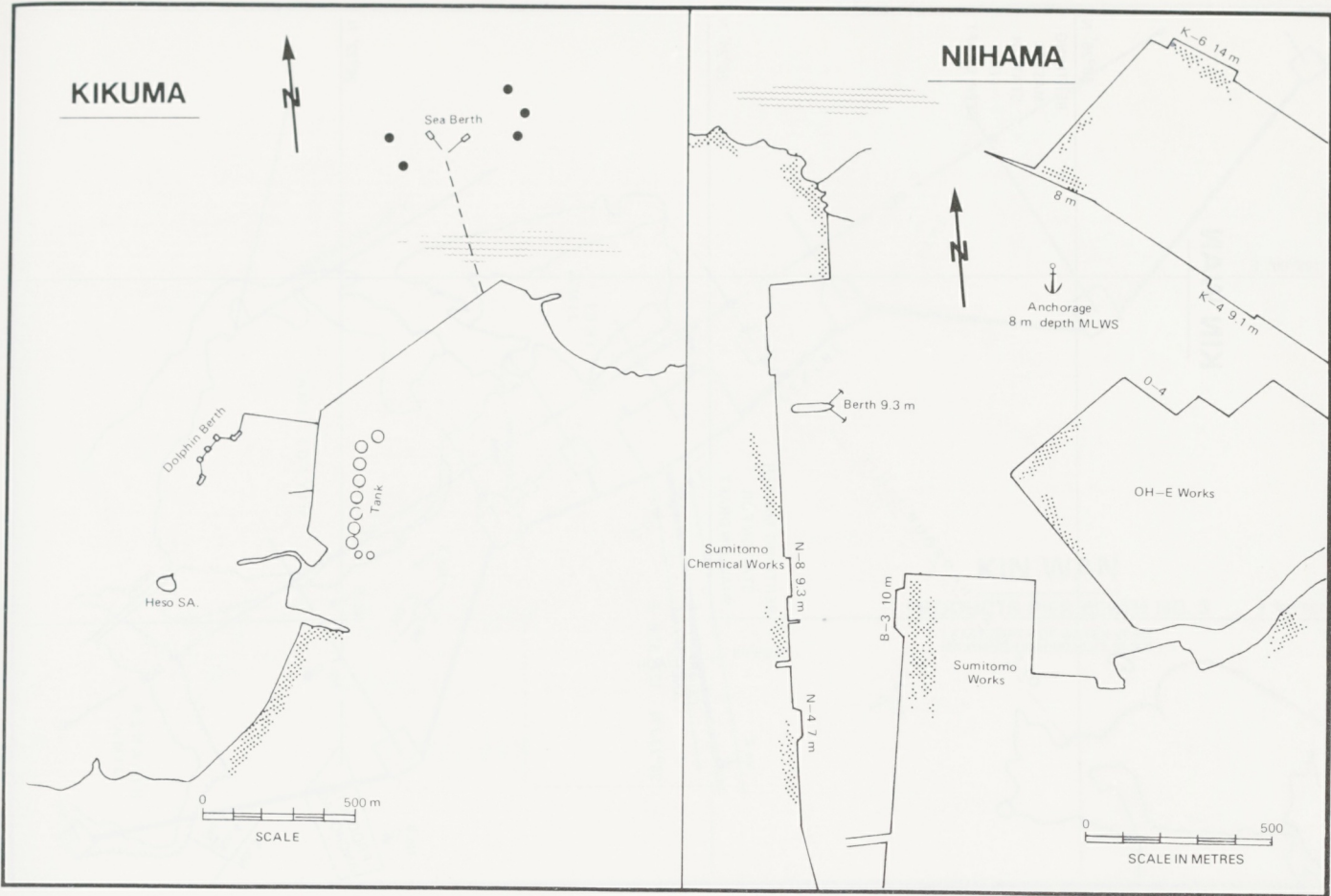


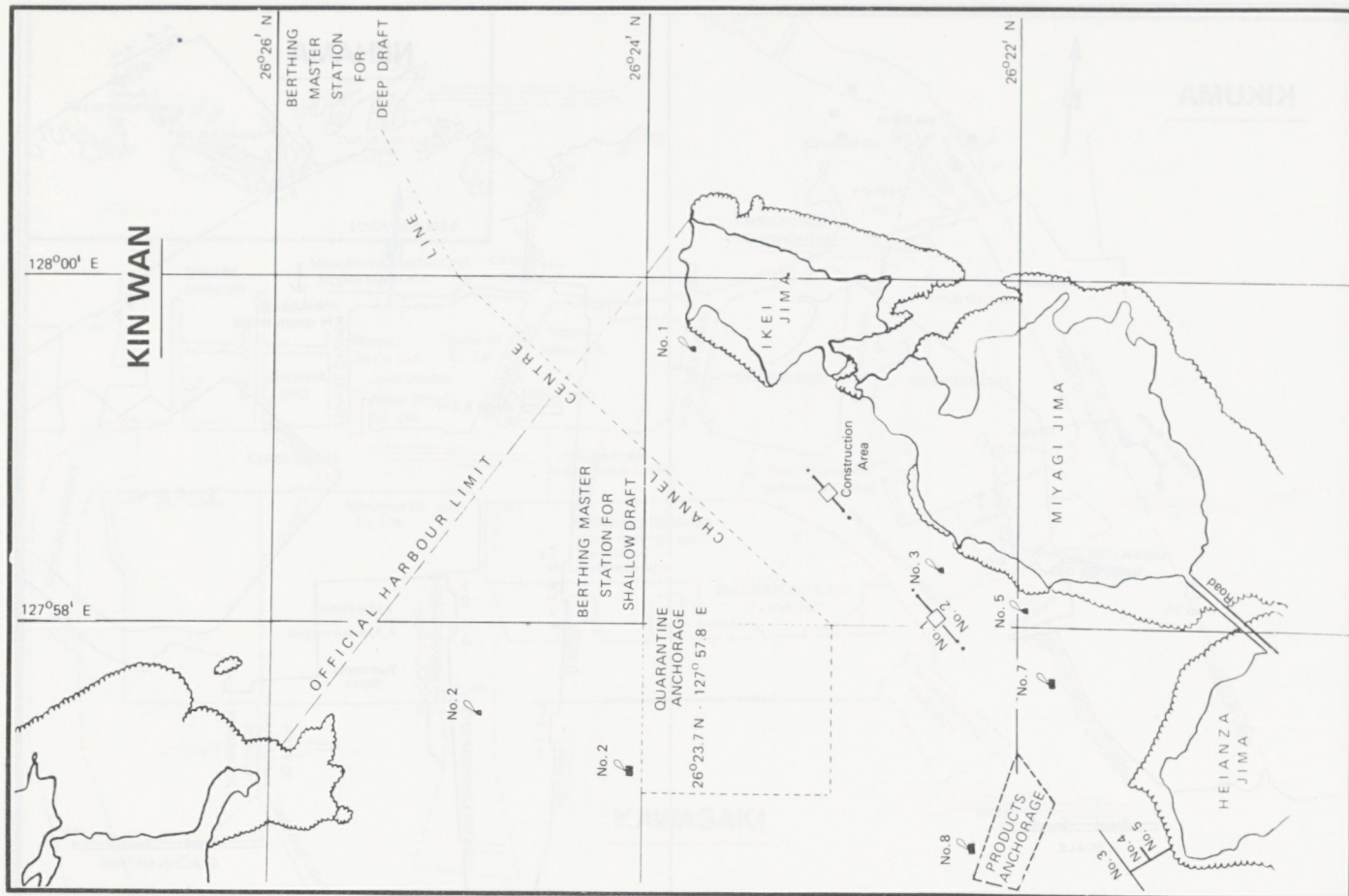


"Plan supplied by Ship's Master"



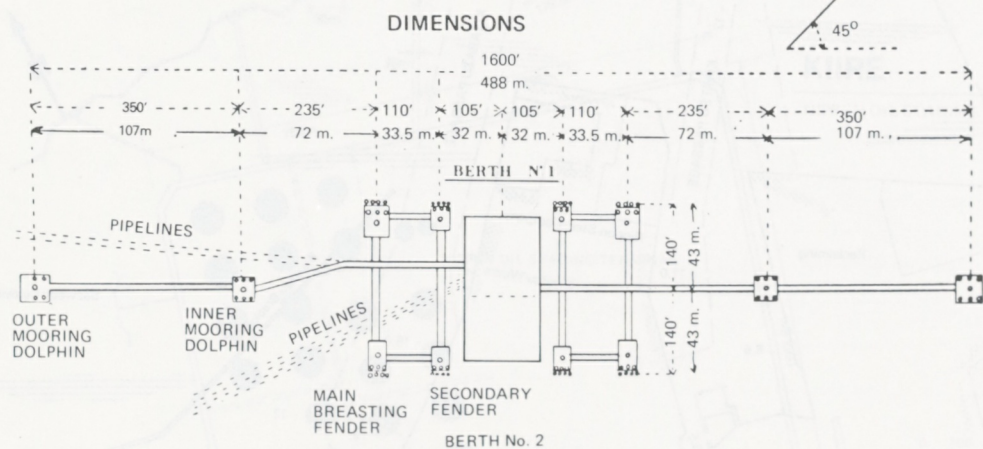






KIN WAN

SEA ISLAND DIMENSIONS & MOORING PARTICULARS



BERTH No. 1

Outer Dolphins

- 3 x 150 ton Sliphooks
- 1 x 150 ton Bollard
- 1 x 2½ ton Capstan

Inner Dolphins

- 6 x 75 ton Sliphooks
- 1 x 150 ton Bollard
- 1 x 2½ ton Capstan

Main Breasting Fenders

- 3 x 75 ton Sliphooks
- 2 x 100 ton Bollards
- 1 x 2½ ton Capstan

Secondary Fenders

- 3 x 75 ton Sliphooks
- 2 x 100 ton Bollards
- 1 x 2½ ton Capstan

BERTH No. 2

Outer Dolphins

- 3 x 100 ton Sliphooks
- 1 x 120 ton Bollard
- 1 x 2½ ton Capstan

Inner Dolphins

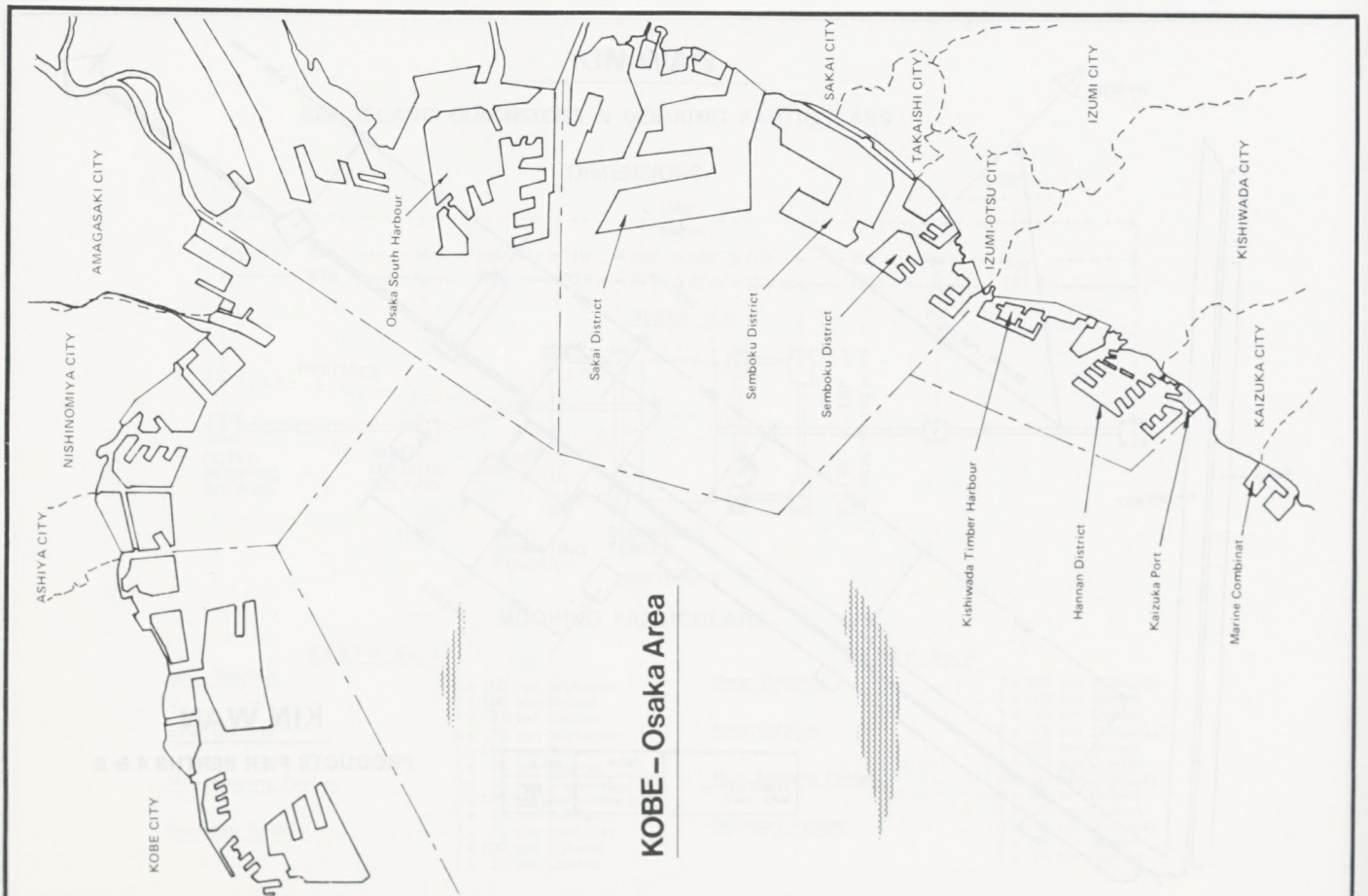
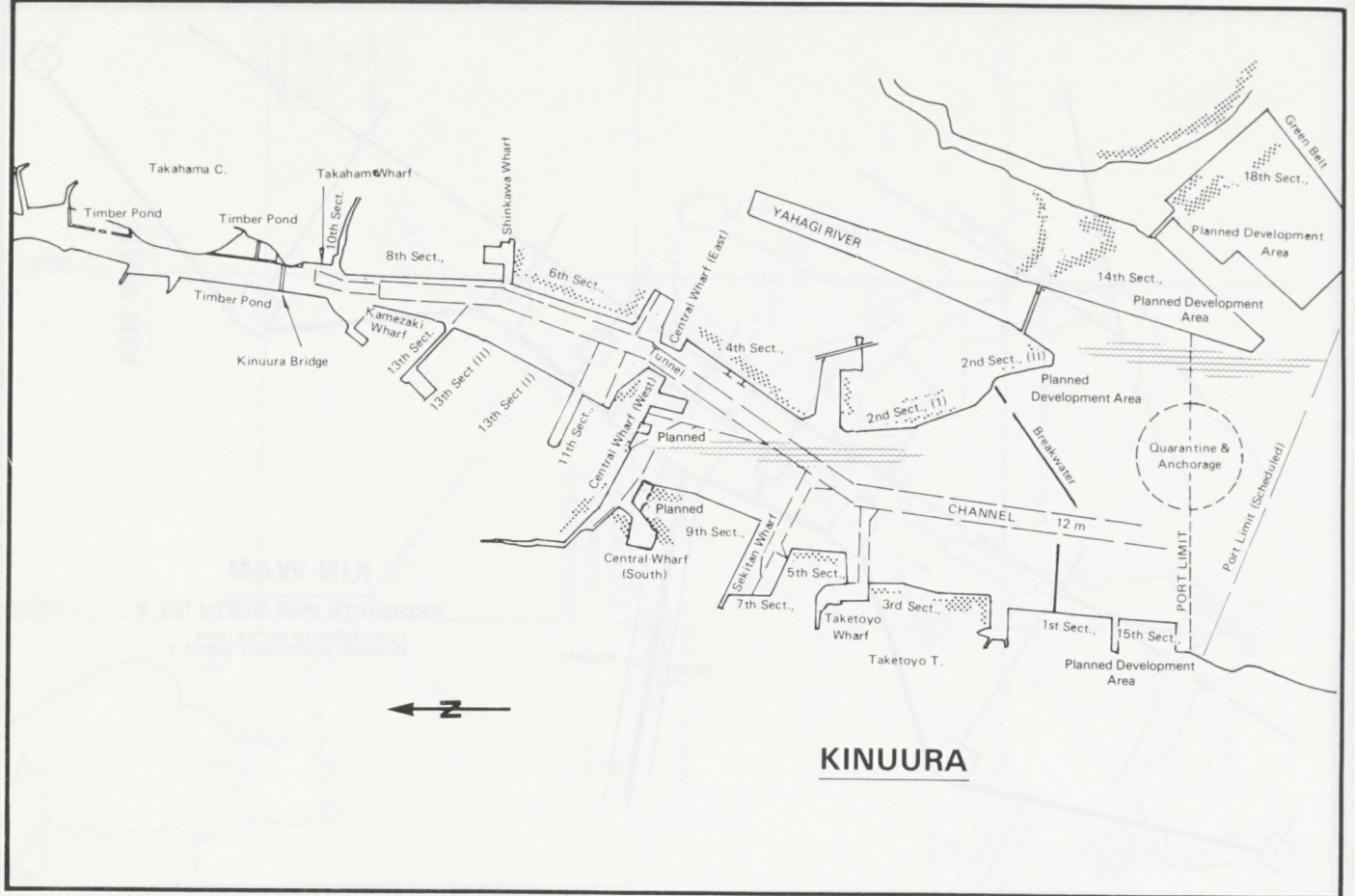
- 6 x 75 ton Sliphooks
- 1 x 120 ton Bollard
- 1 x 2½ ton Capstan

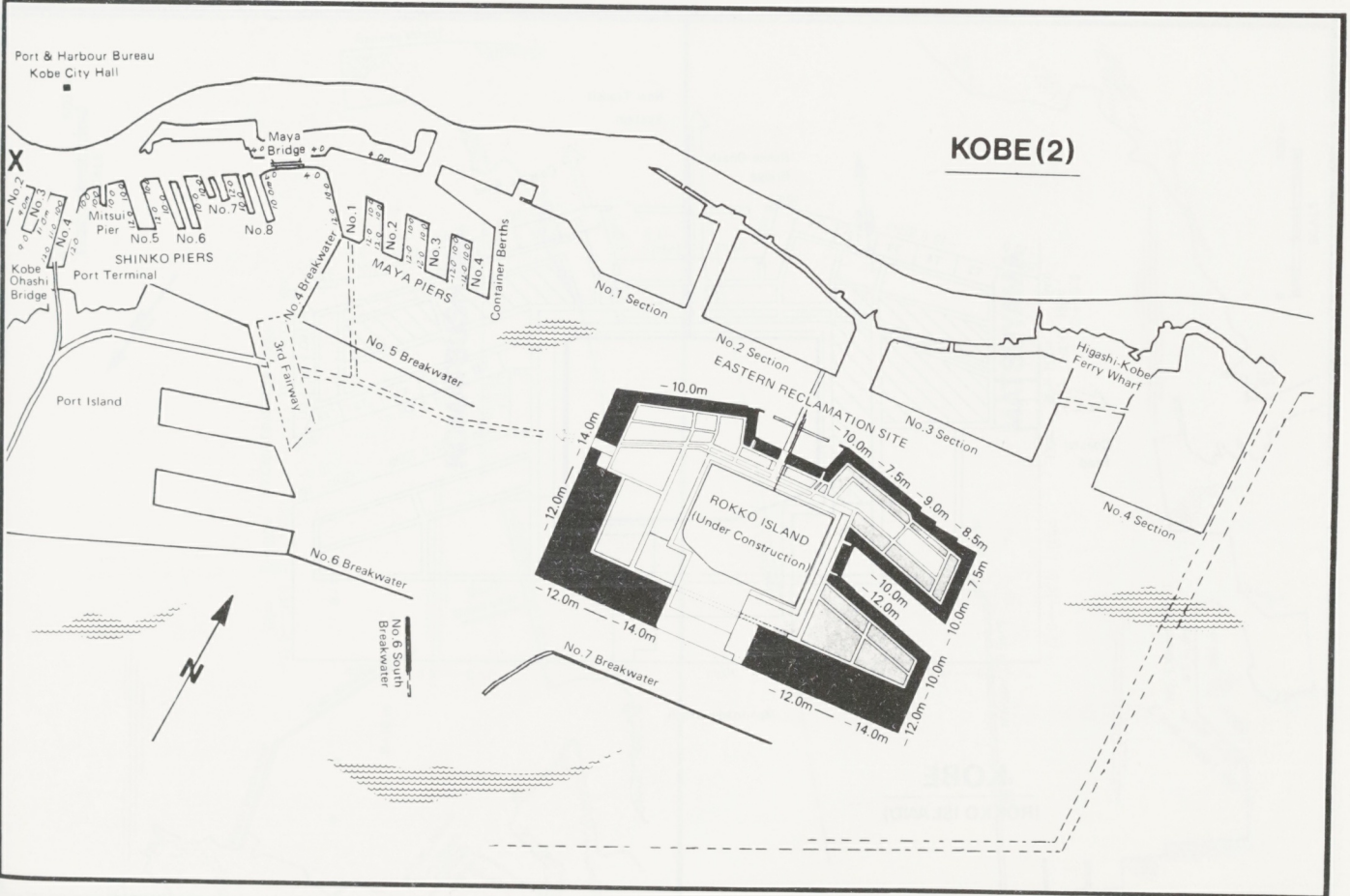
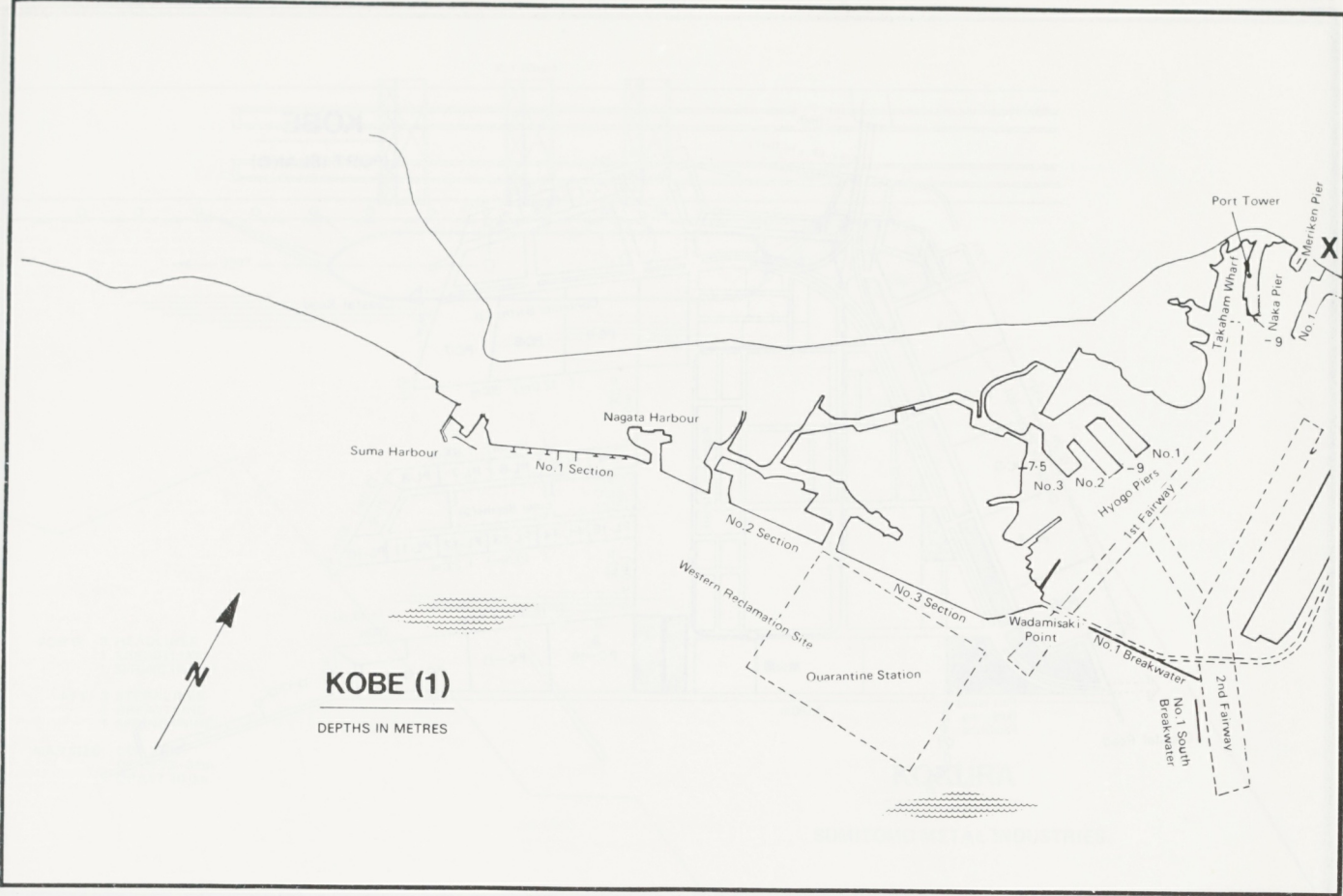
Main Breasting Fenders

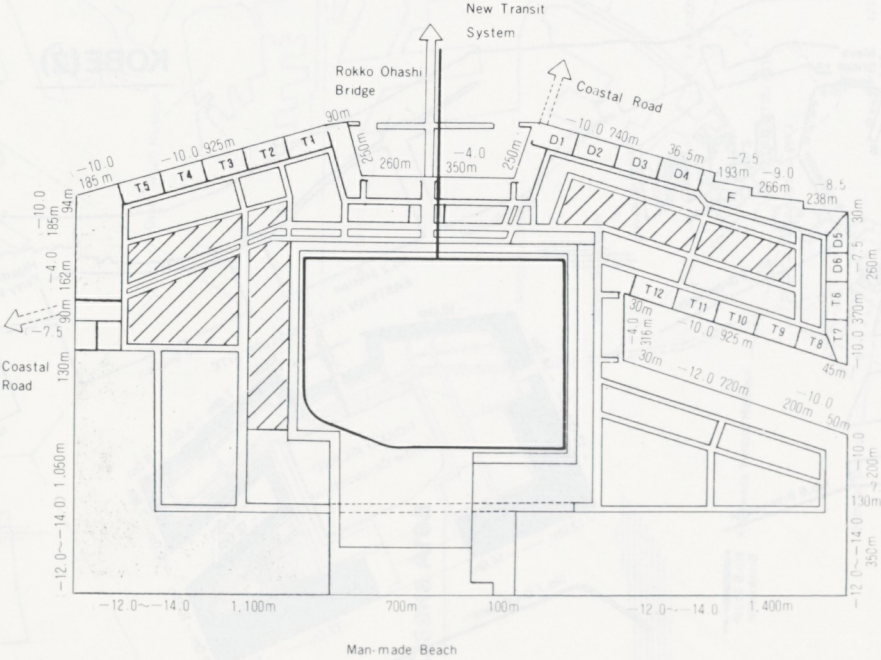
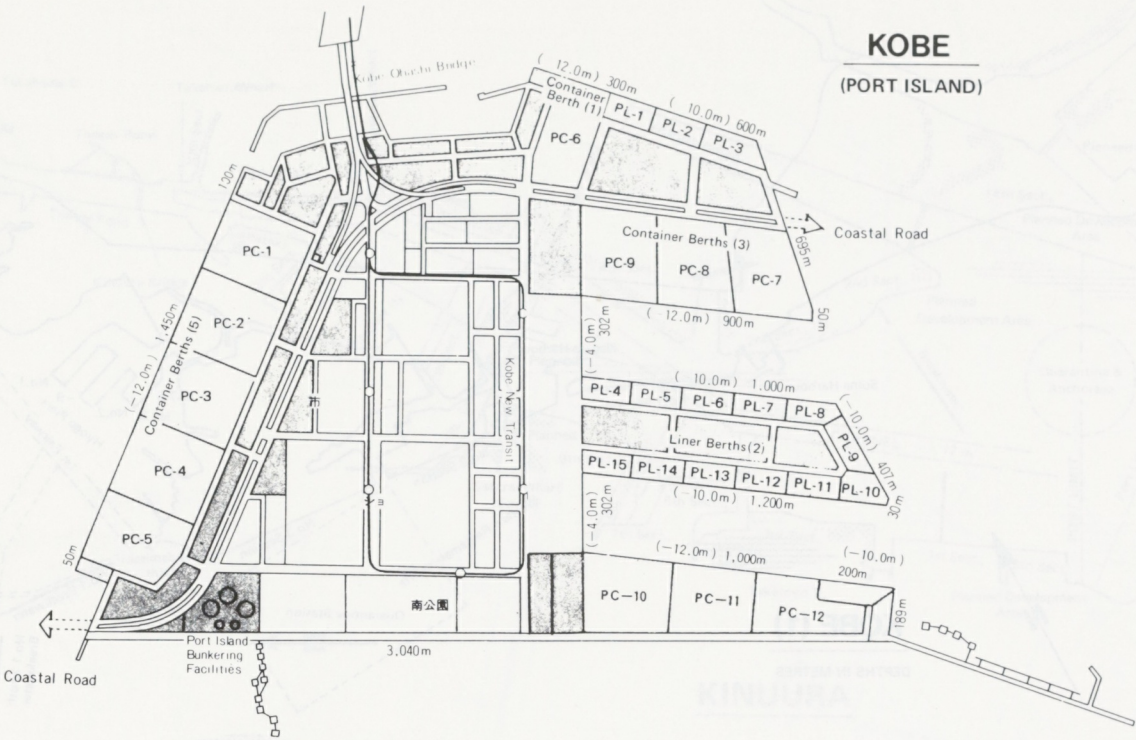
- 3 x 50 ton Sliphooks
- 2 x 75 ton Bollard
- 1 x 2½ ton Capstan

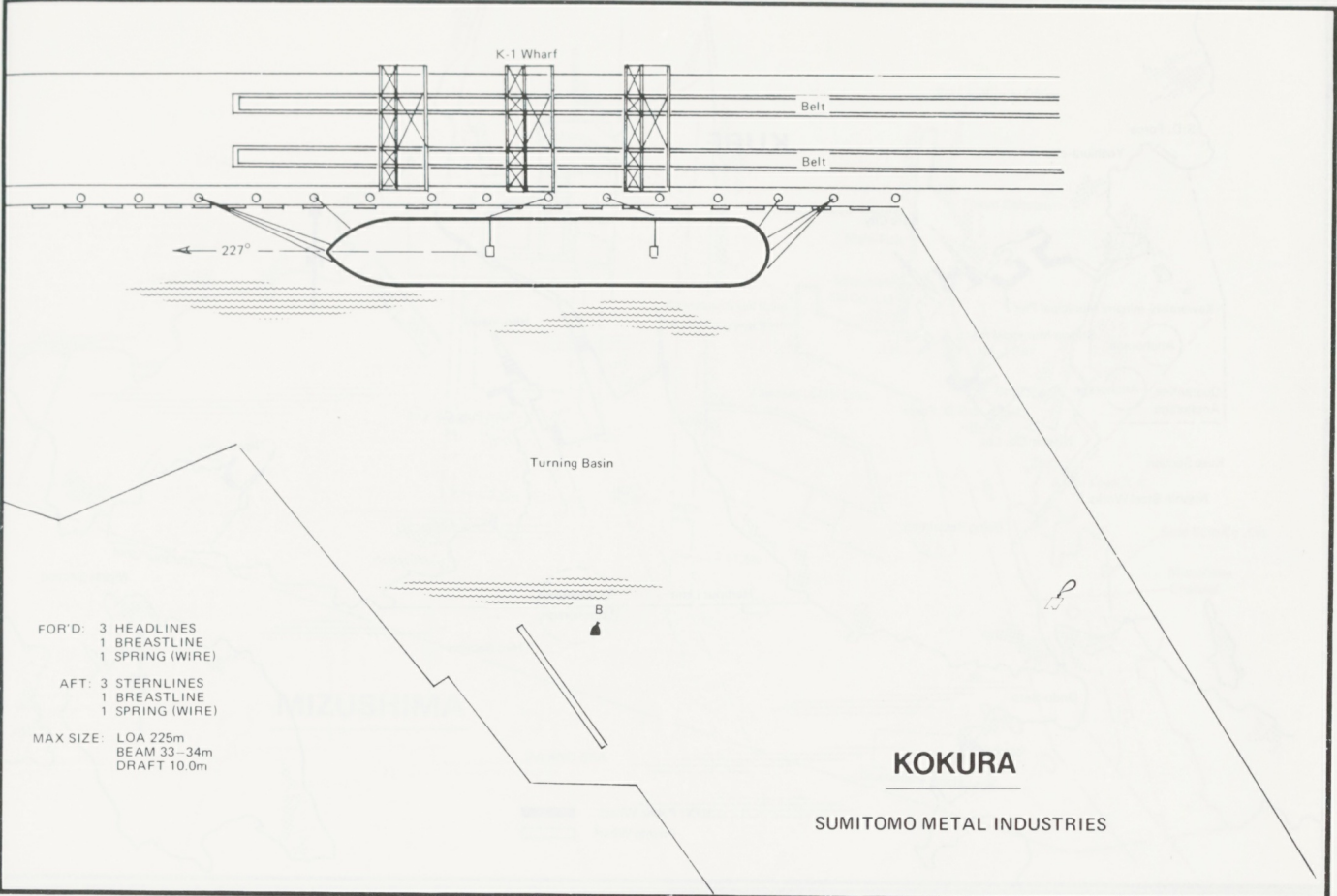
Secondary Fenders

- 3 x 50 ton Sliphooks
- 2 x 75 ton Bollard
- 1 x 2½ ton Capstan

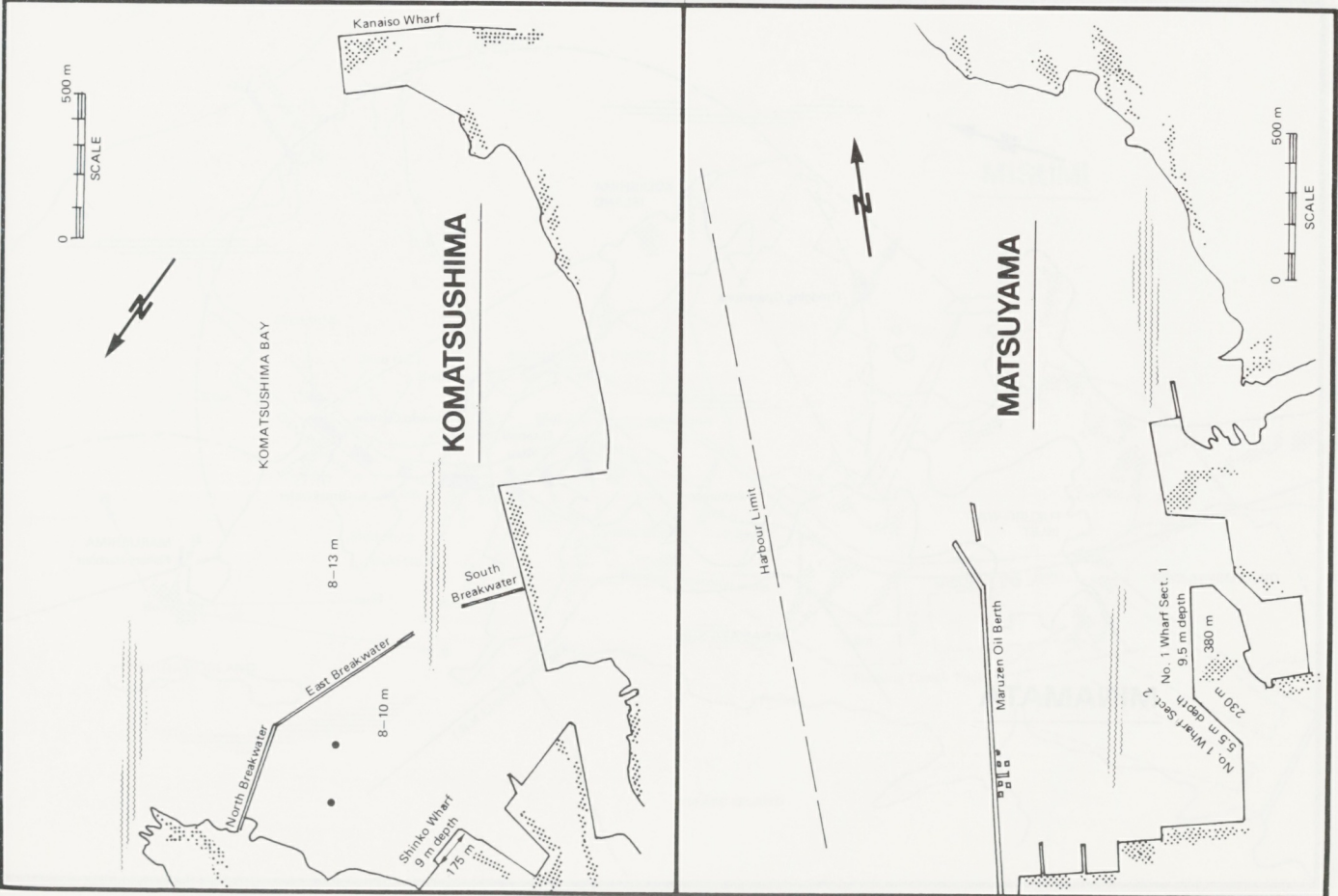


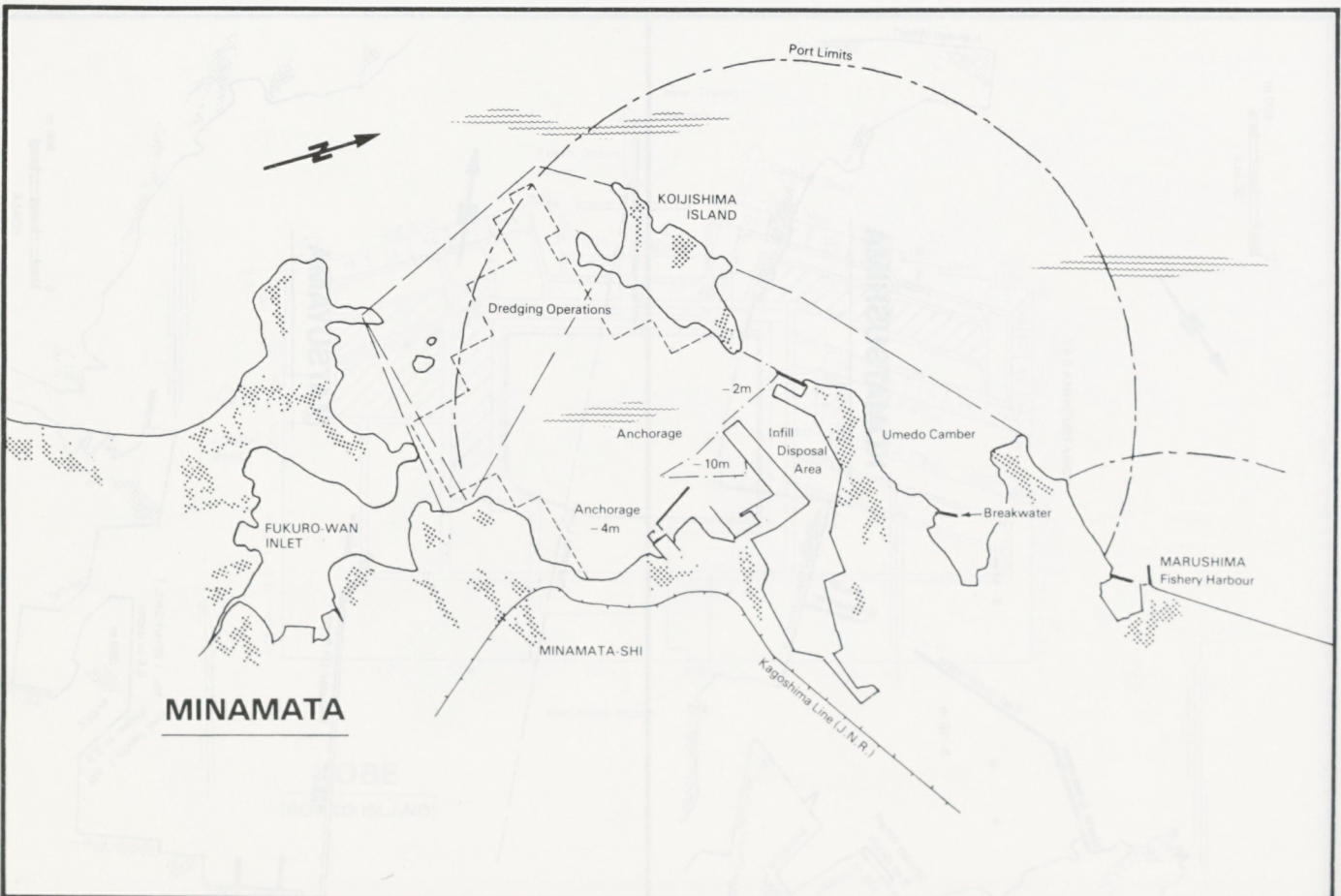
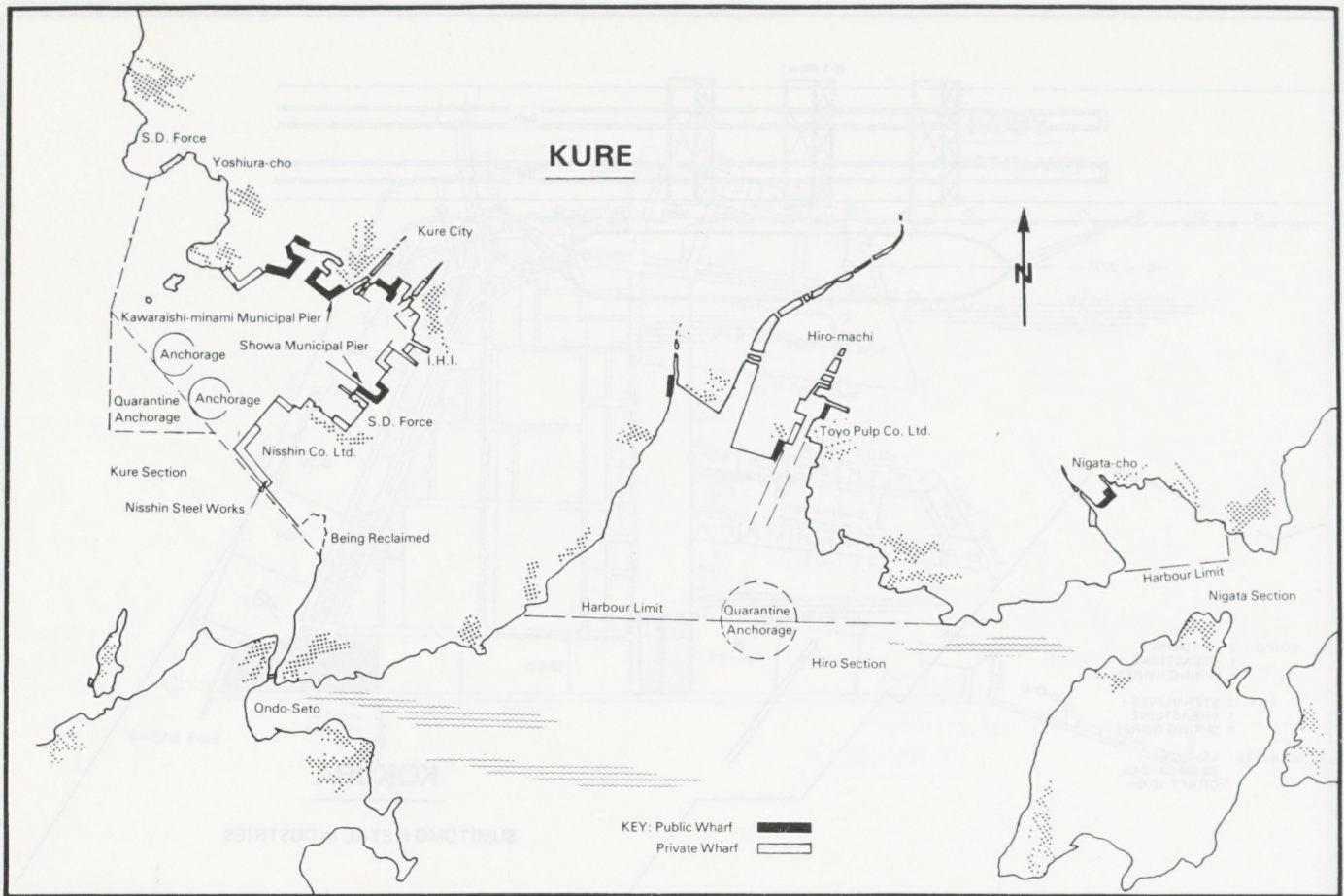


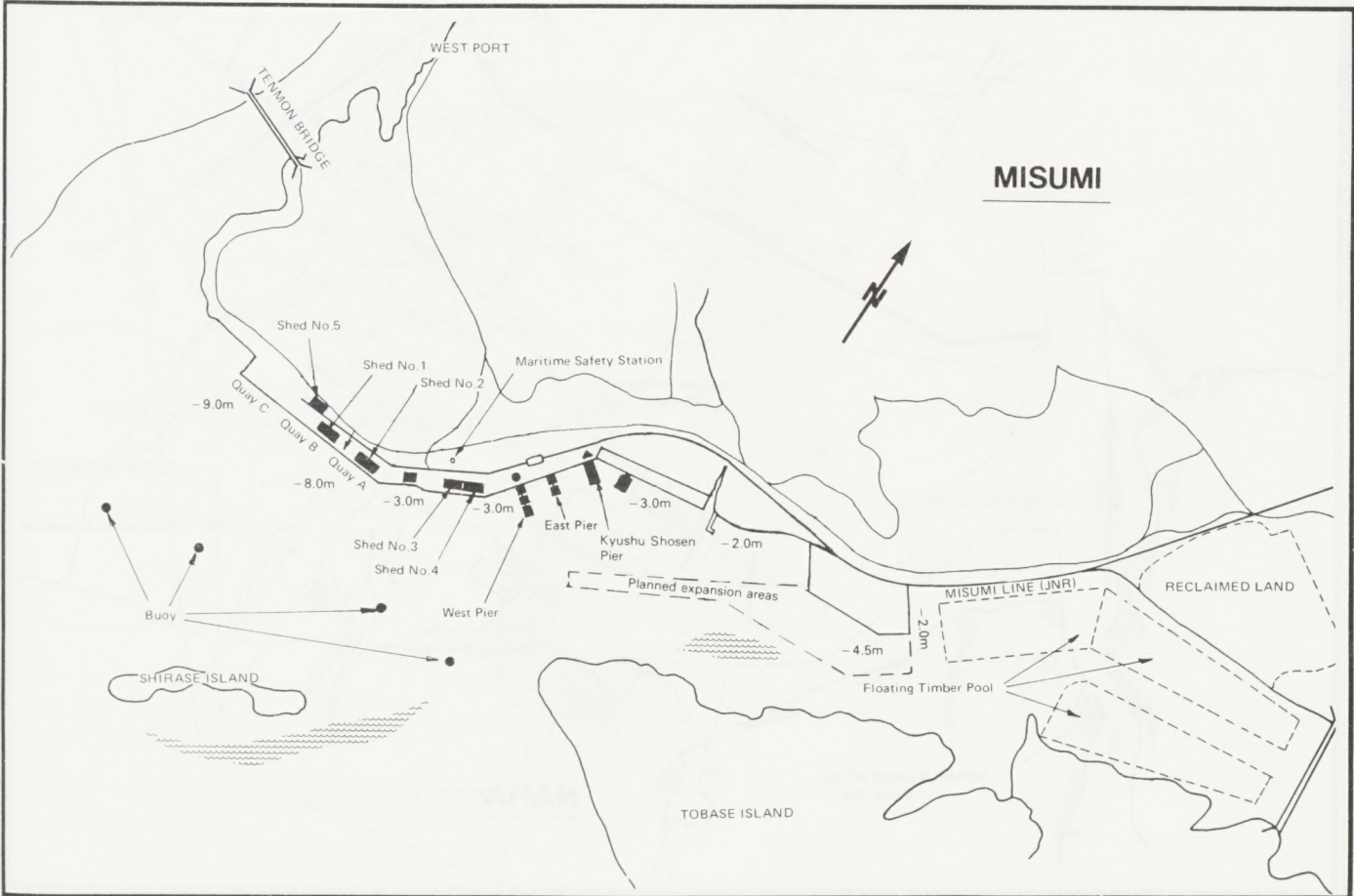
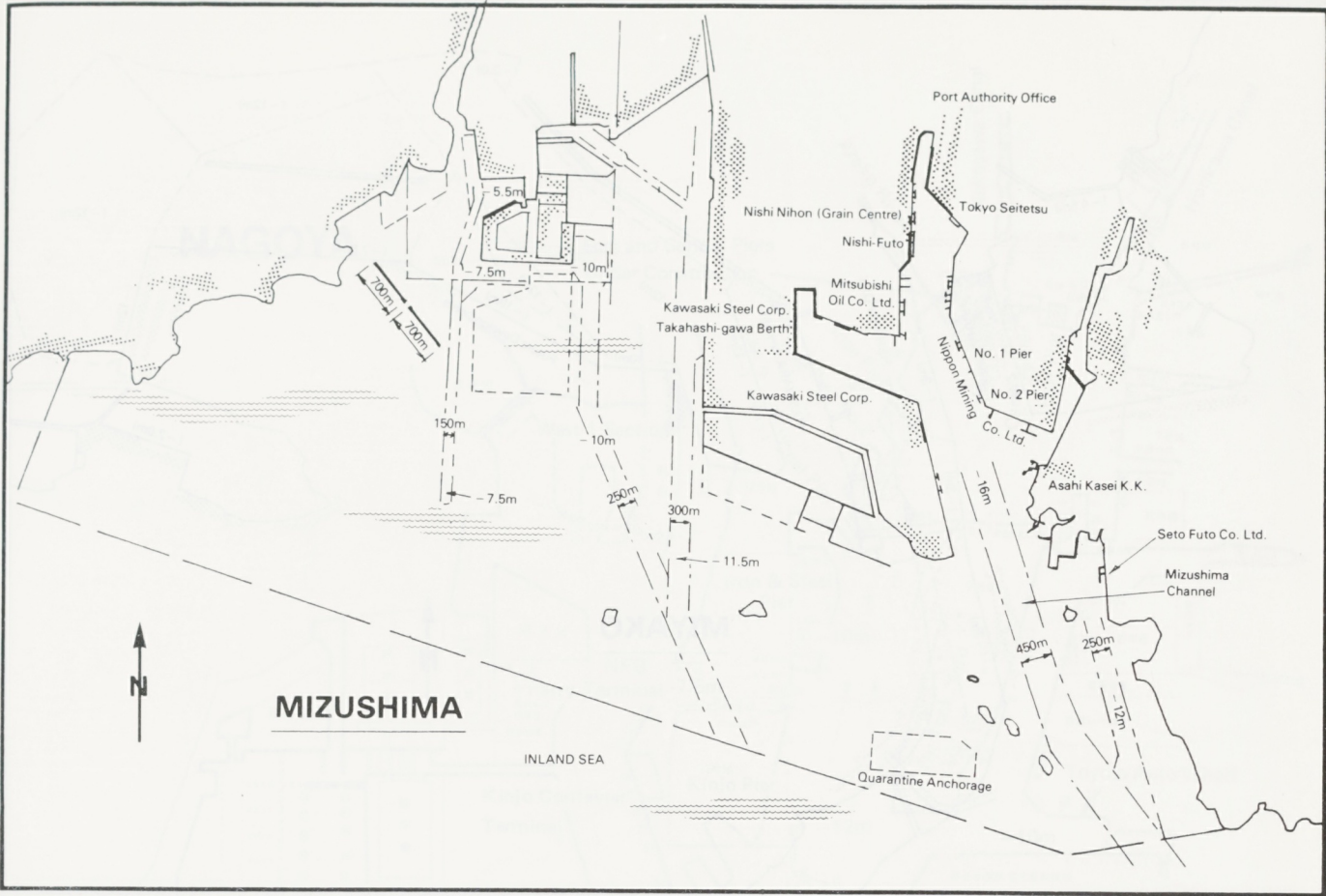


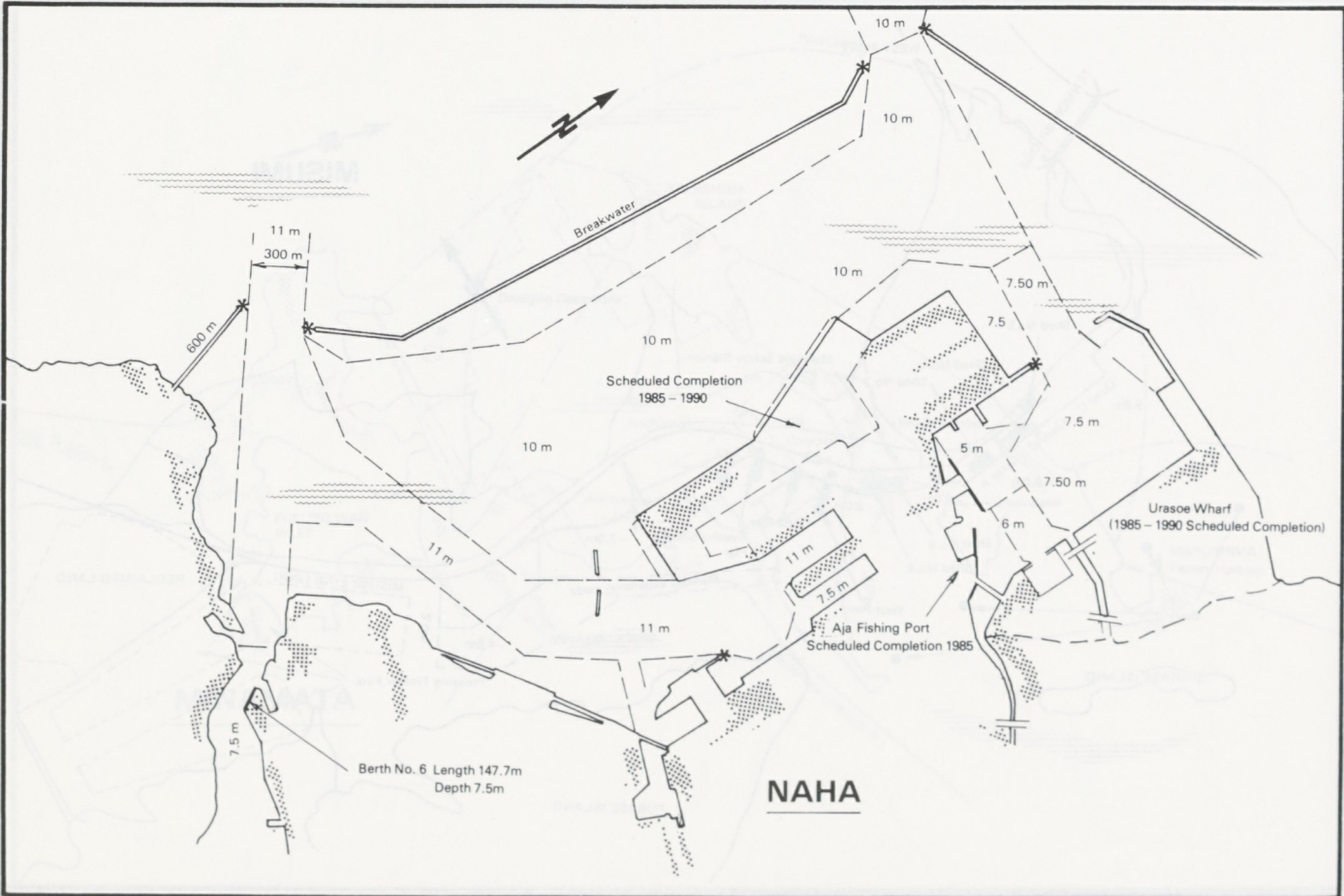
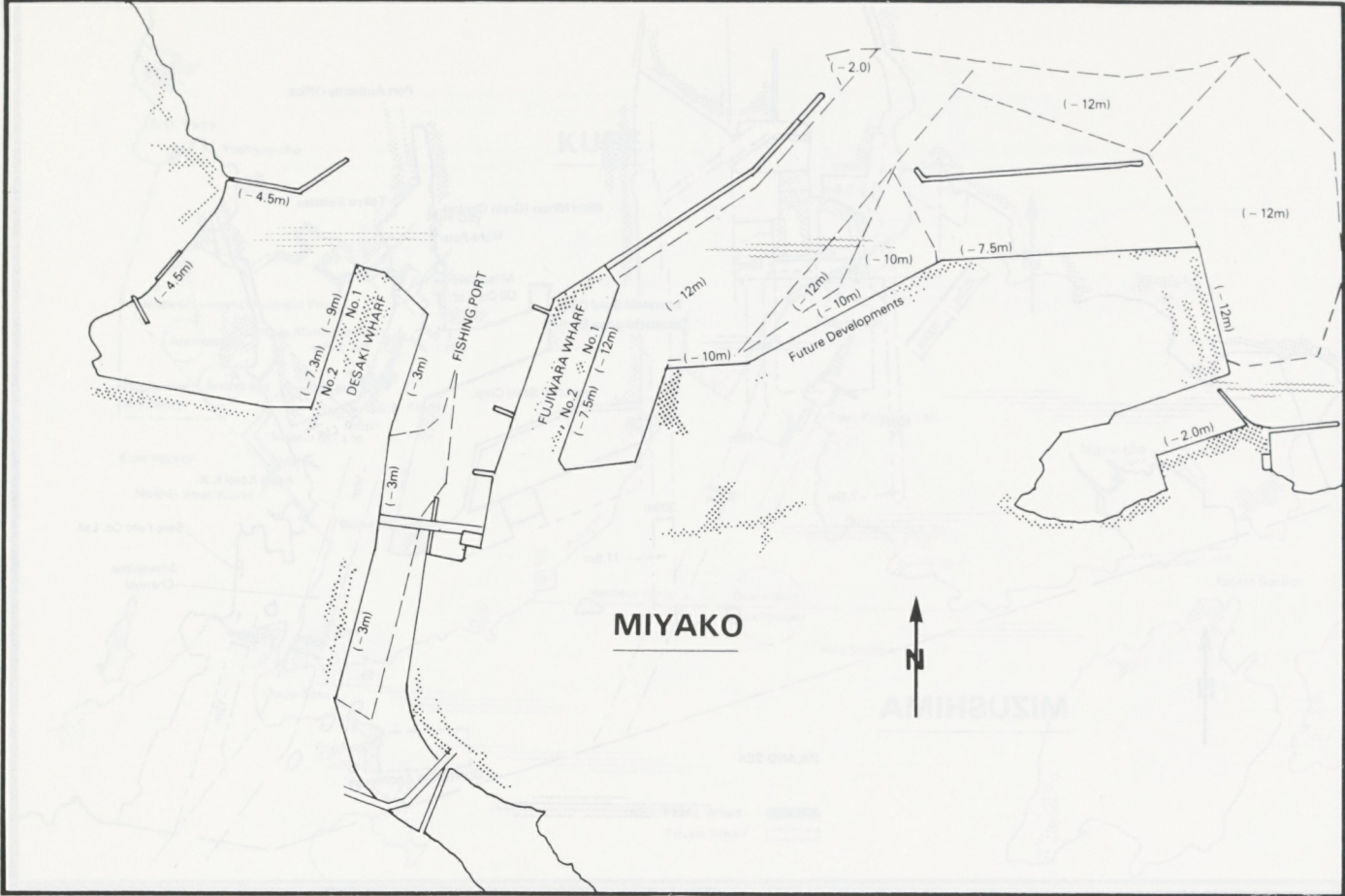


"Plan supplied by Ship's Master"

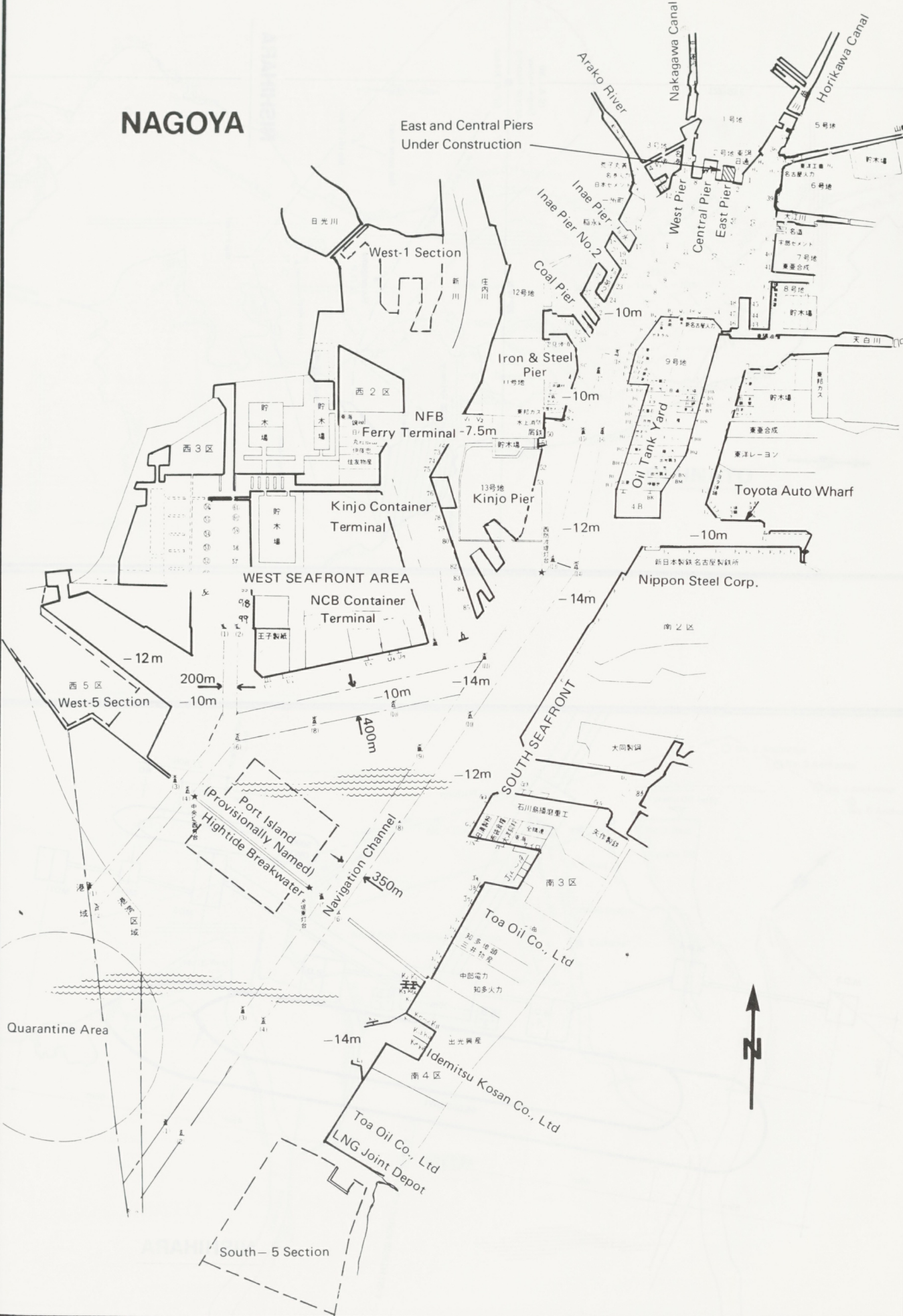


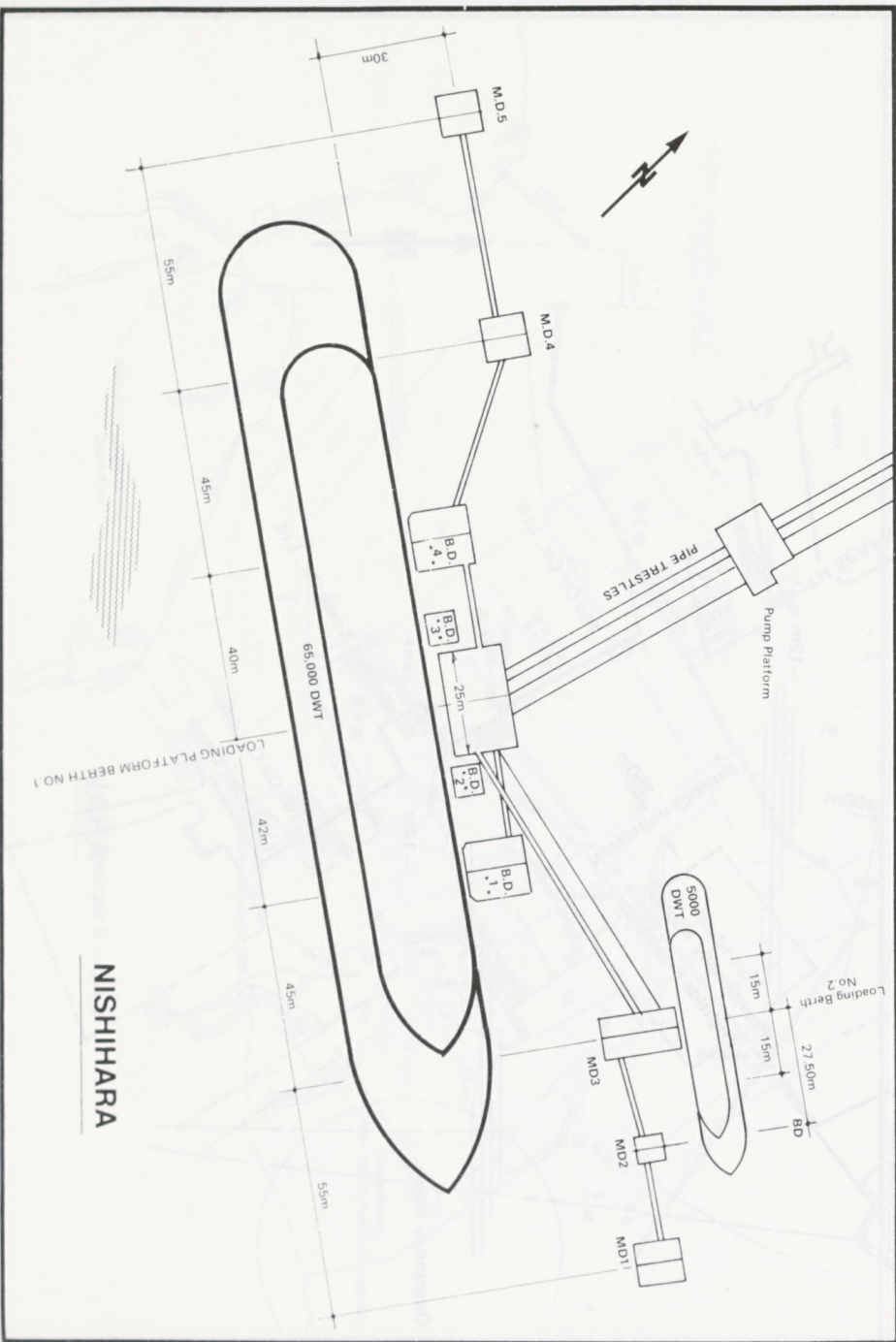
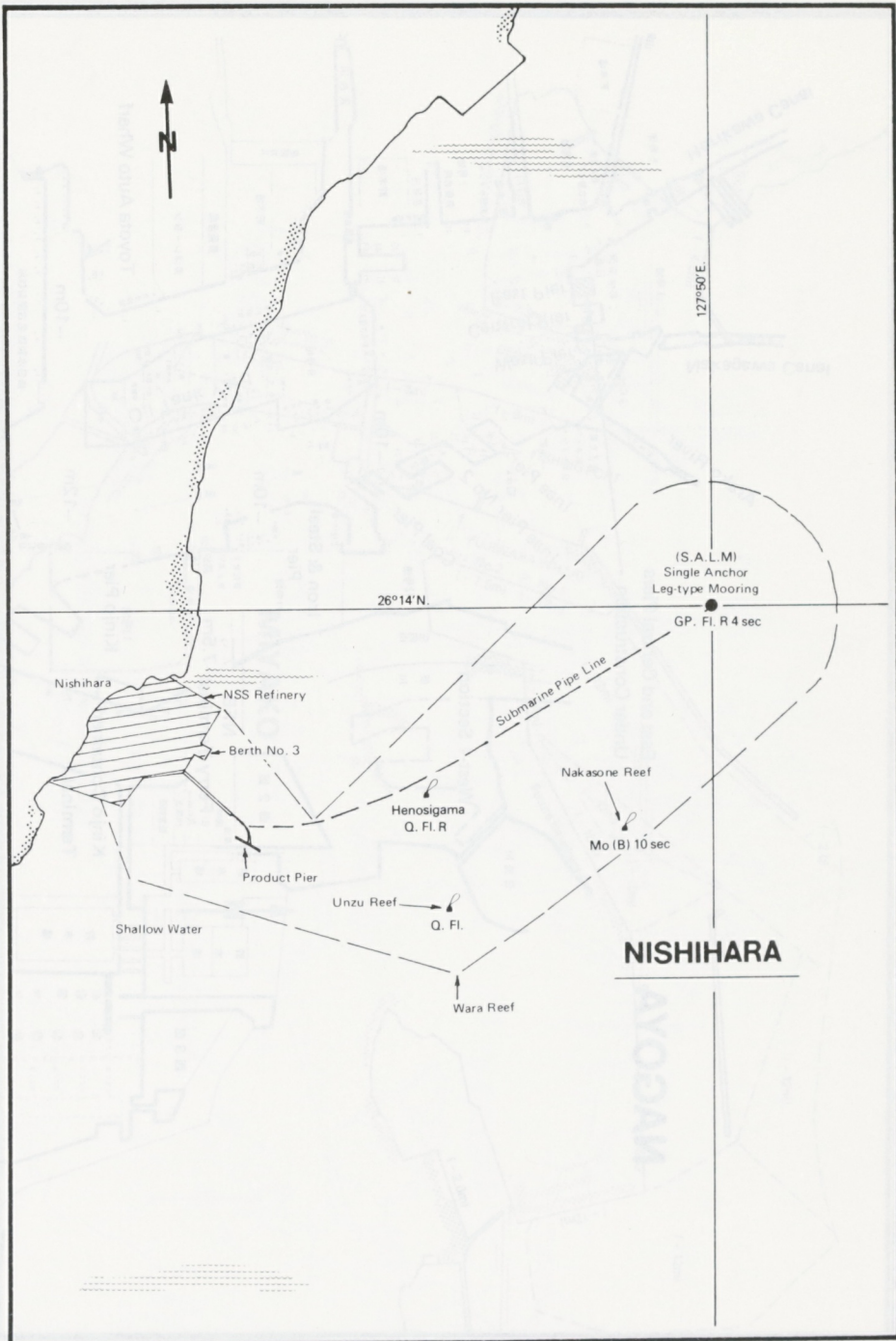


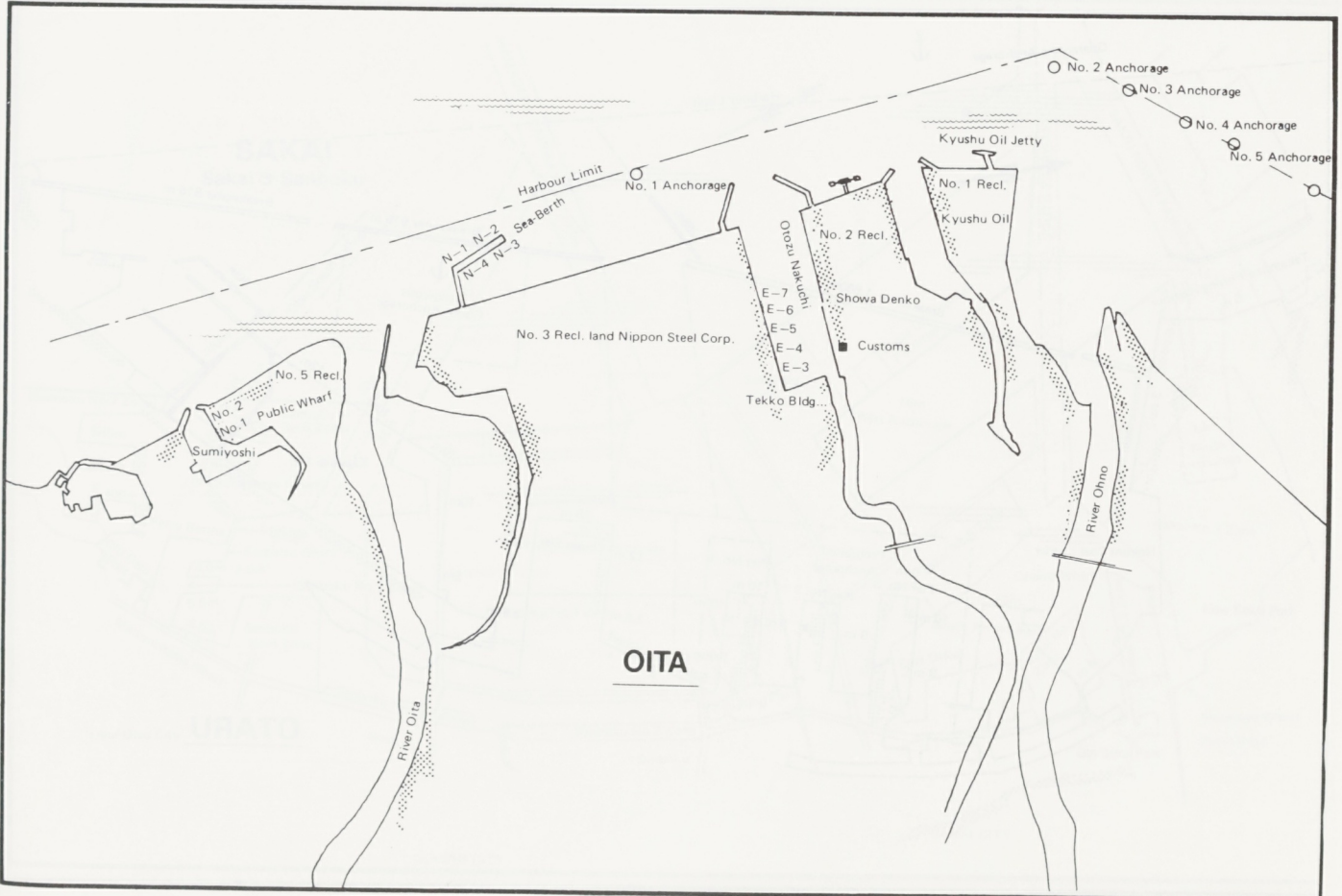
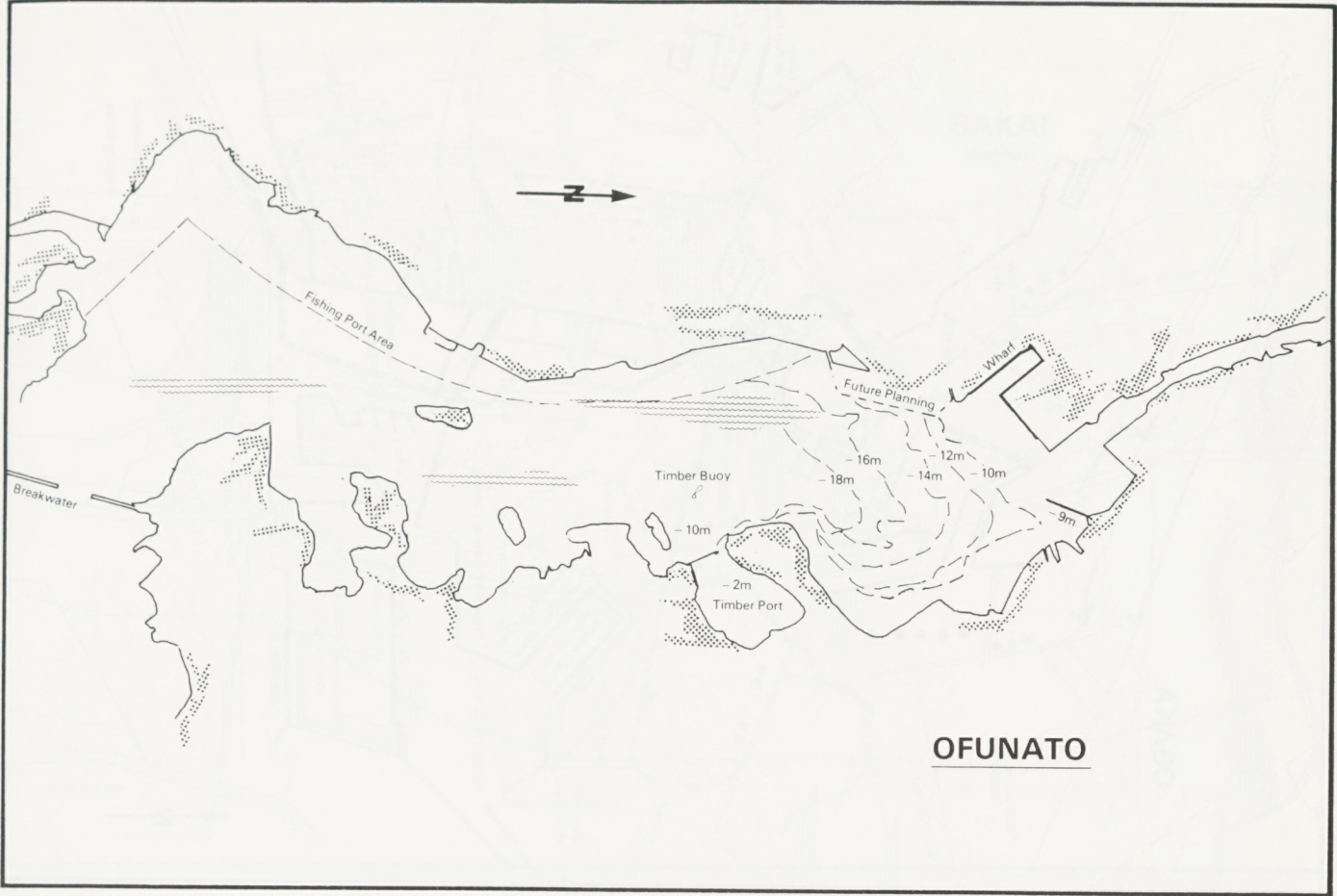


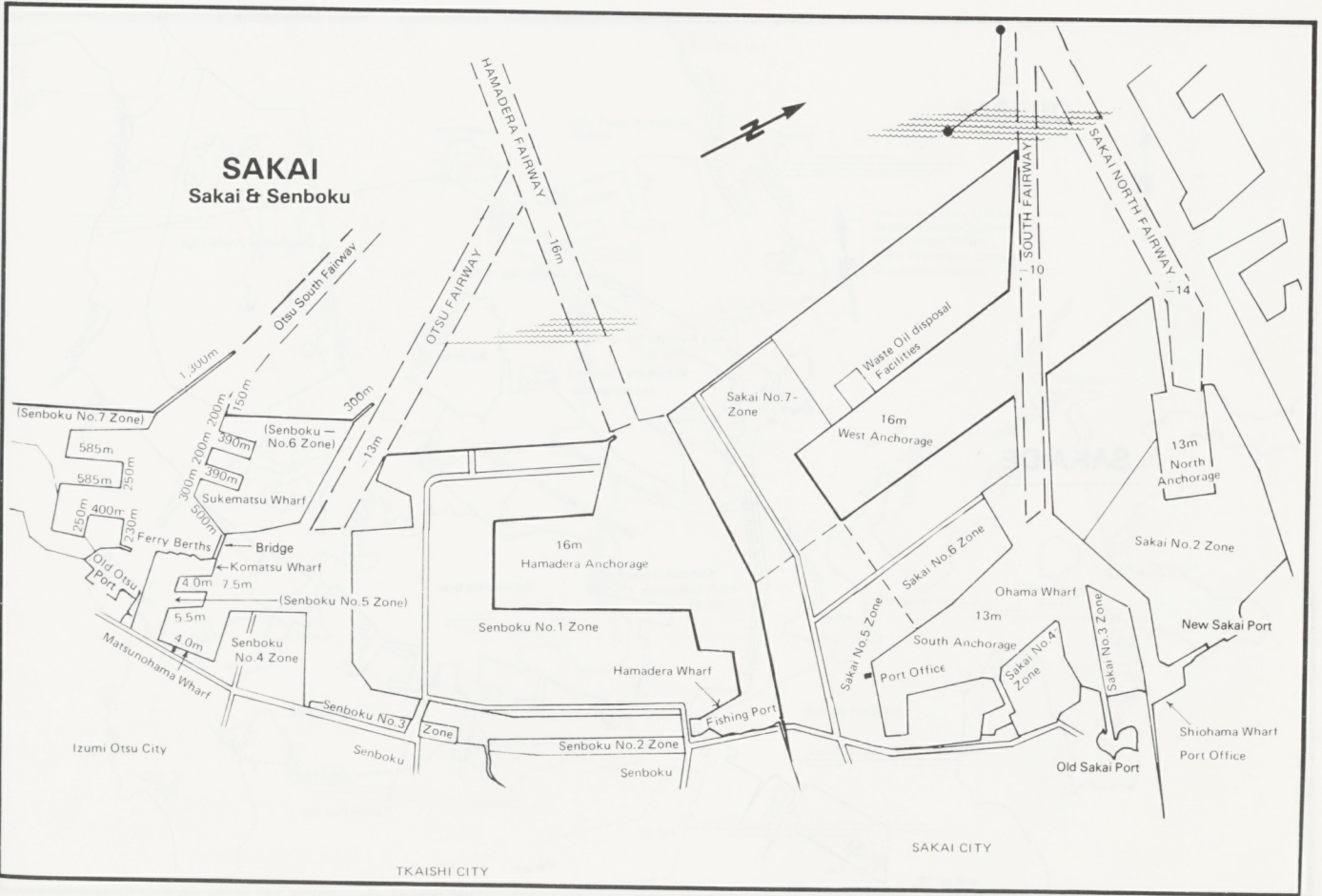
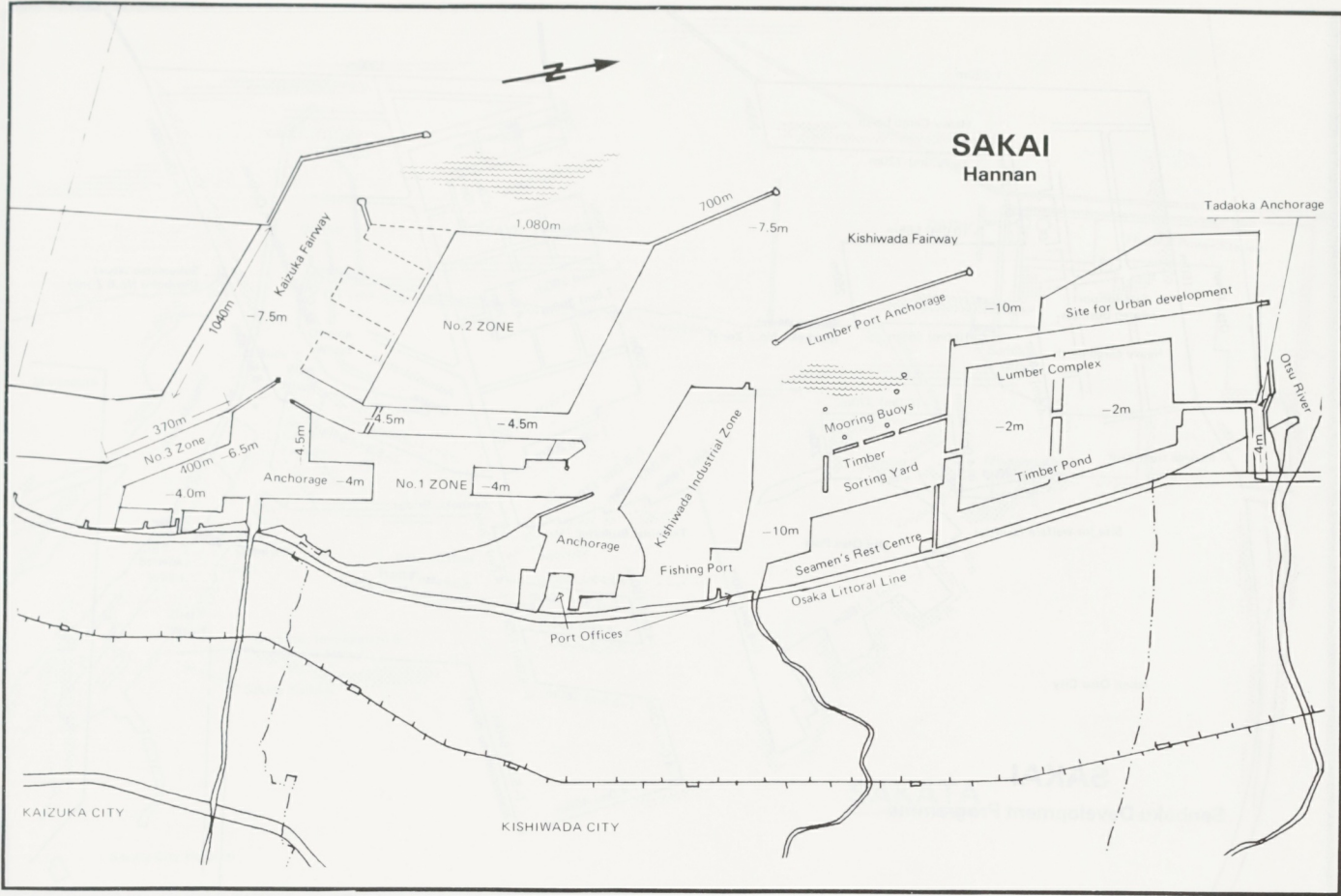


NAGOYA

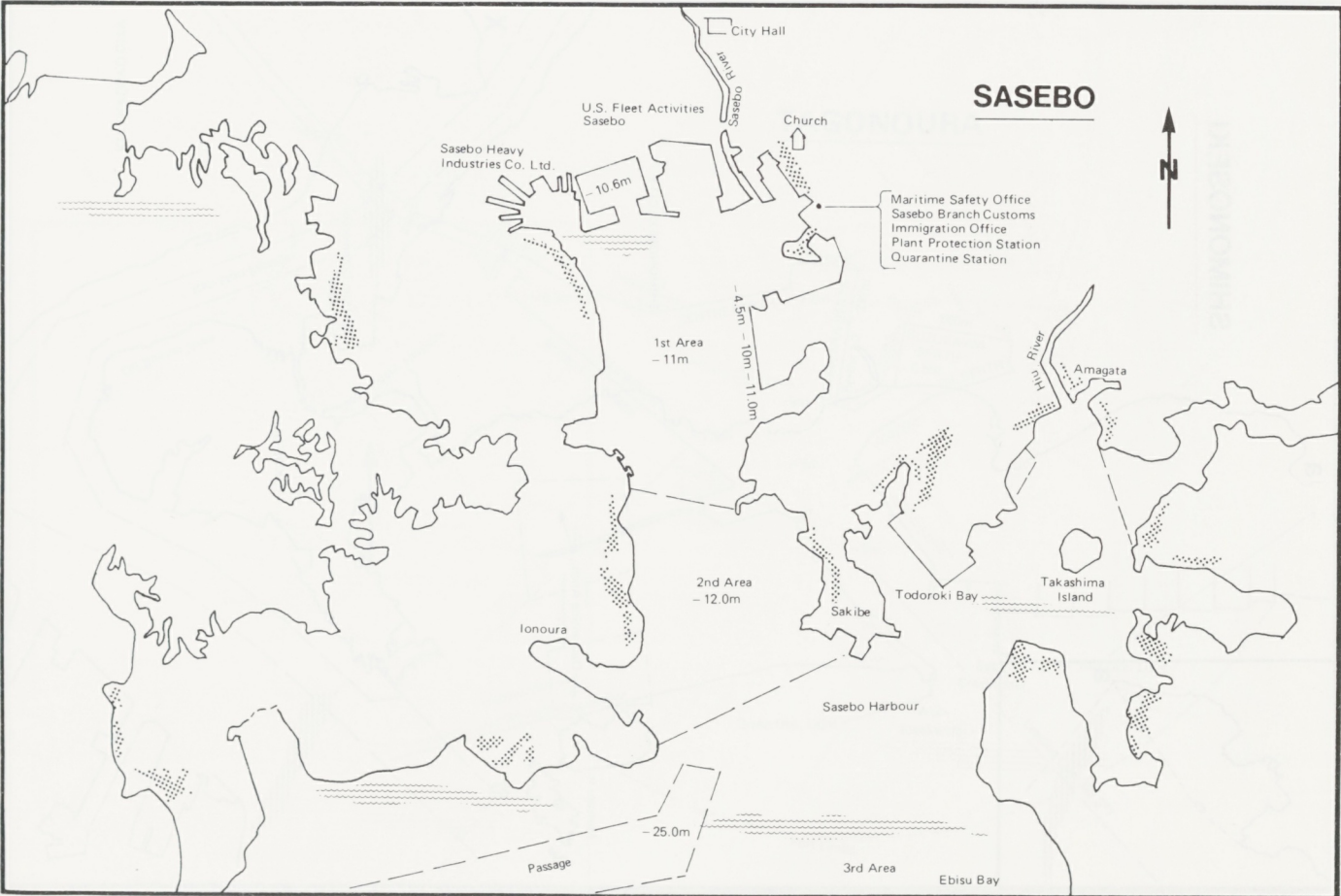
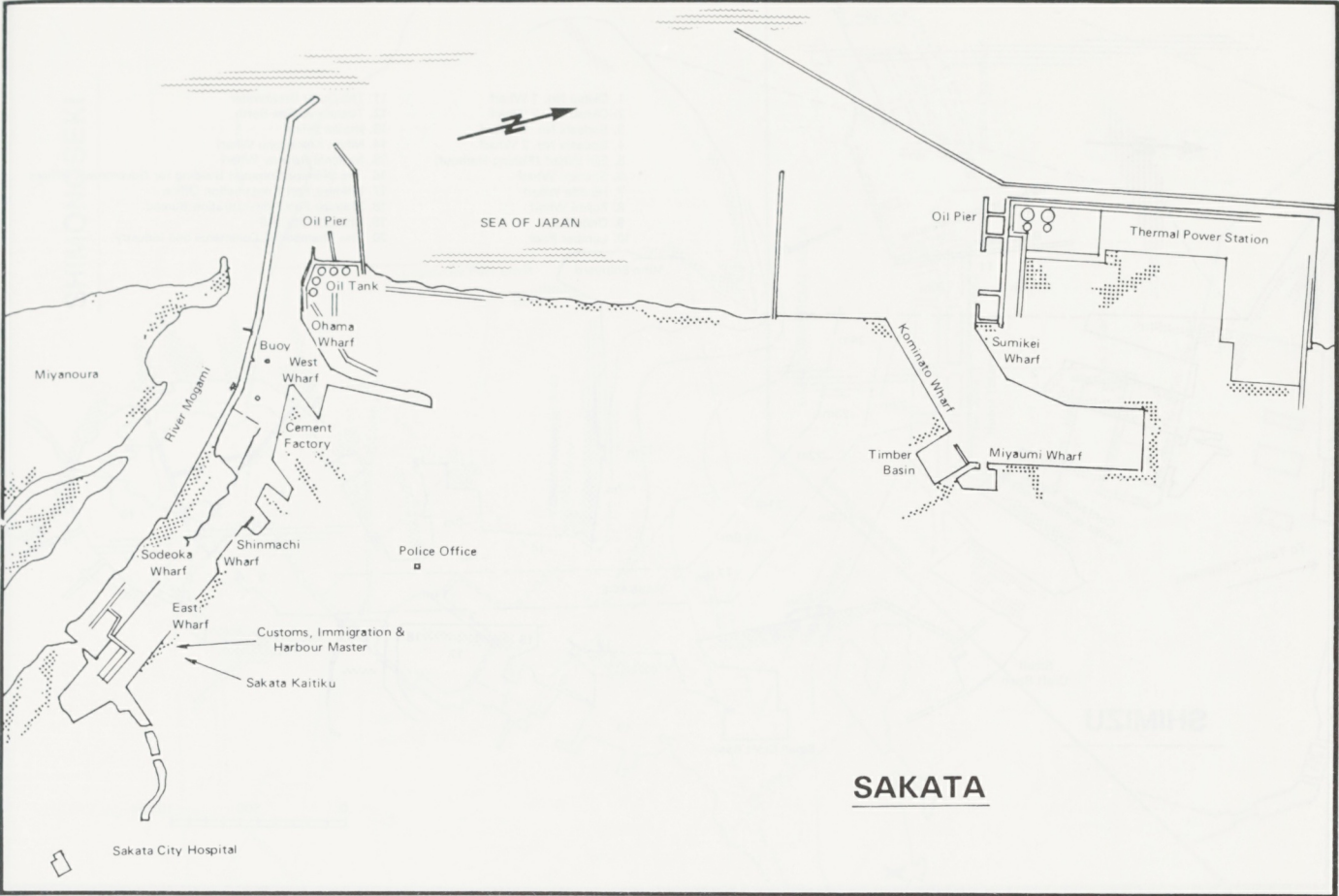


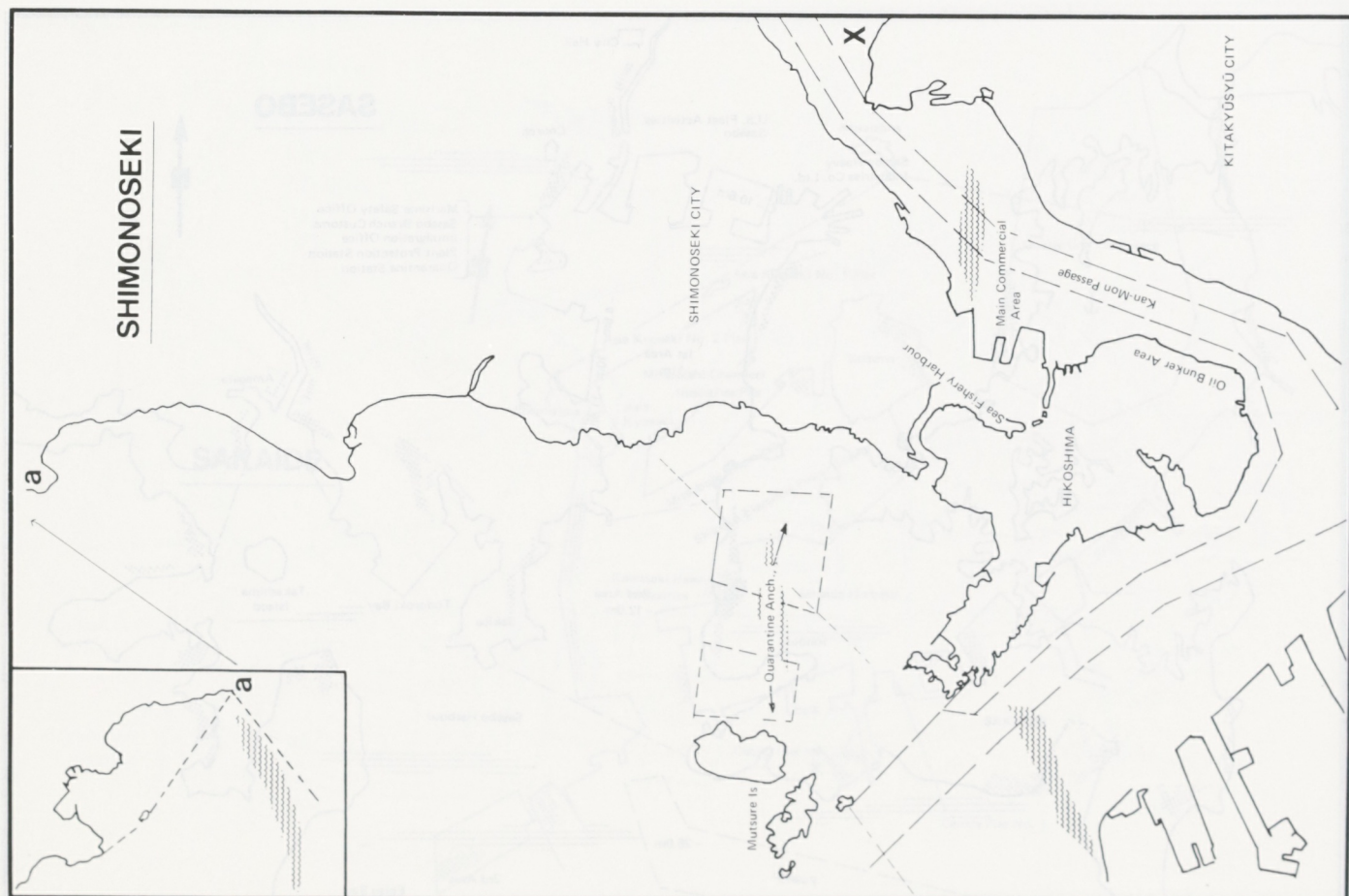
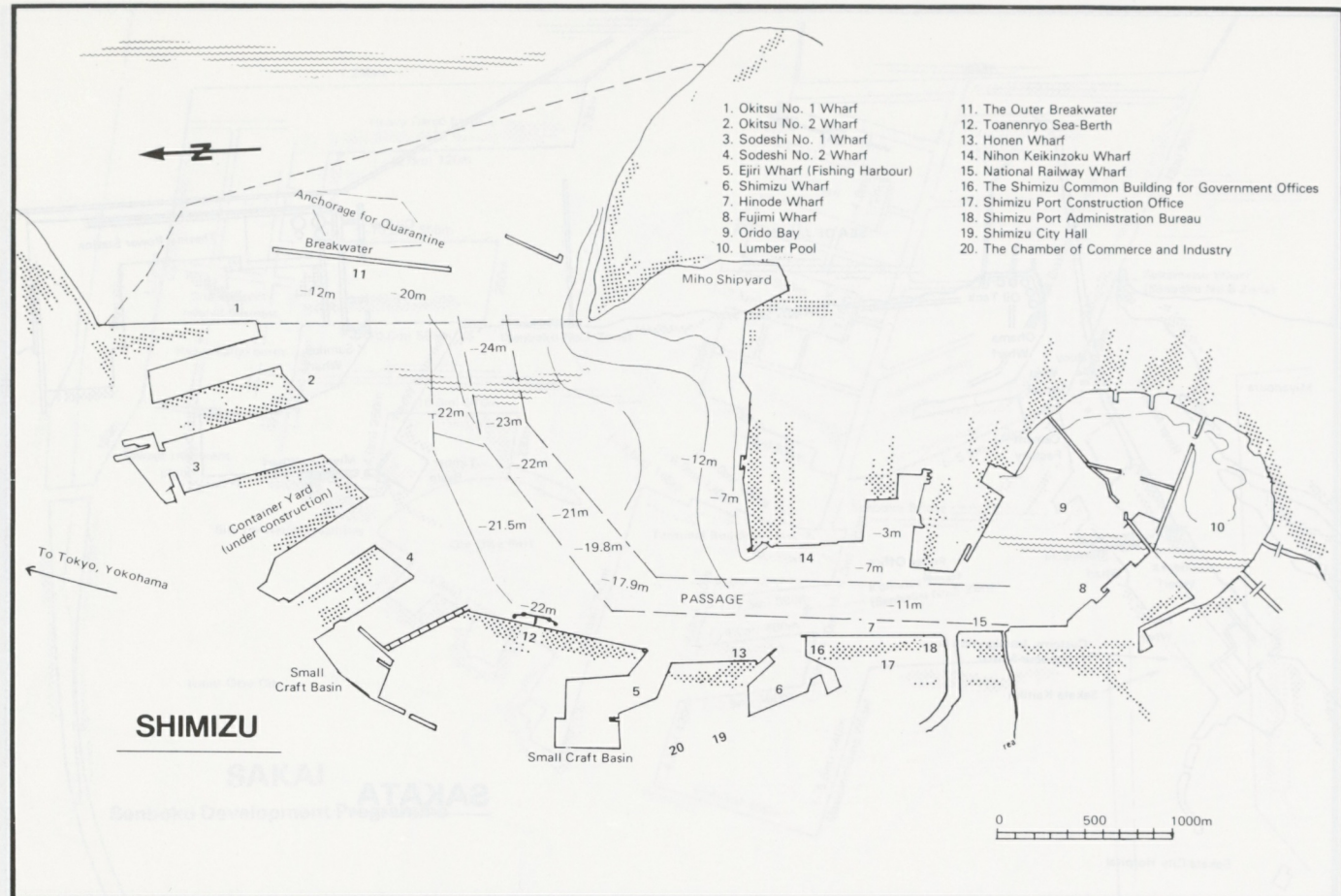


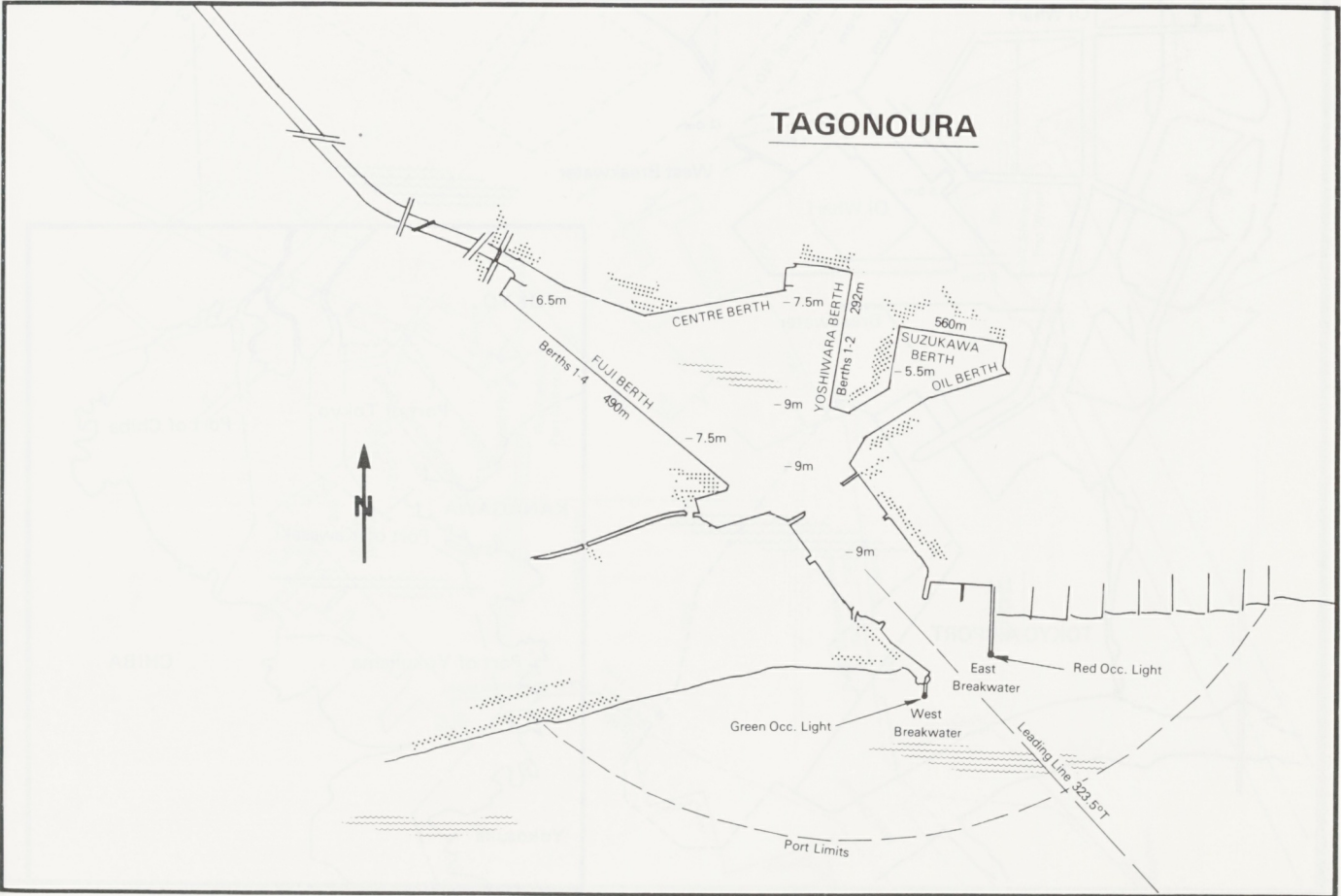
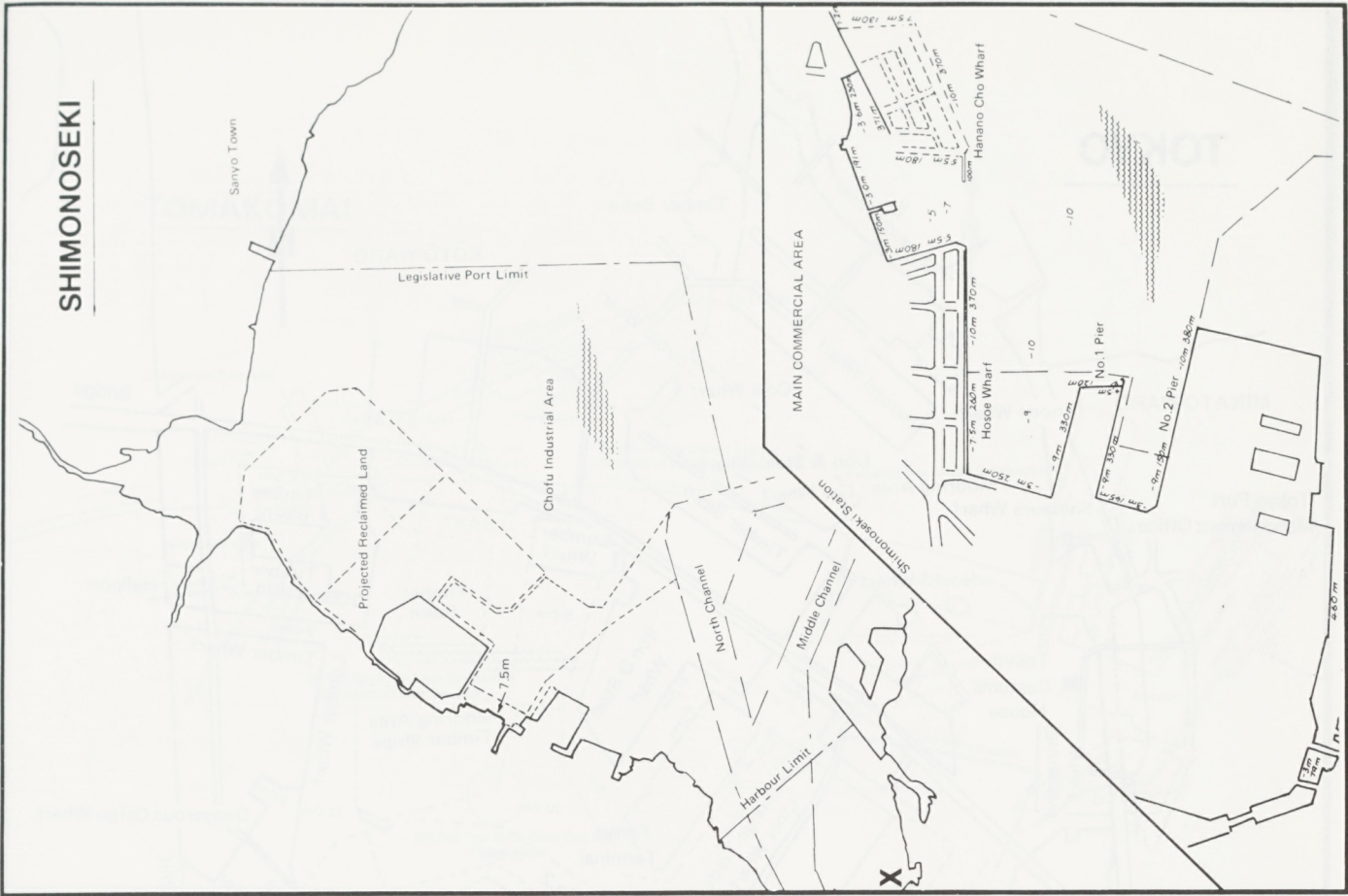




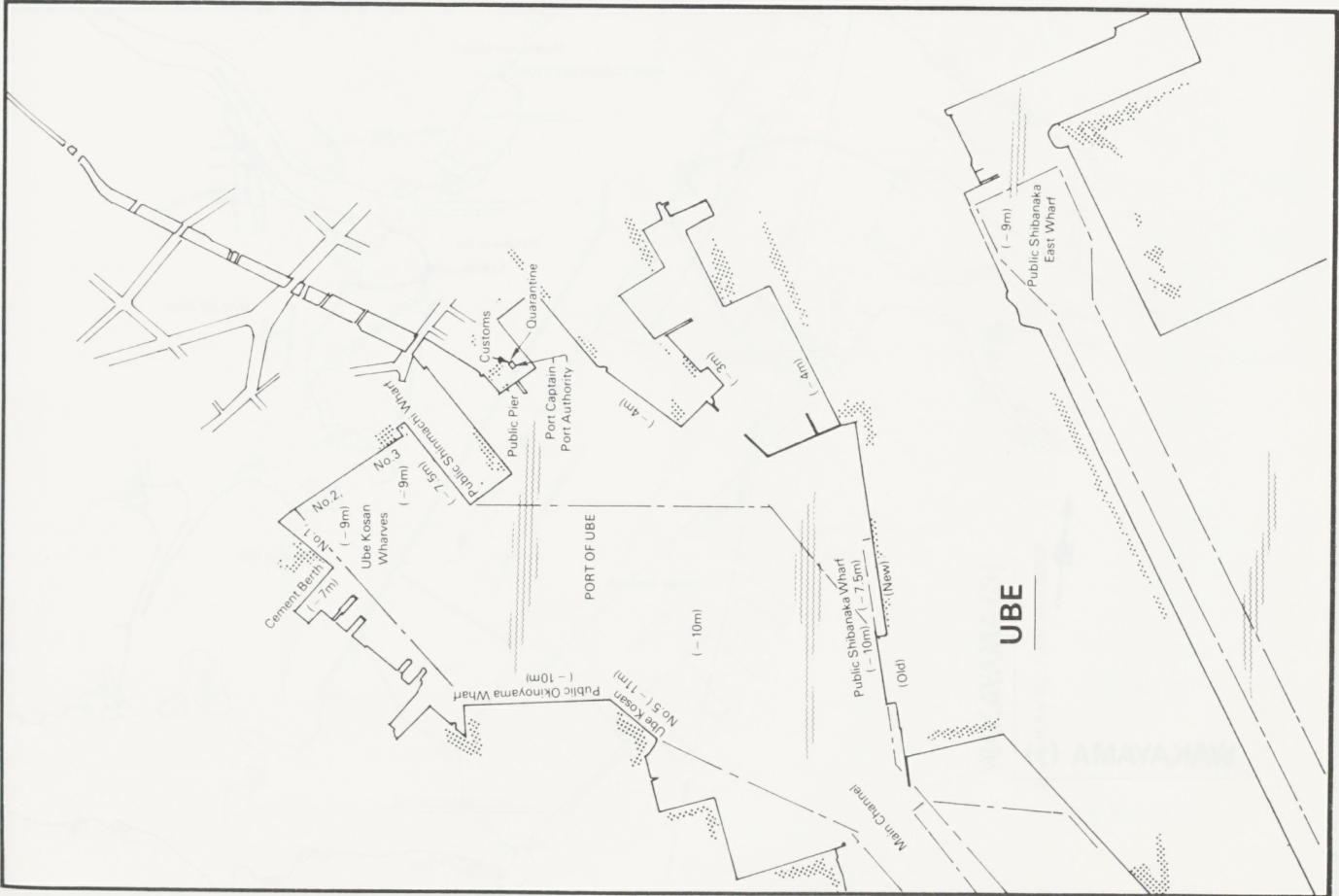
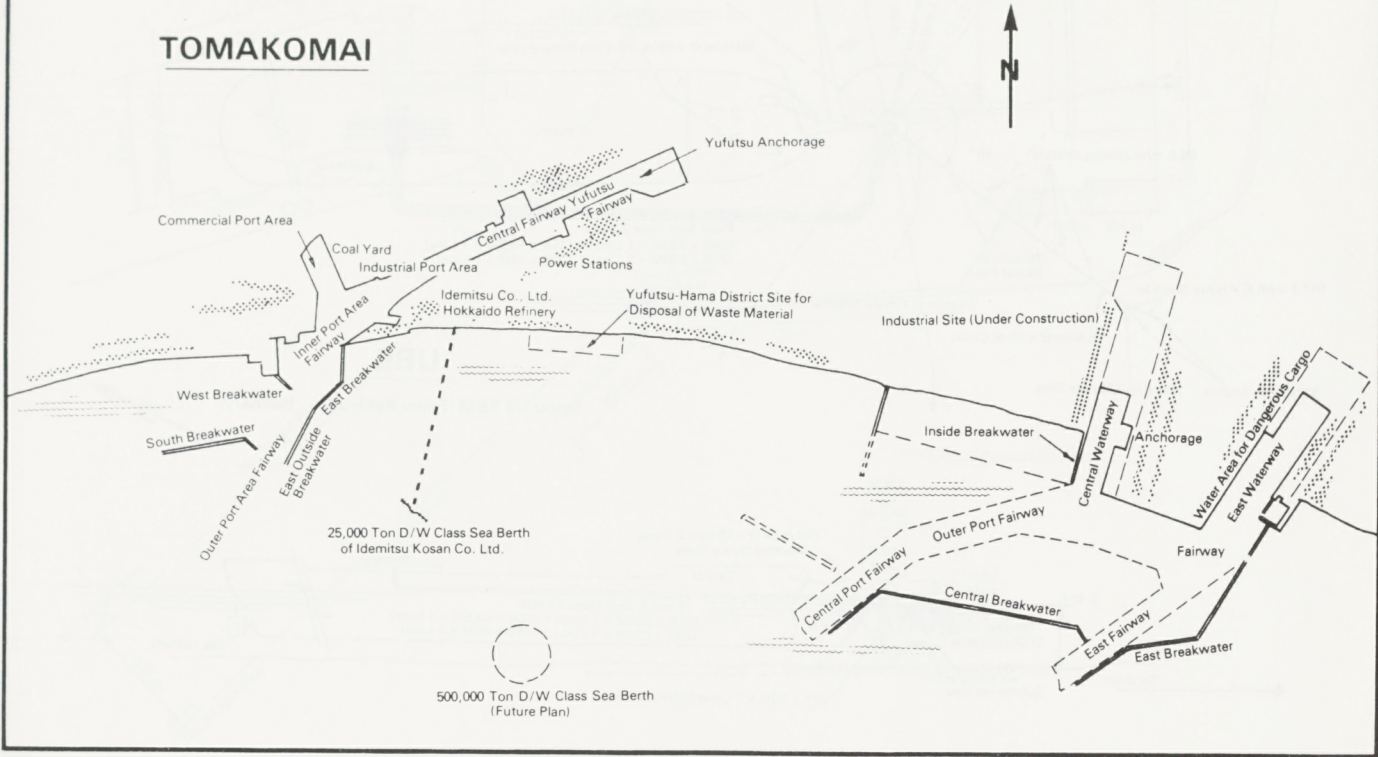


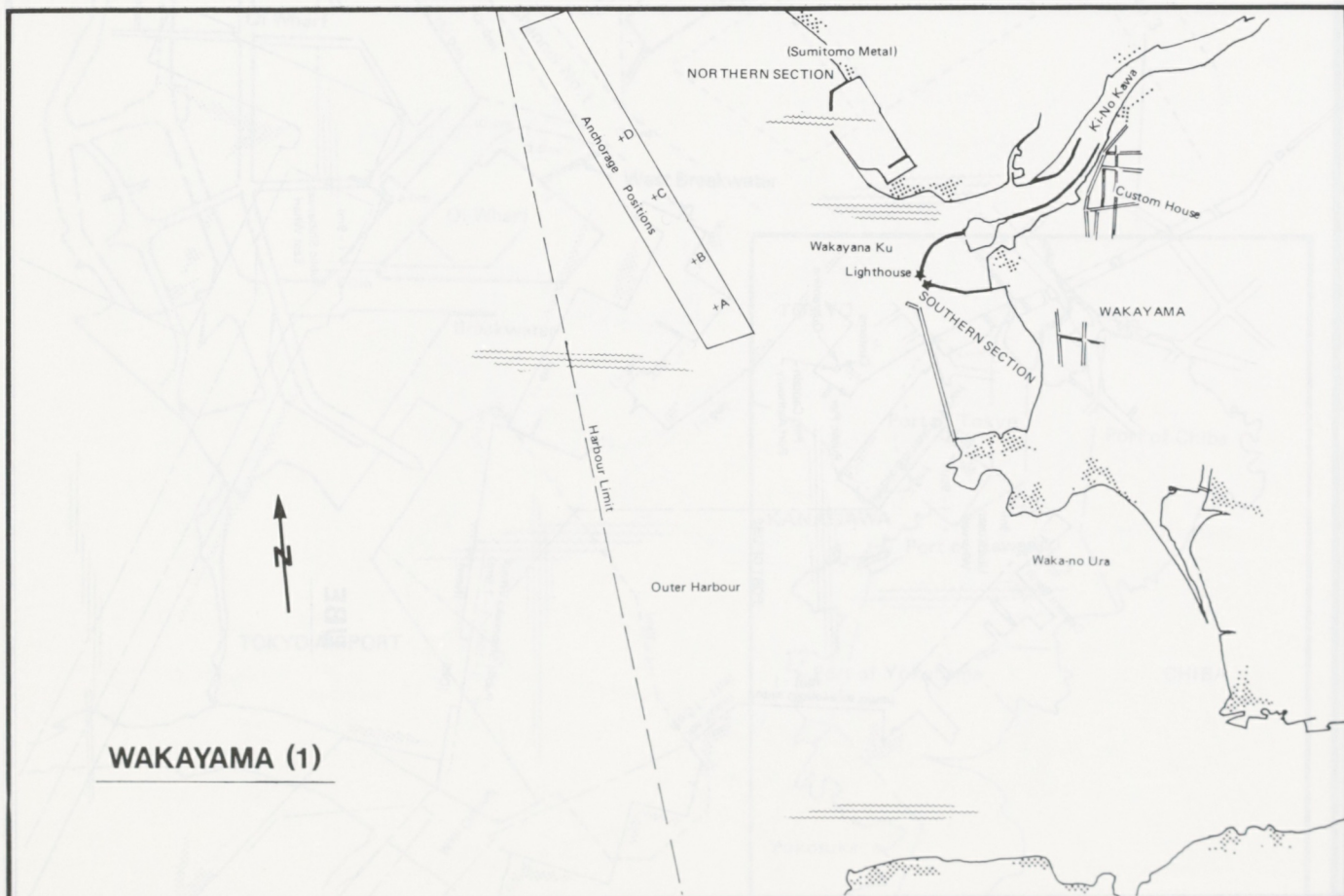
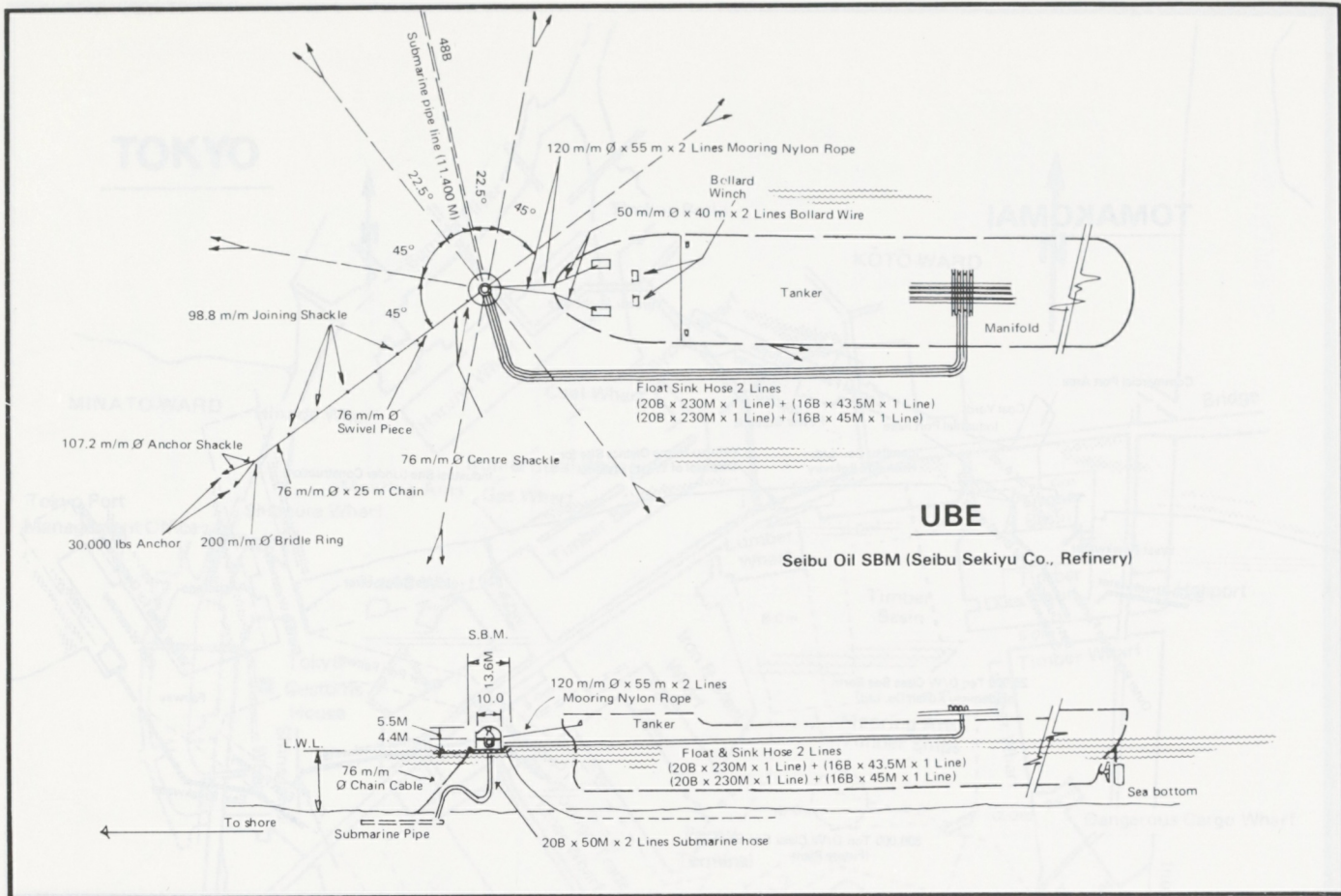


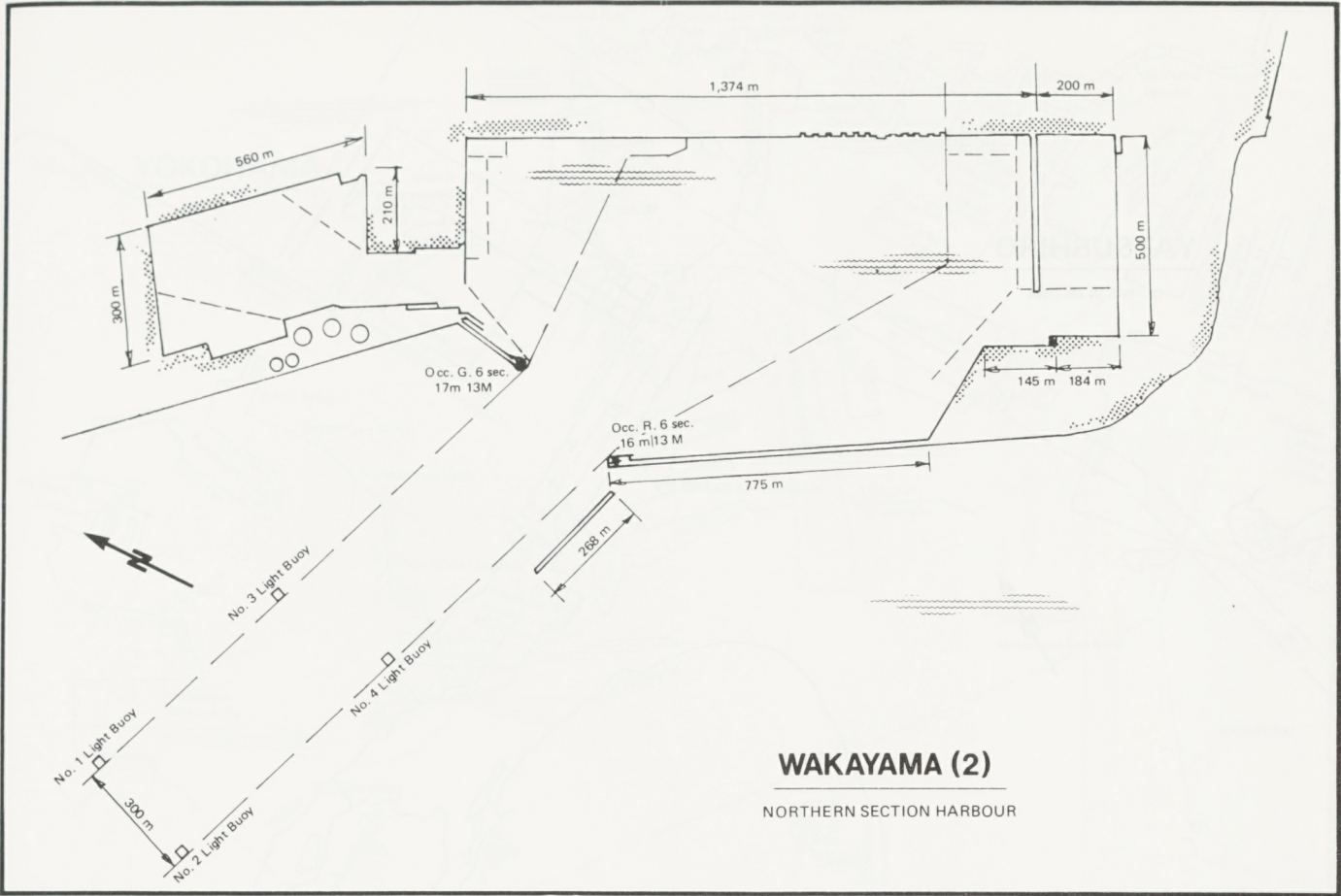


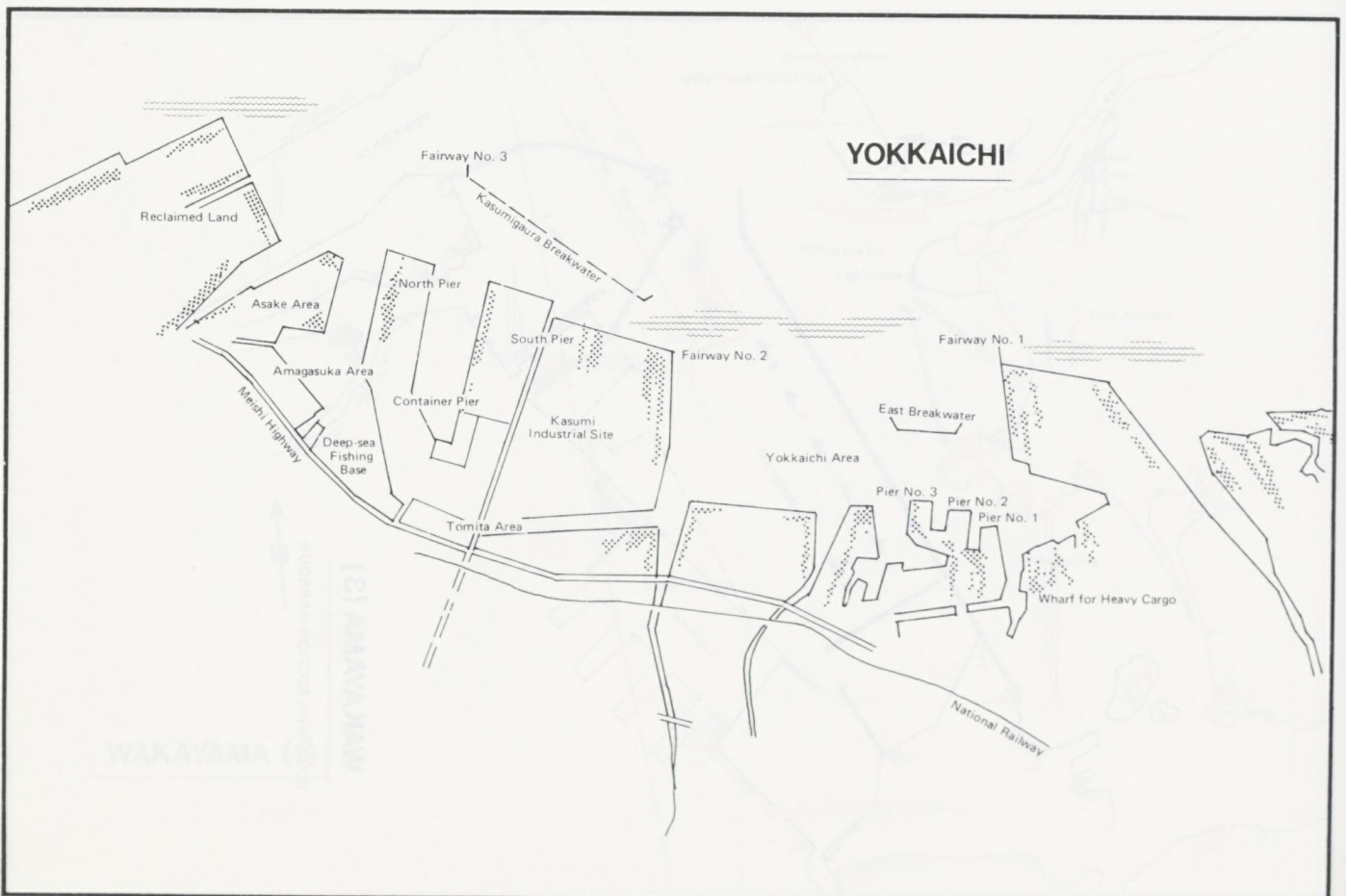
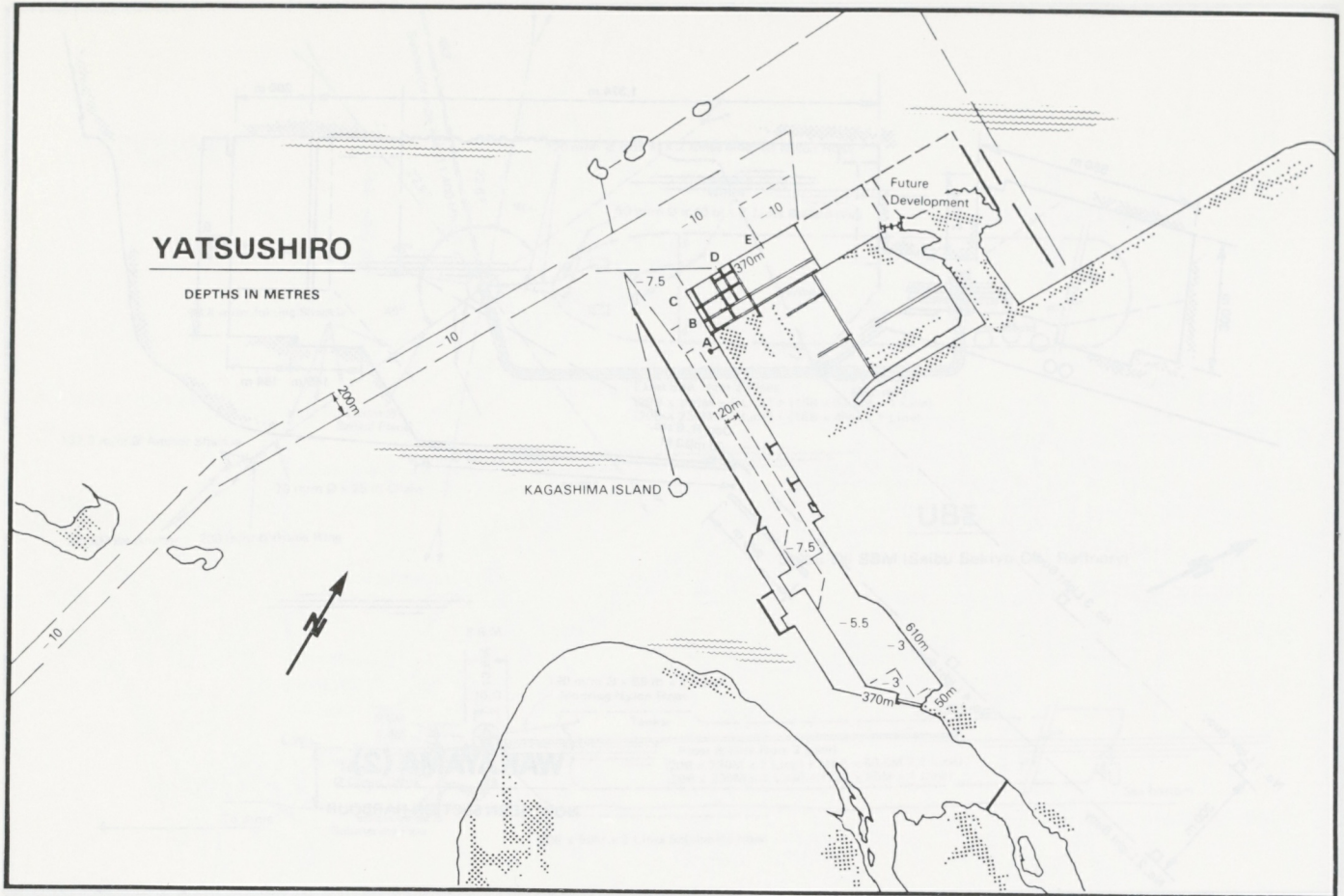


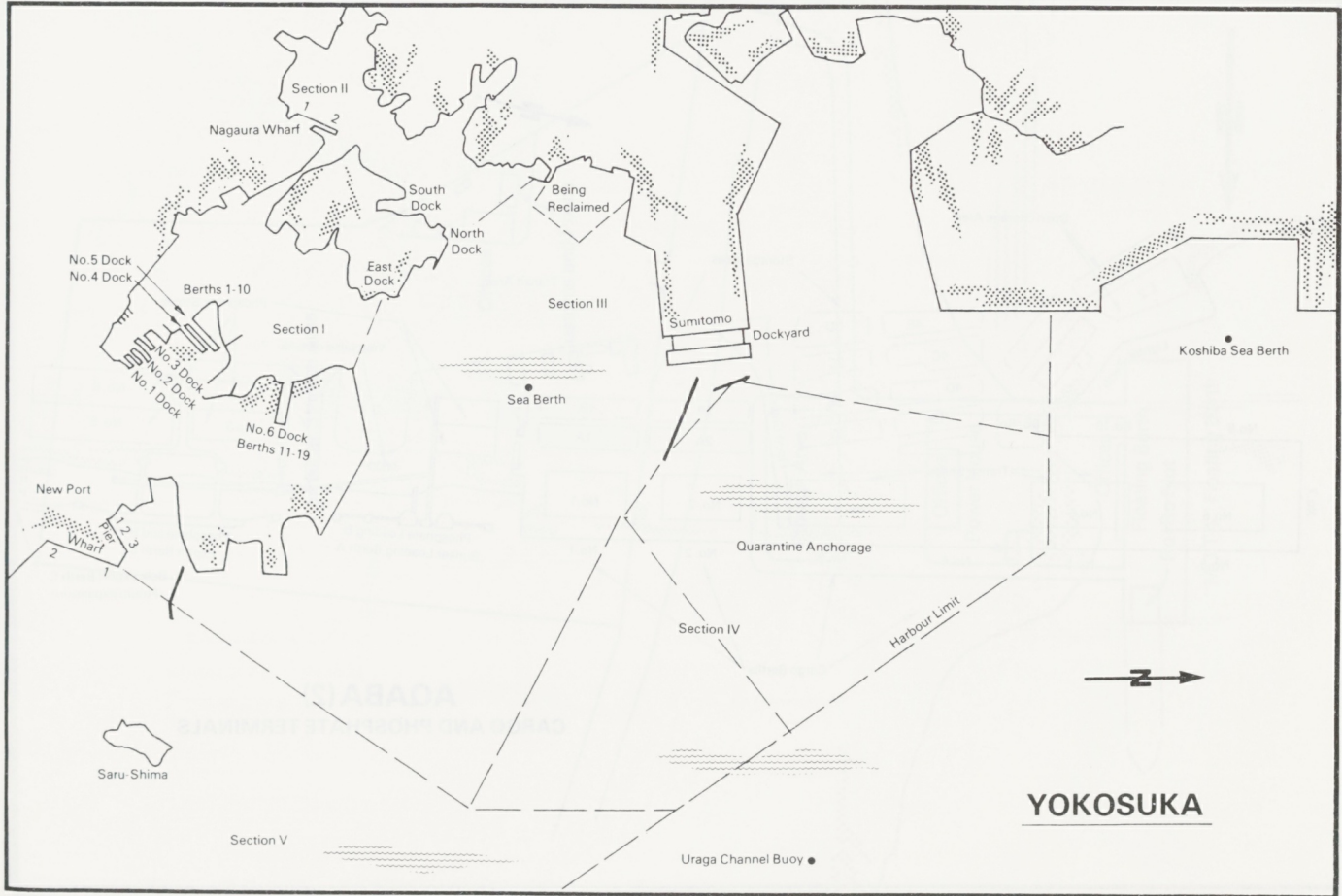
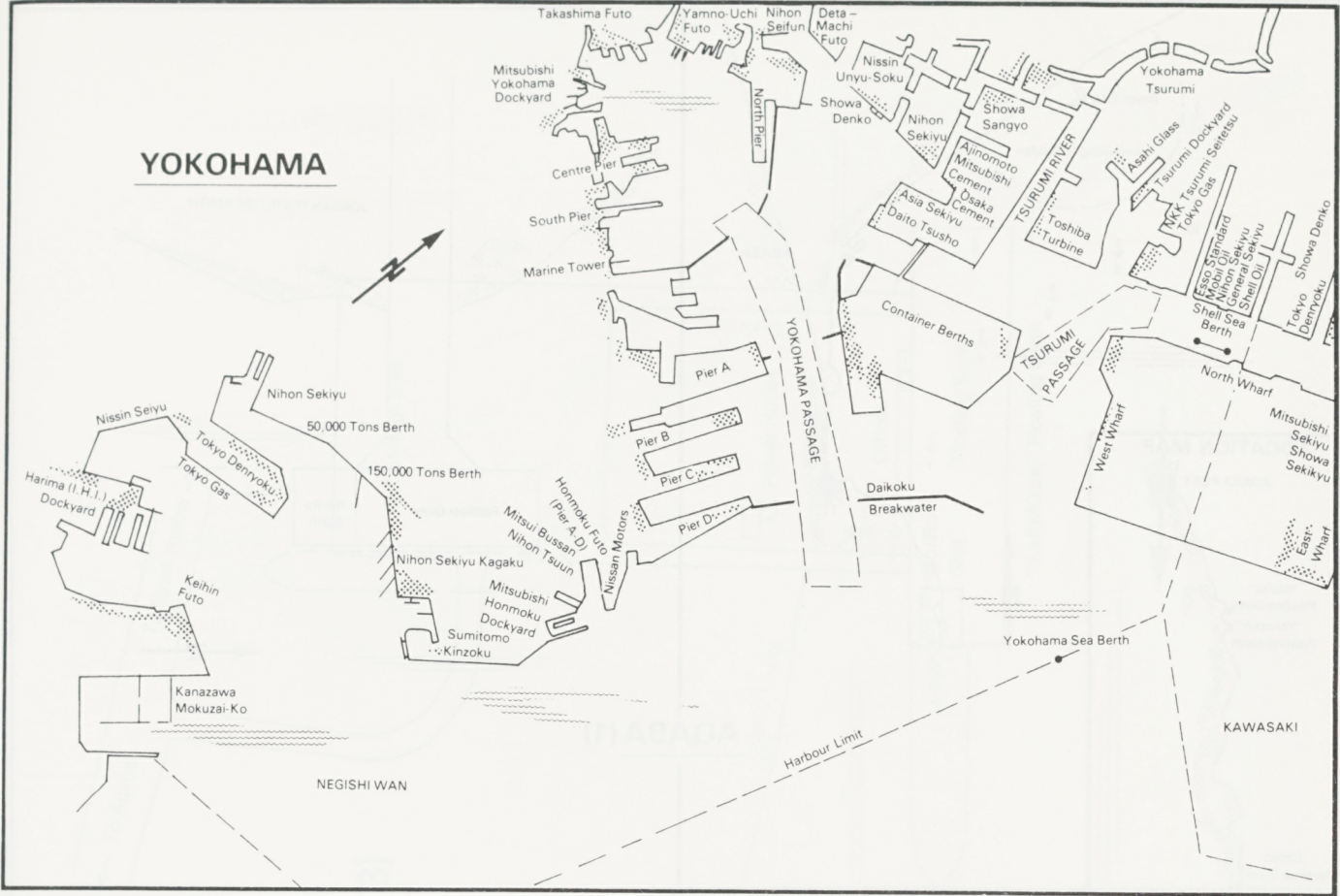
TOMAKOMAI

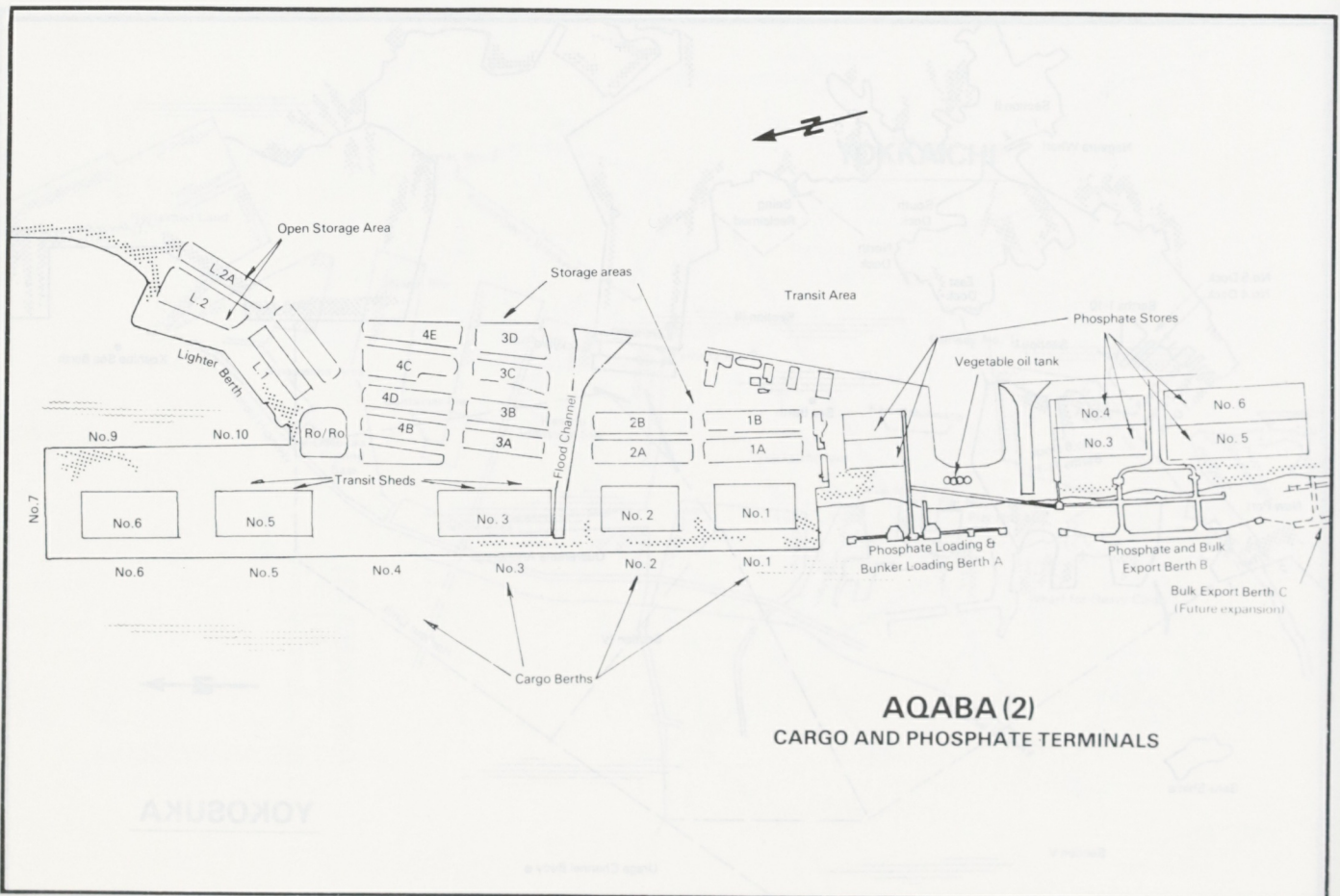
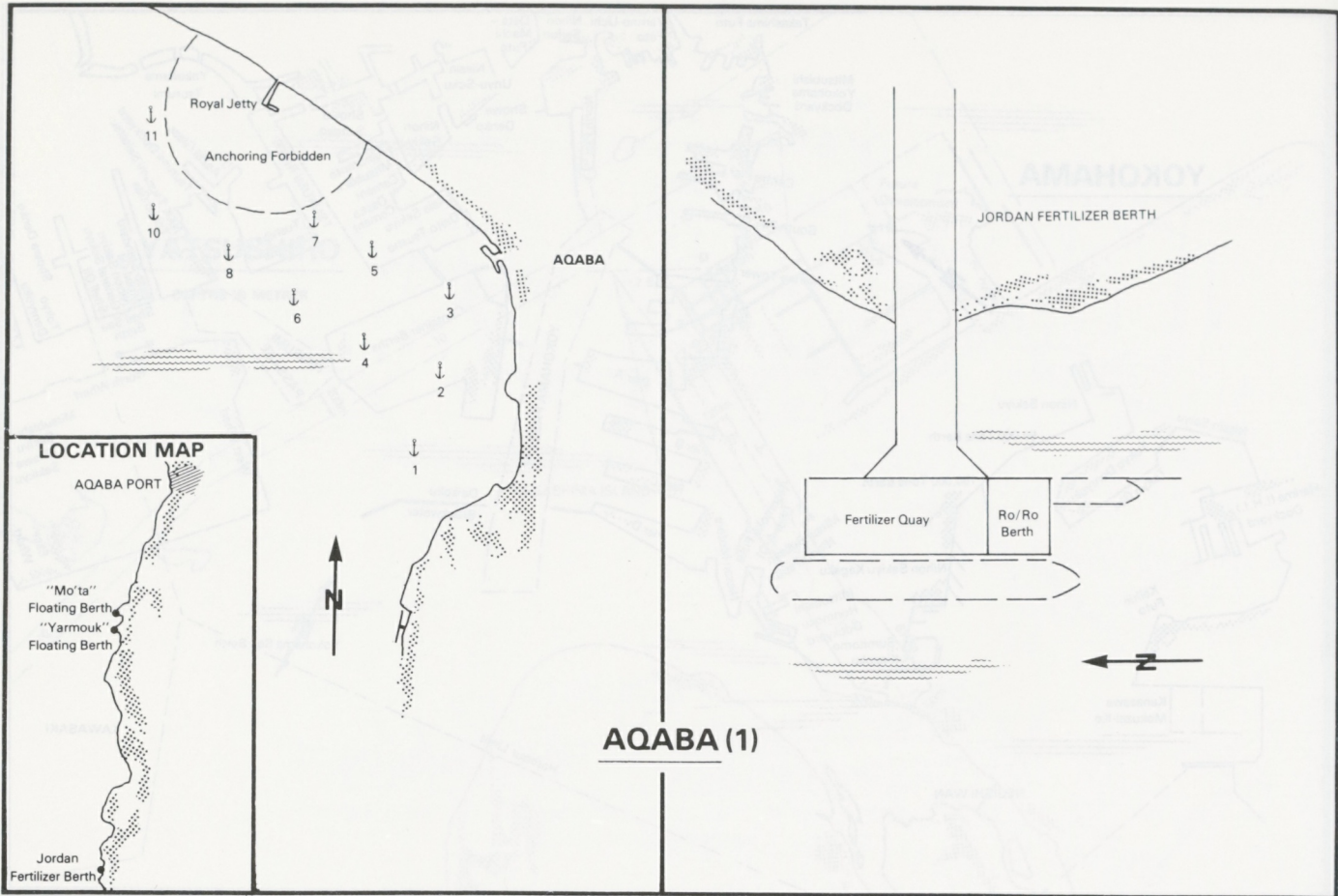












Container Storage Area

Offices

Customs and Police

Storage Area

Offices

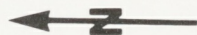
Power House

Offices

Floating Berth

Ro/Ro Slot

"MO'TA" Floating Berth



AQABA (3)

← To Aqaba

To Saudi Arabia →

Storage area

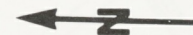
Power House

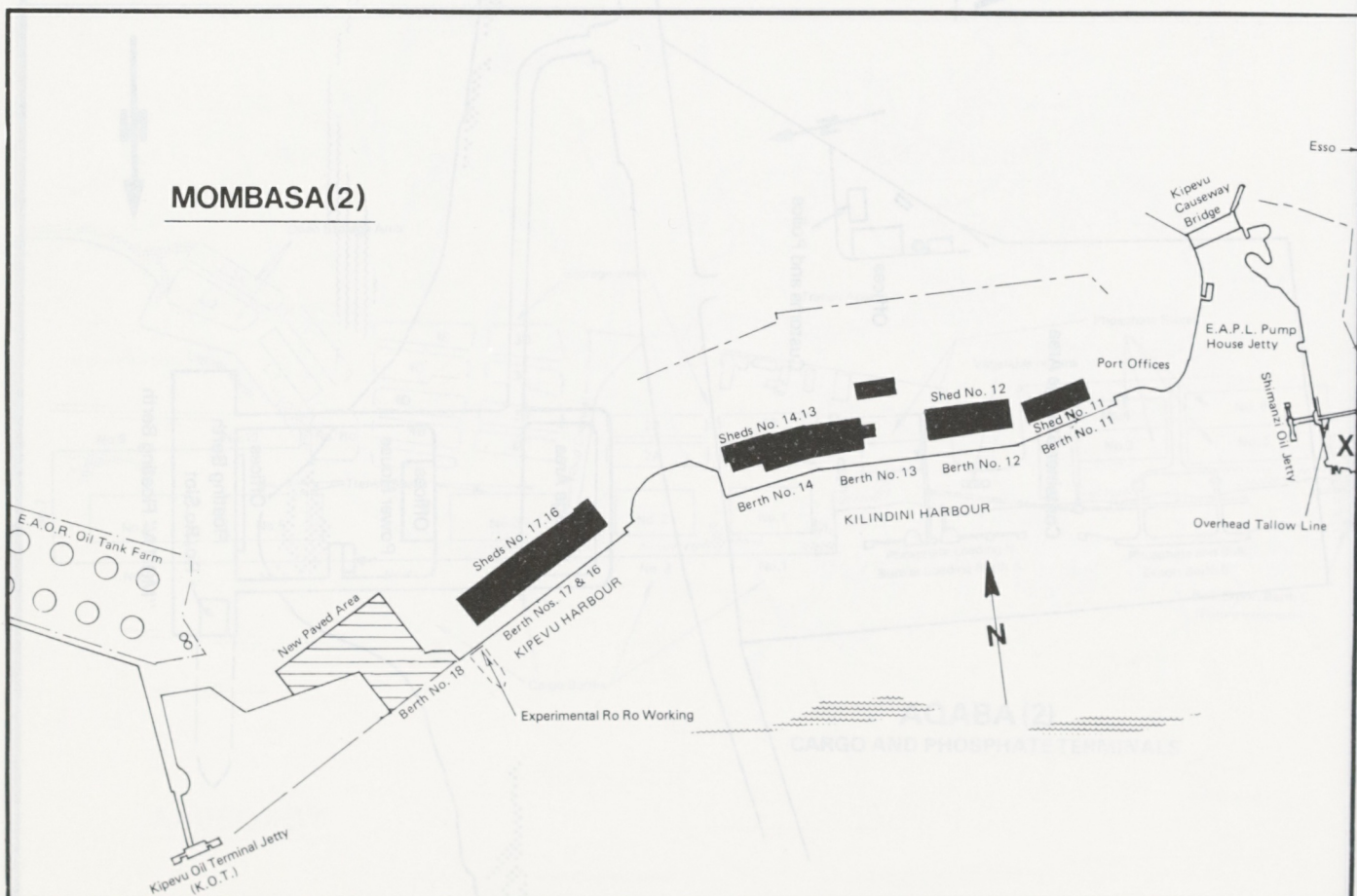
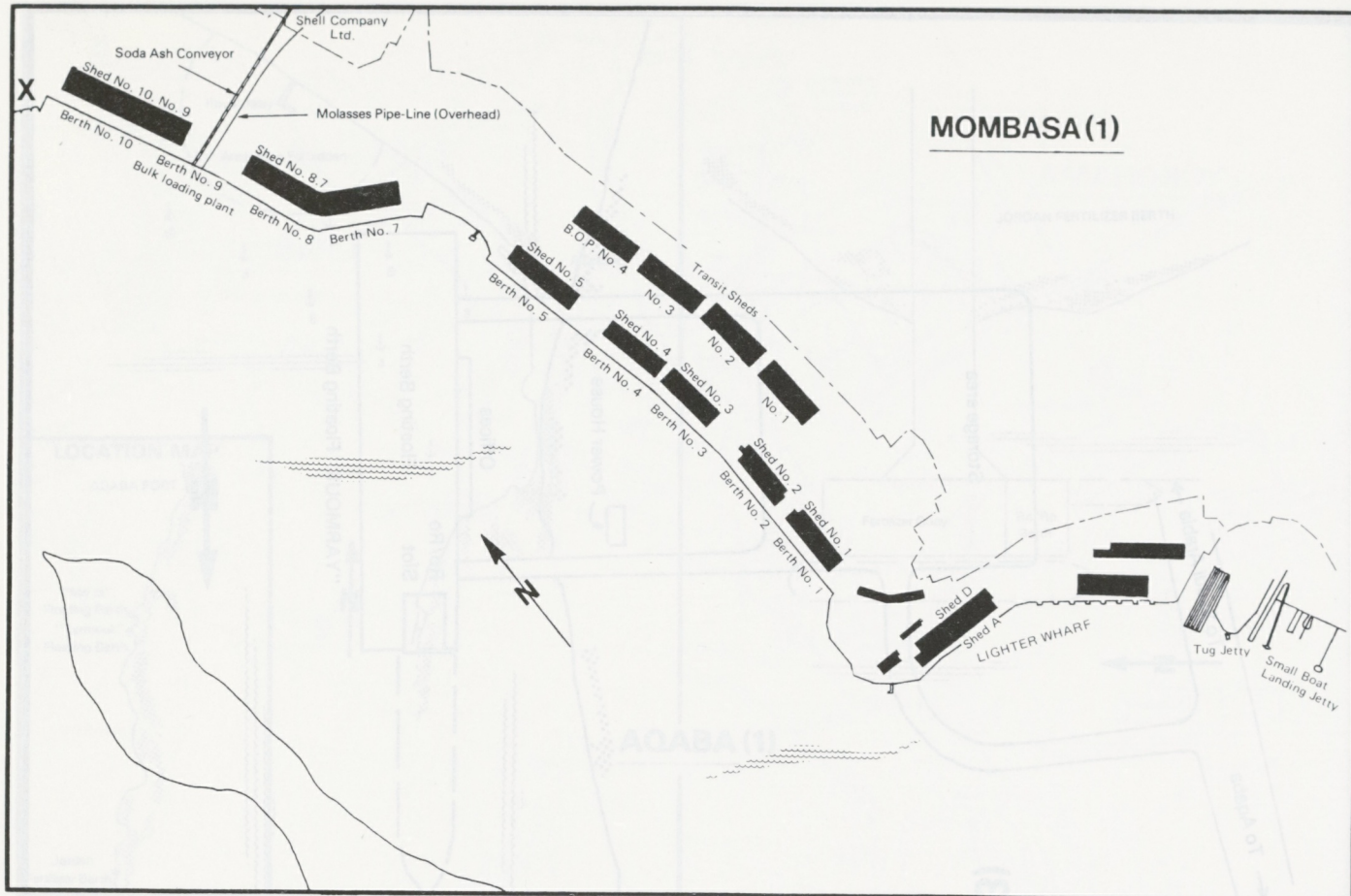
Offices

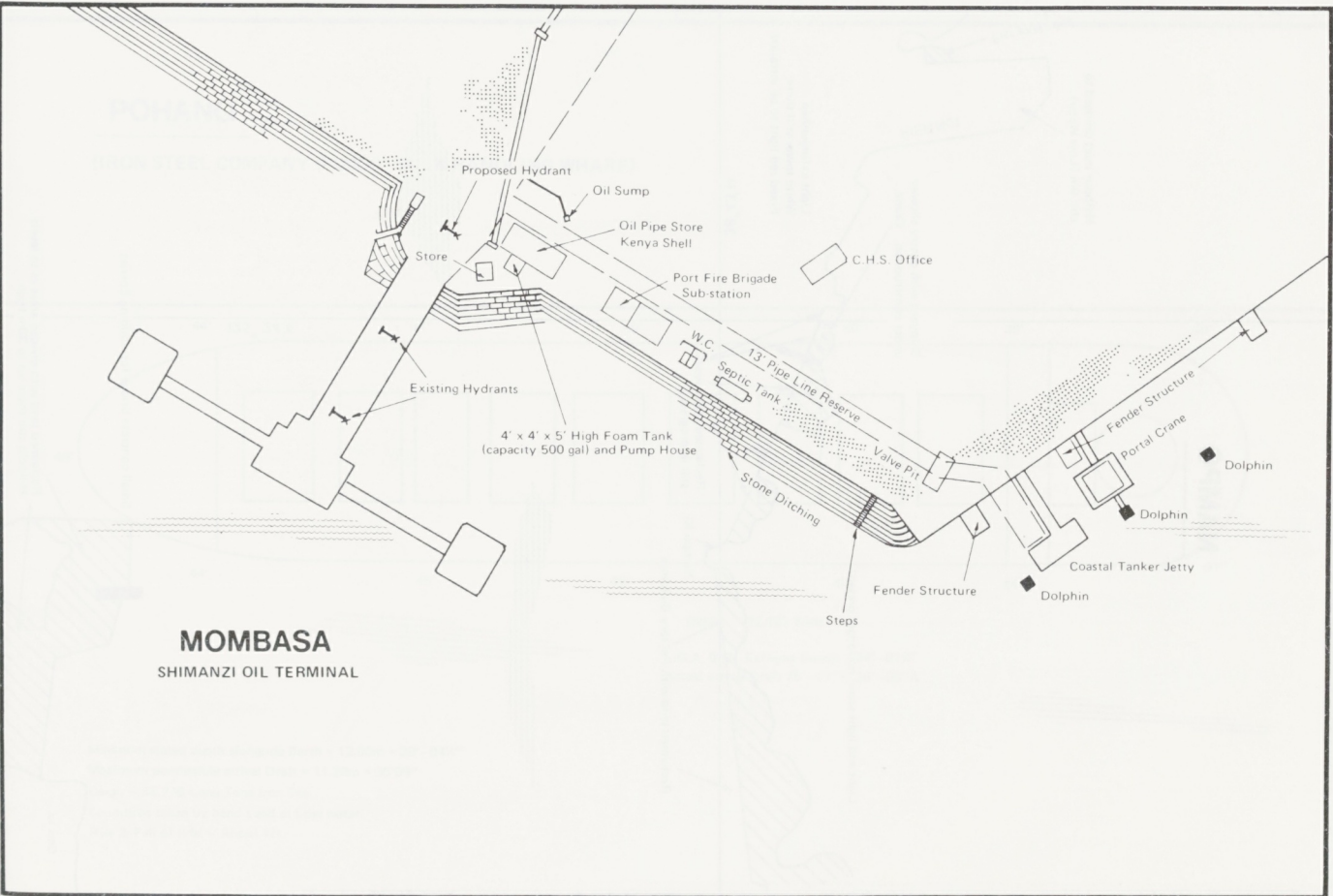
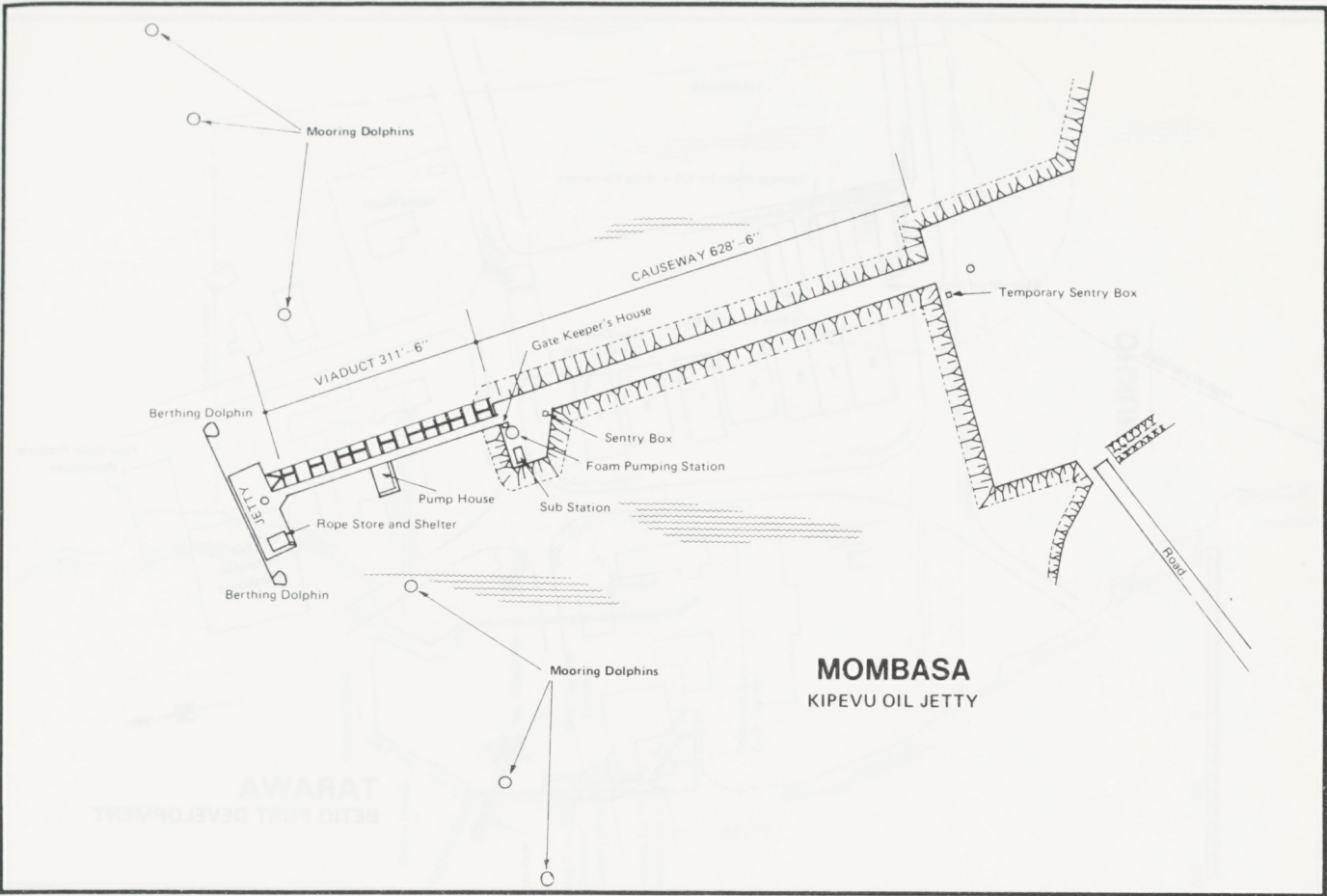
Ro/Ro
Slot

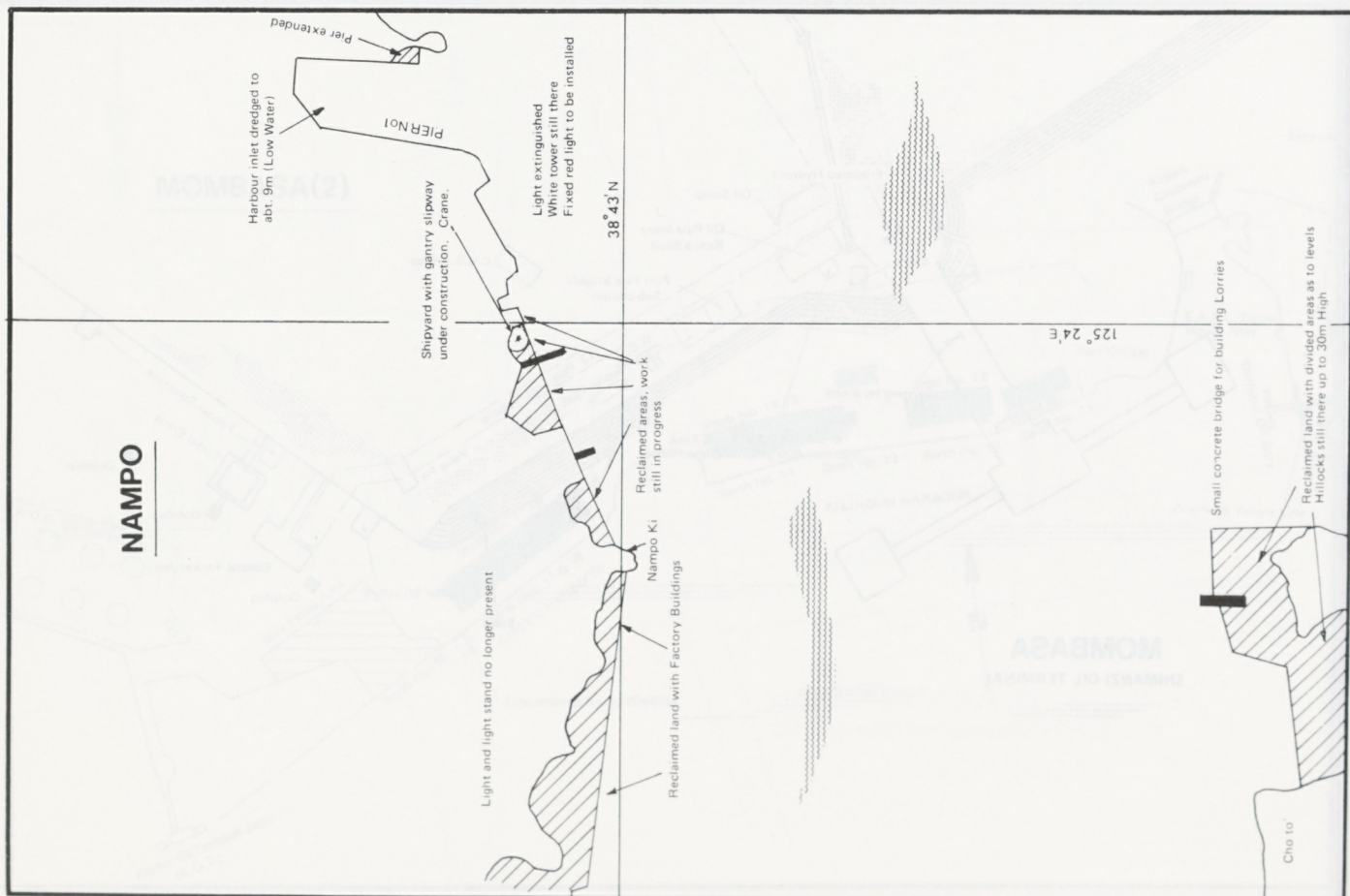
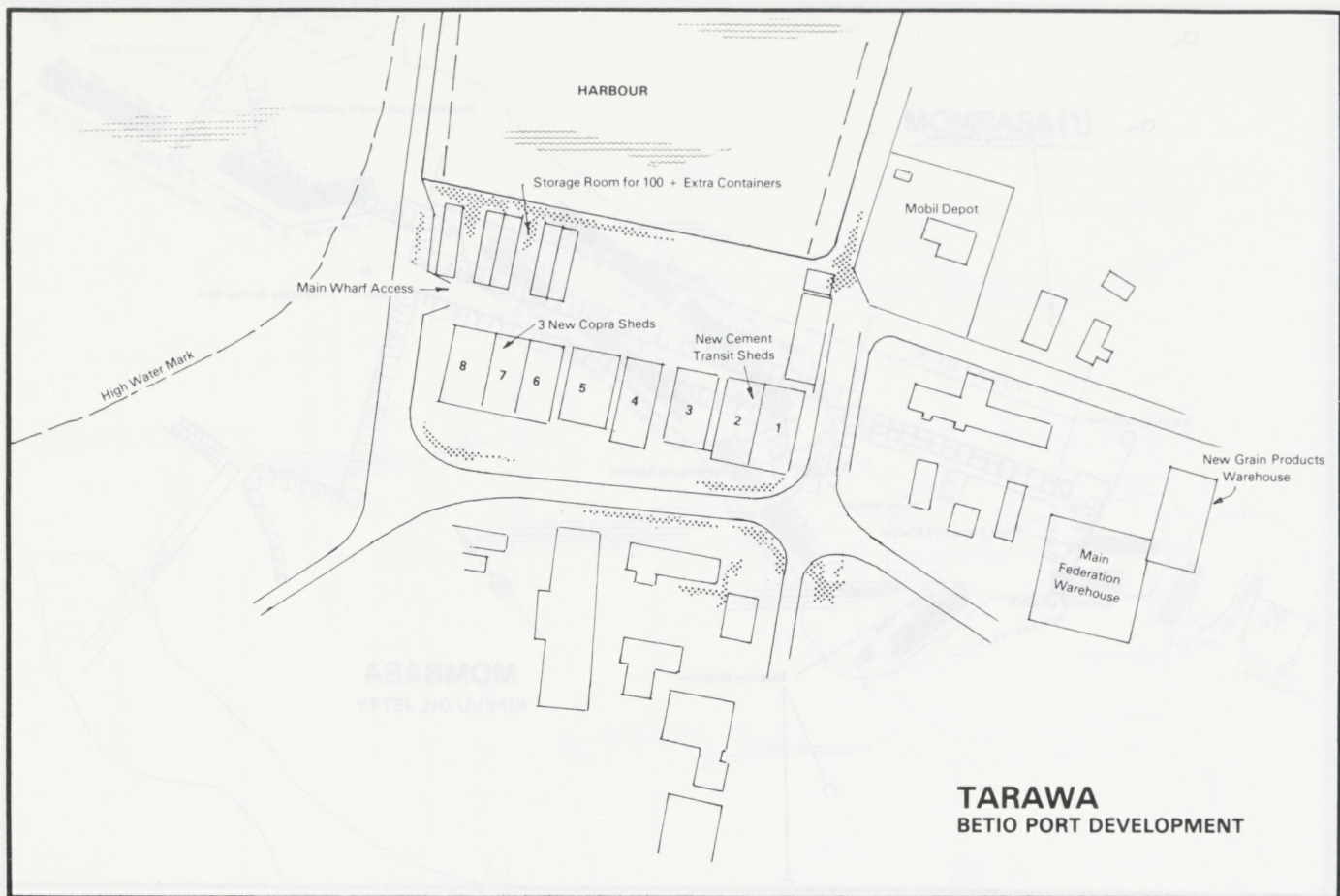
Floating Berth

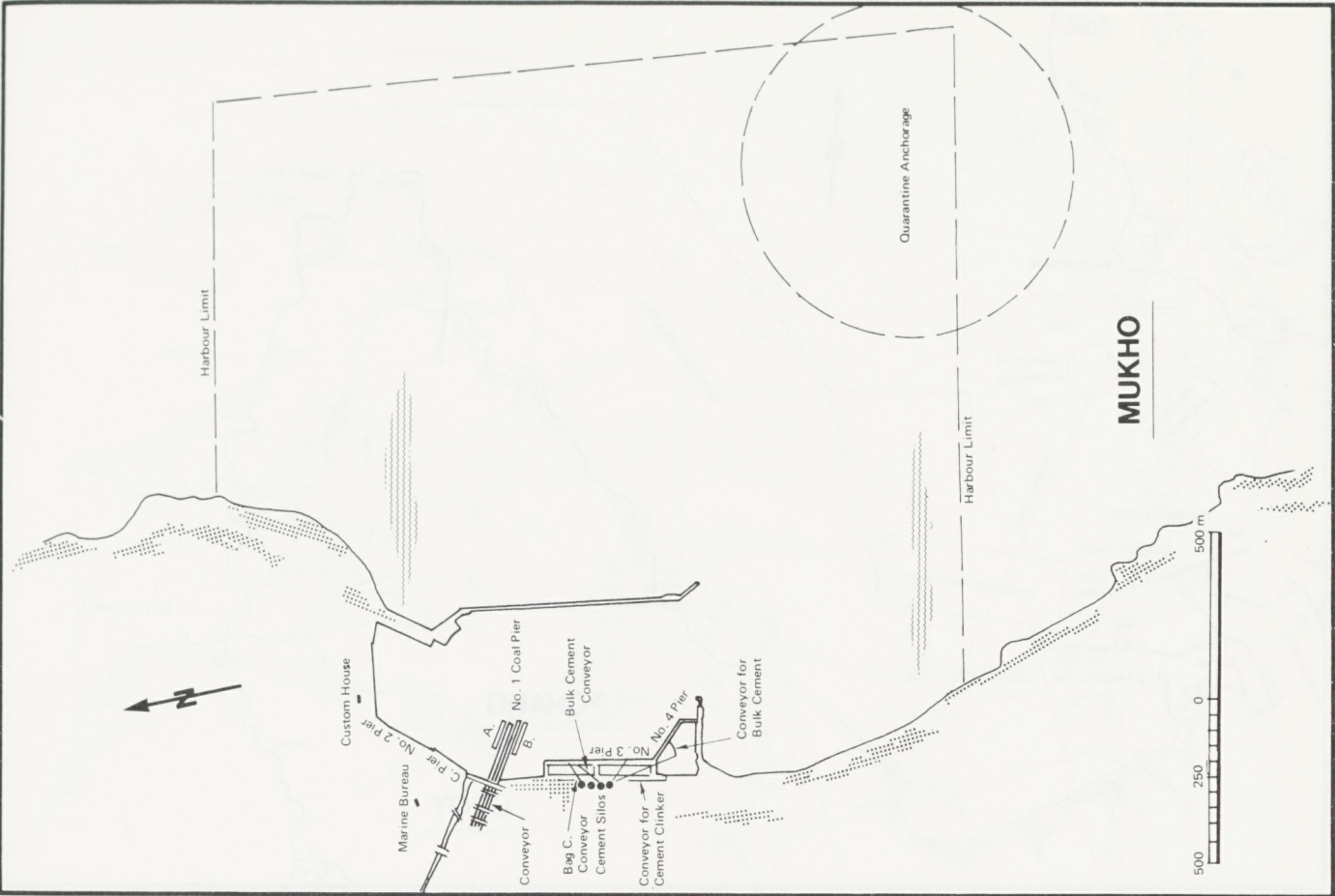
"YARMOUK" Floating Berth





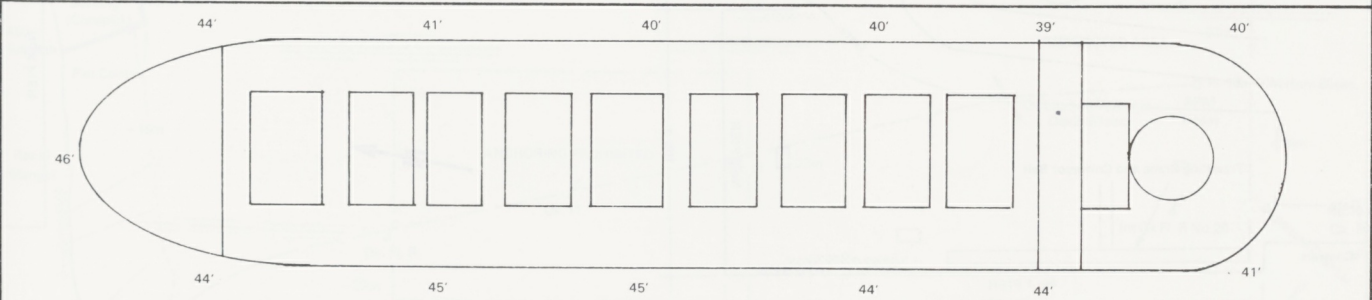






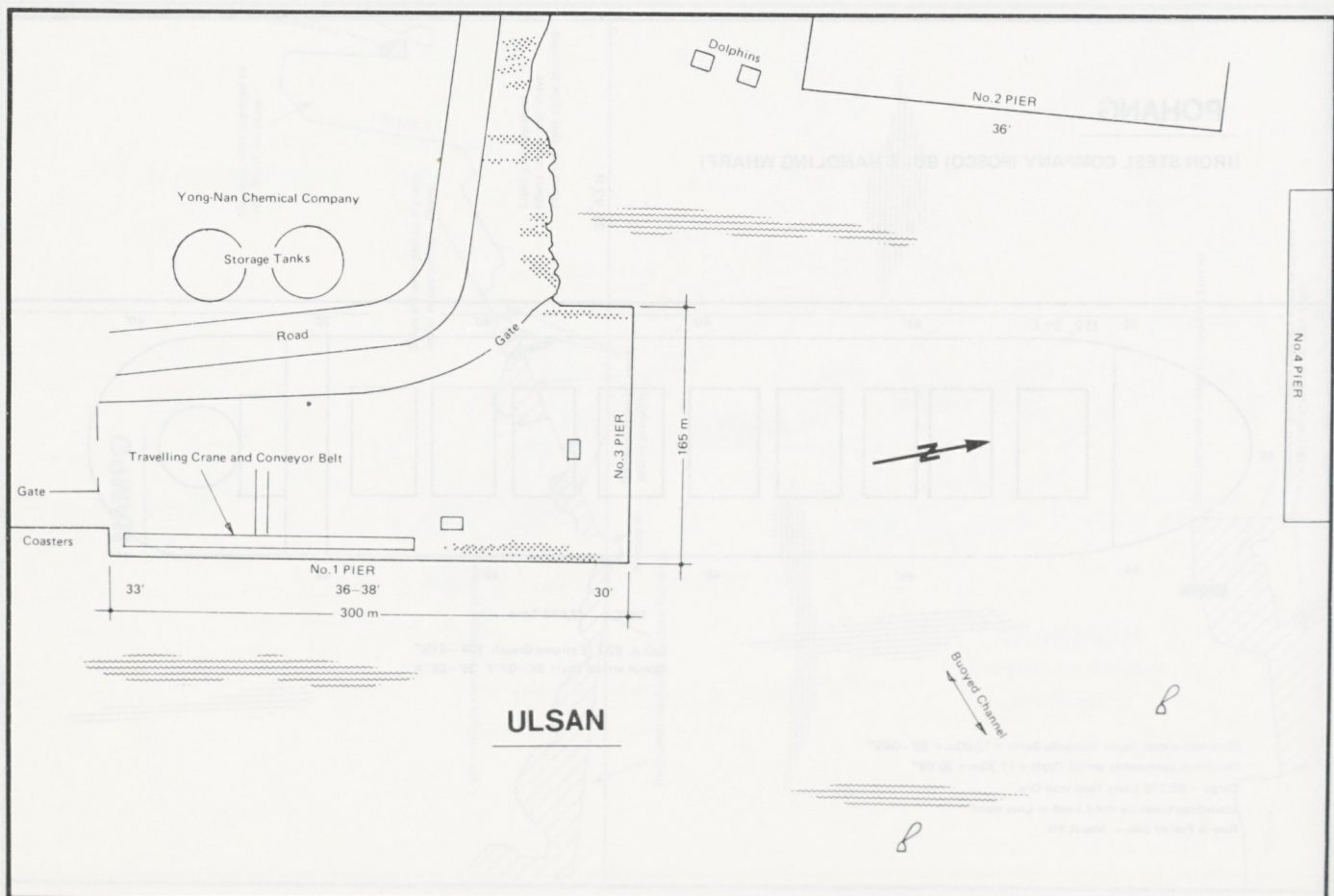
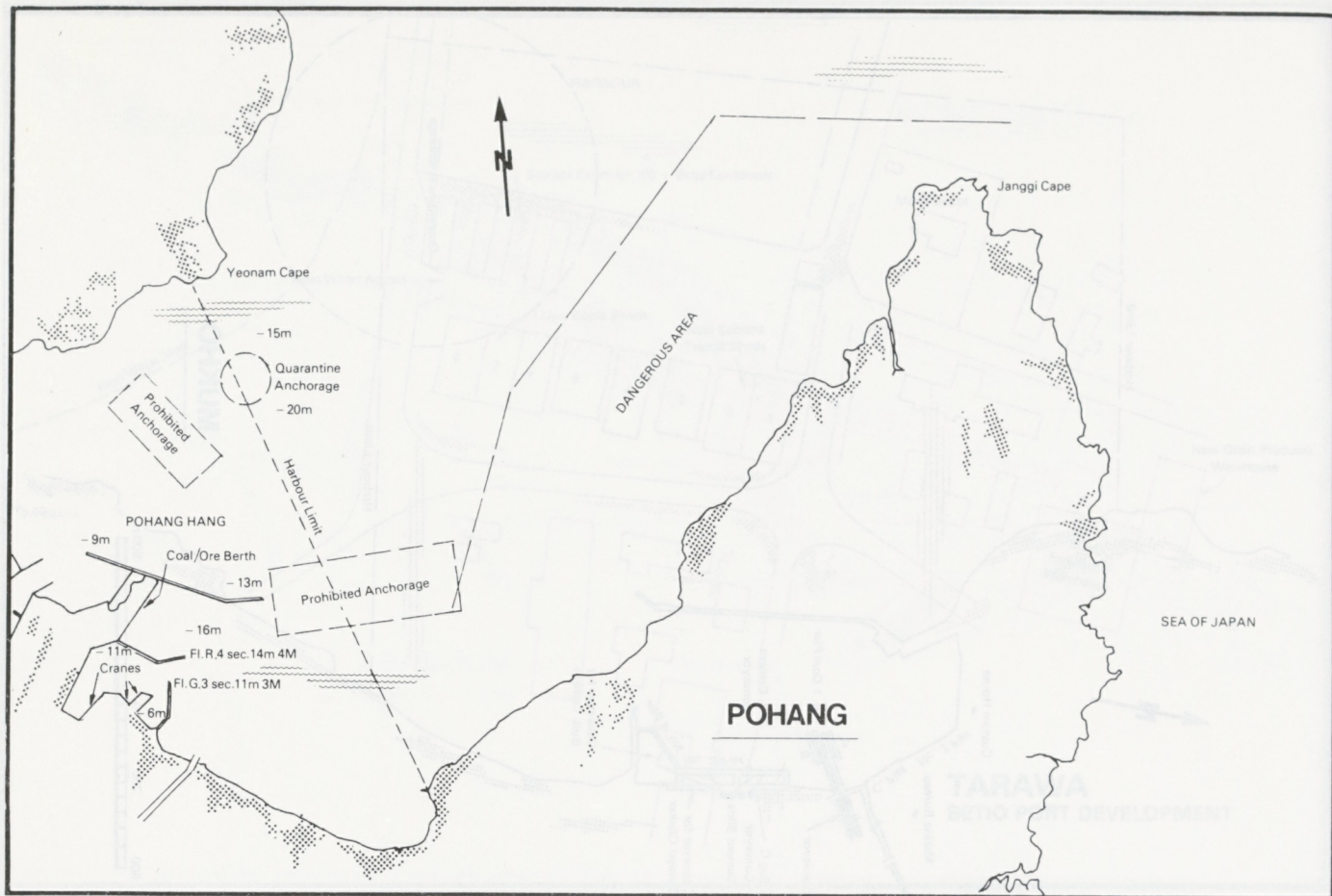
POHANG

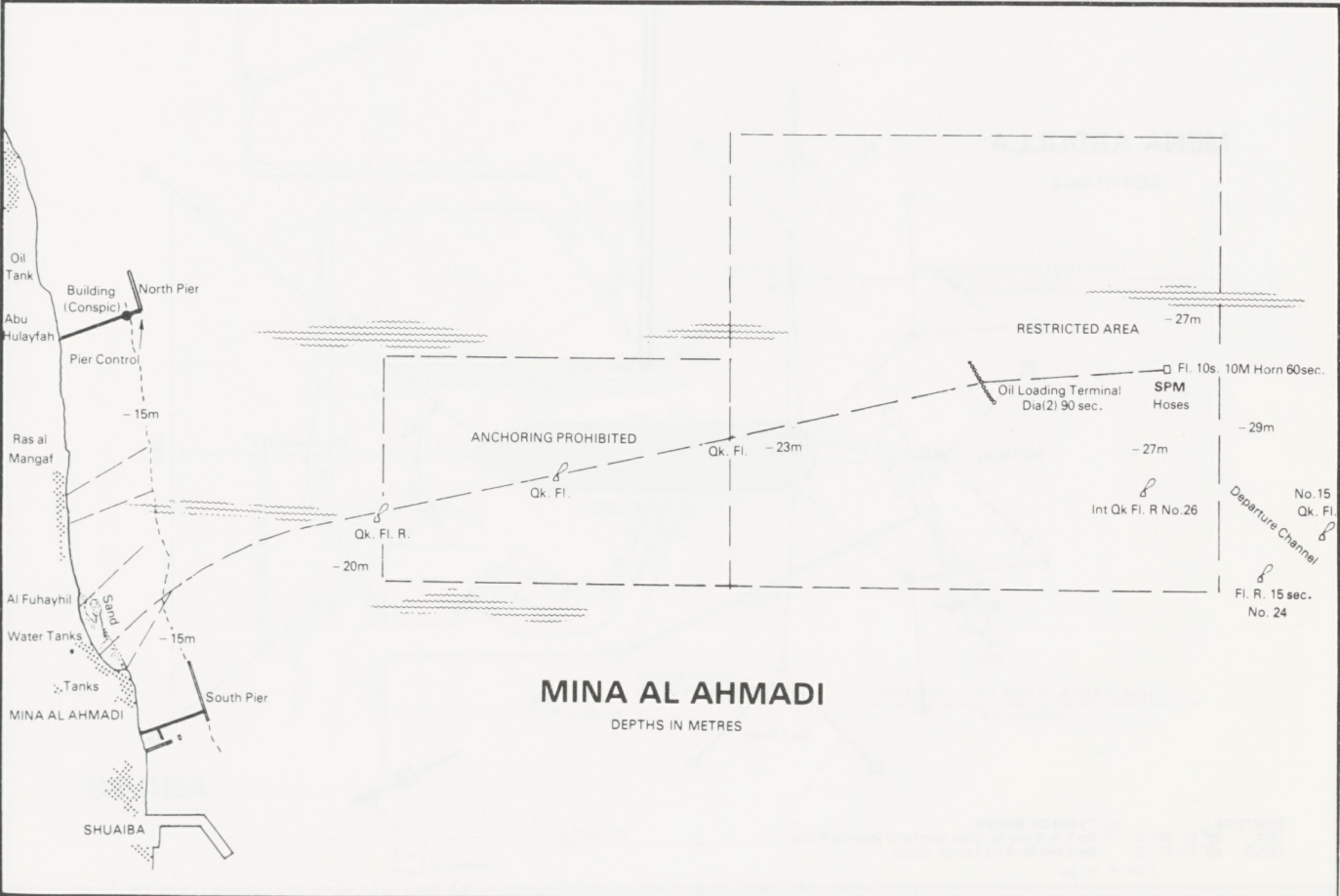
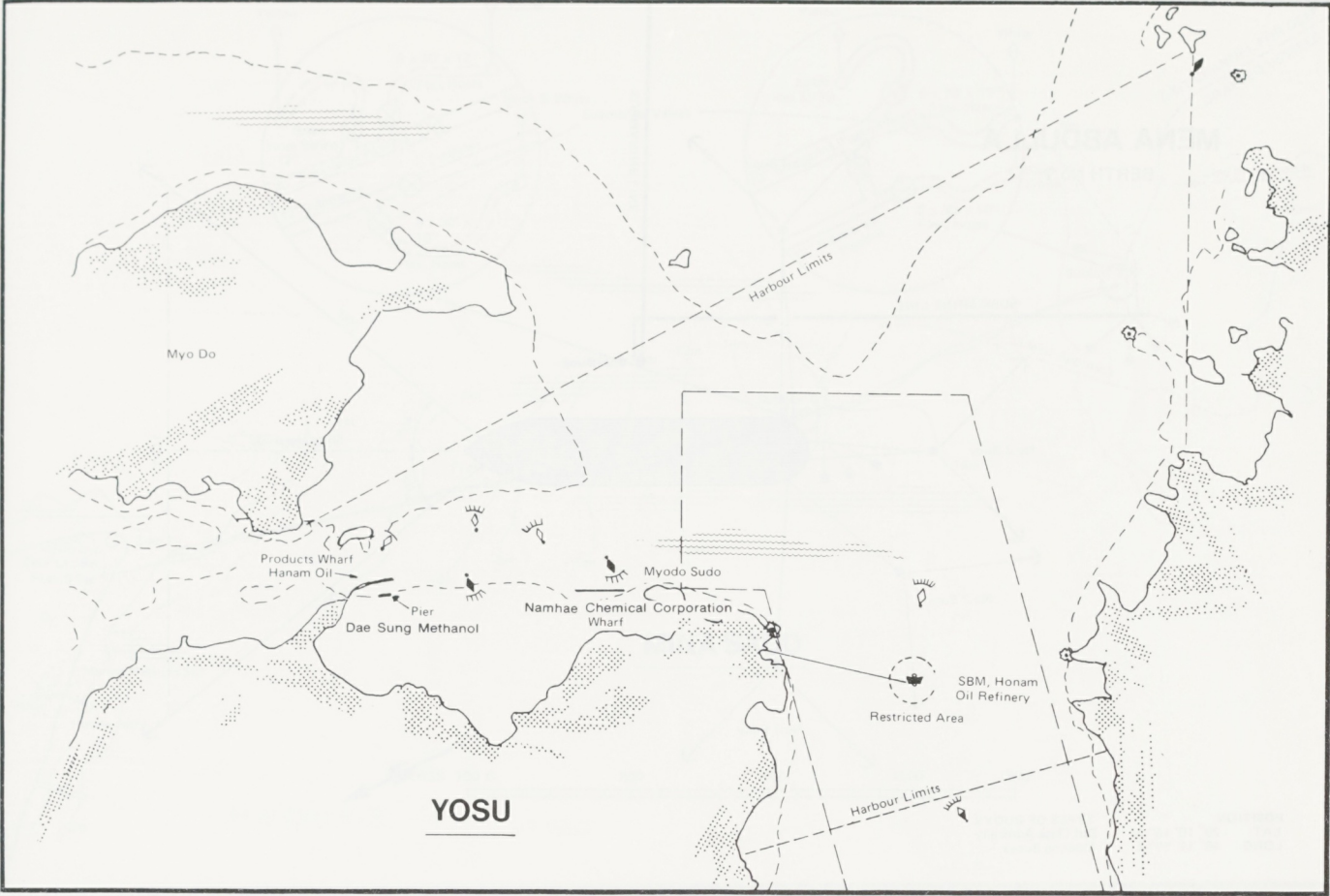
(IRON STEEL COMPANY (POSCO) BULK HANDLING WHARF)



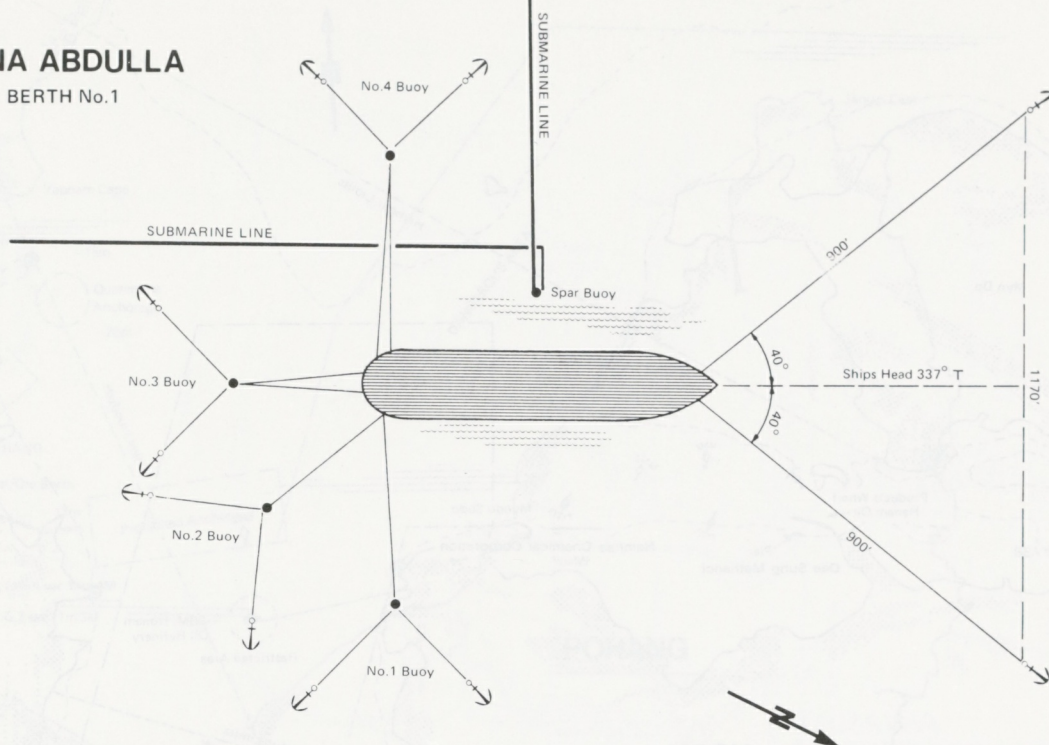
DWT 72,072 Tons
L.O.A. 820' Extreme Breath 104'-01 3/4"
Actual arrival Draft 36'-07" F 36'-08" A

Minimum stated depth alongside Berth = 12.00m = 39'-04 1/2"
Maximum permissible arrival Draft = 11.20m = 36'-09"
Cargo - 55,776 Long Tons Iron Ore
Soundings taken by hand Lead at Low water
Rise & Fall of tide - About 1ft.





BERTH No.1

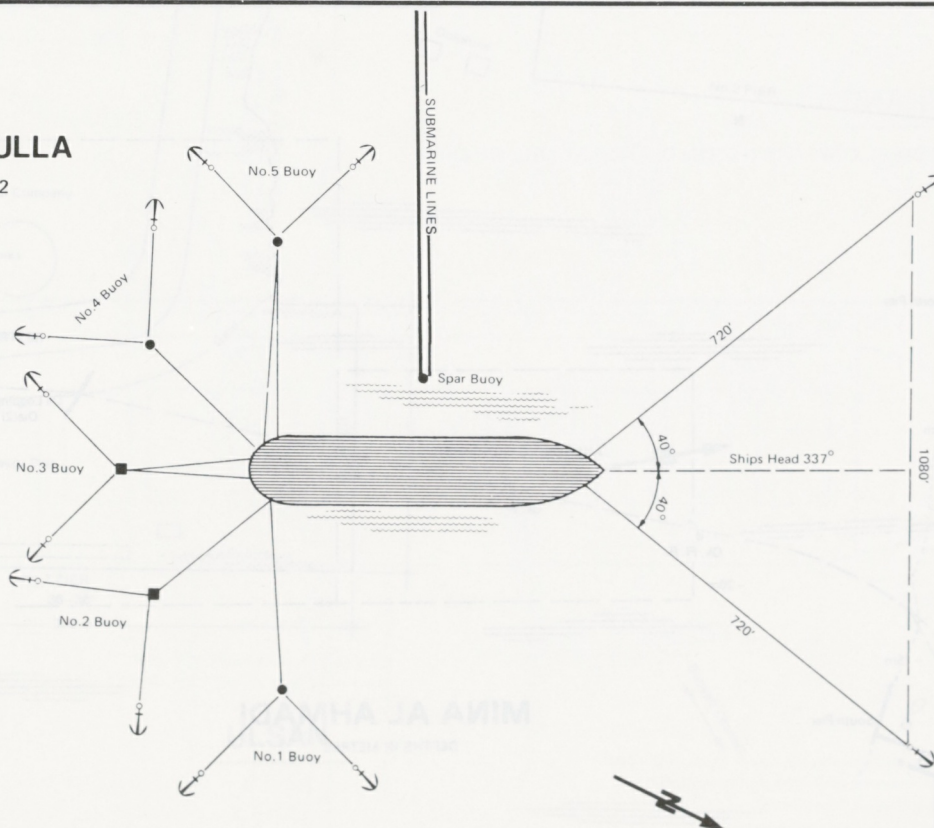


POSITION:
LAT: 29° 10' 16" N
LONG: 48° 11' 52" E

TYPES OF BUOYS:
3rd Class Admiralty
Mooring Buoys

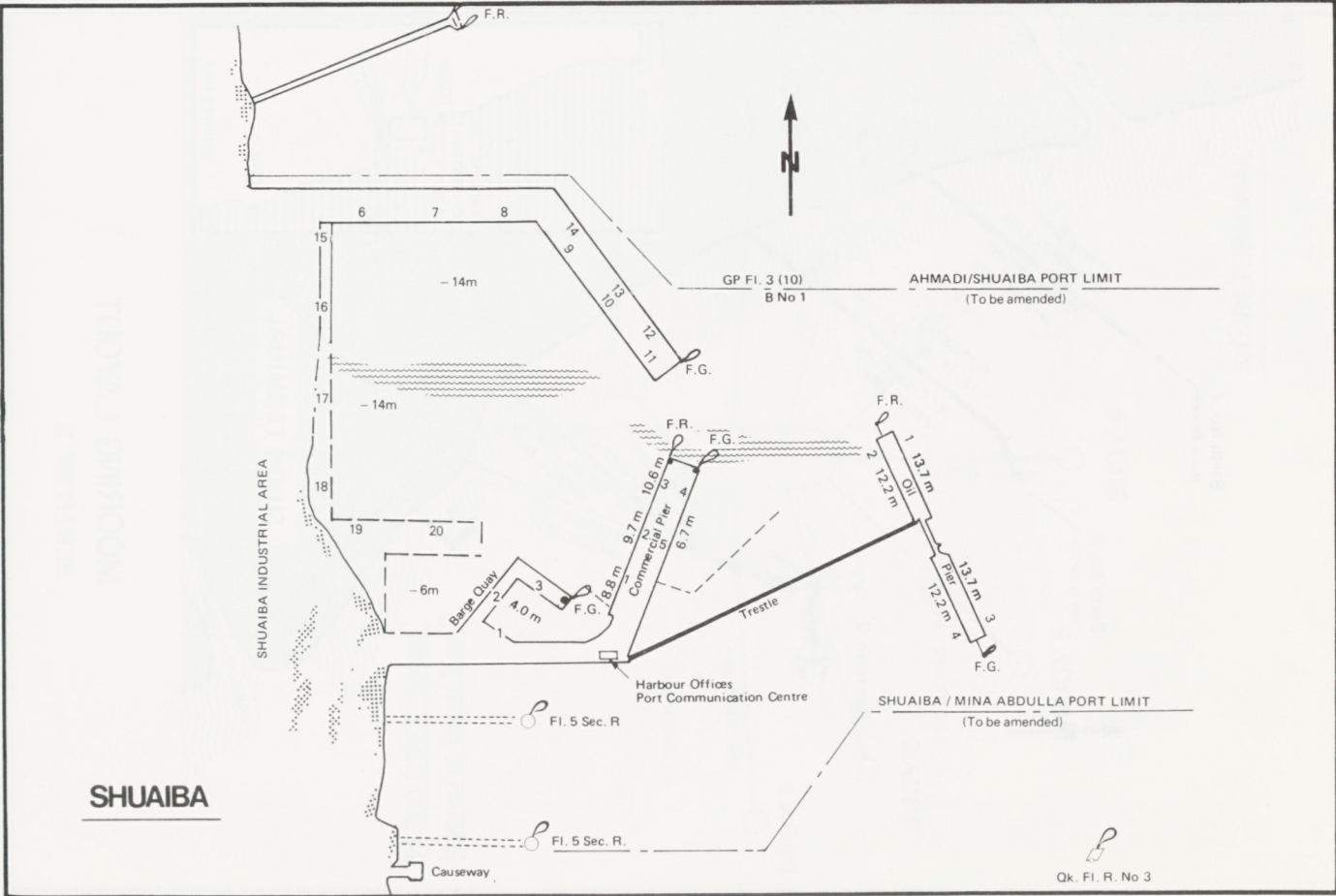
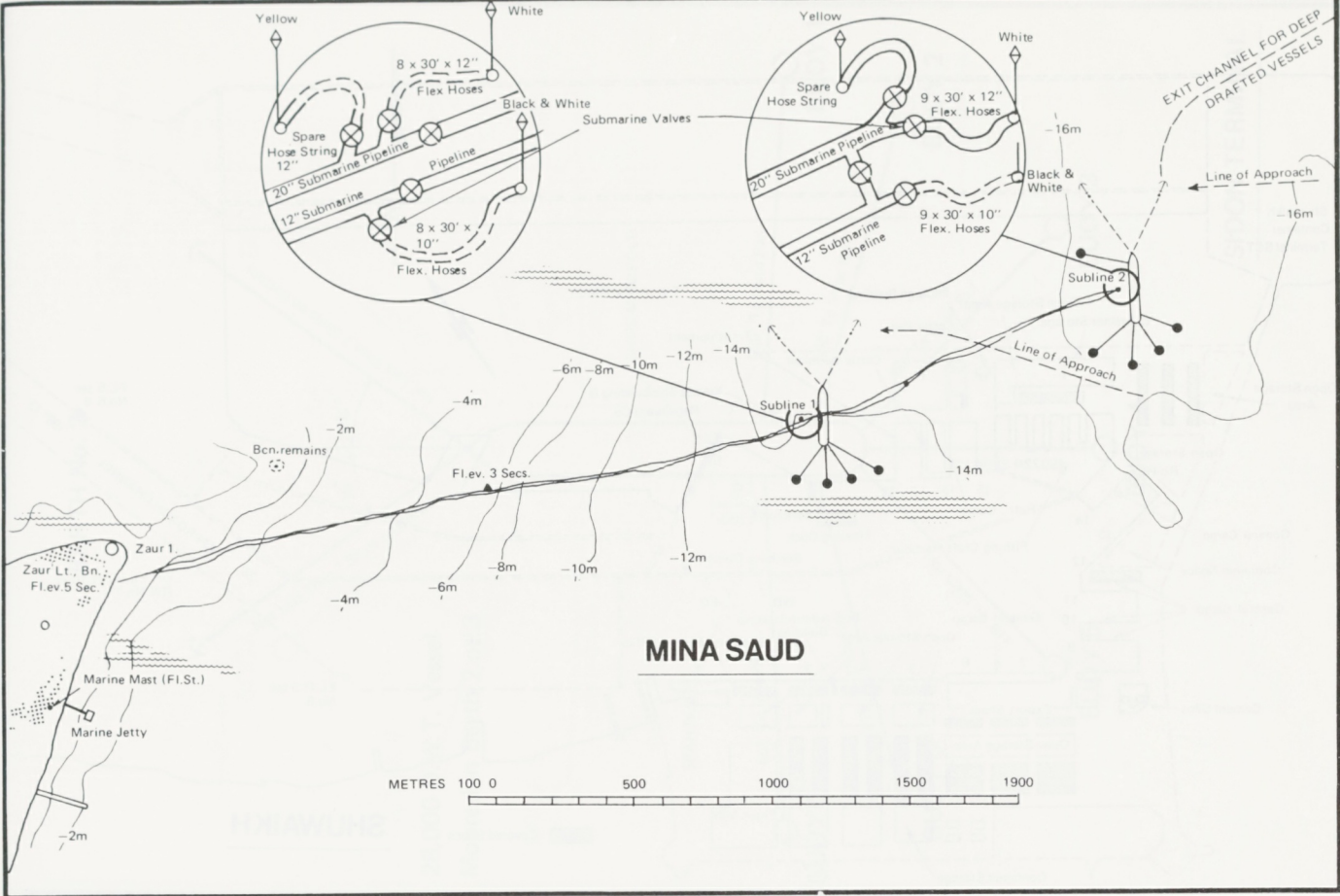
MENA ABDULLA

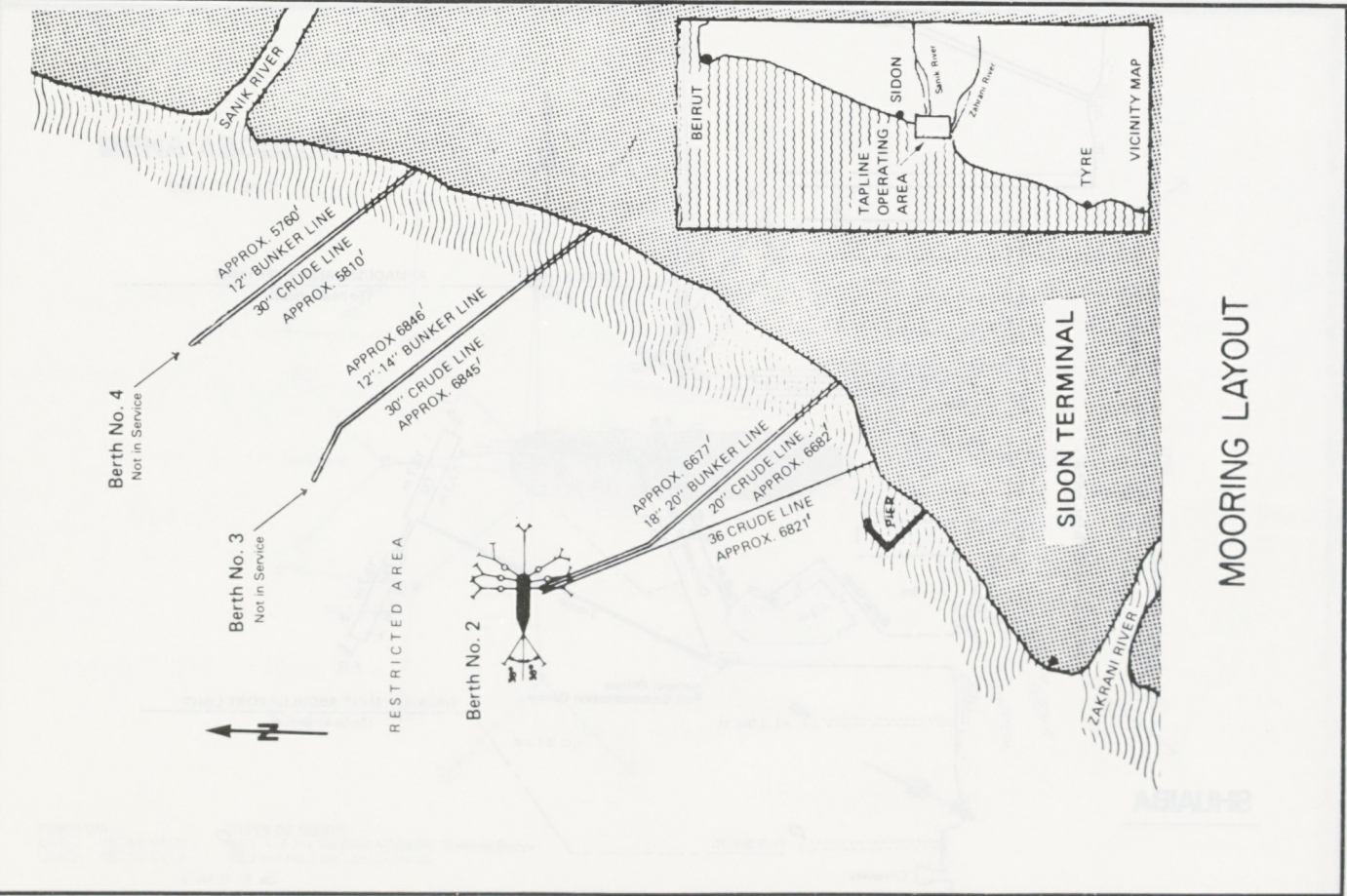
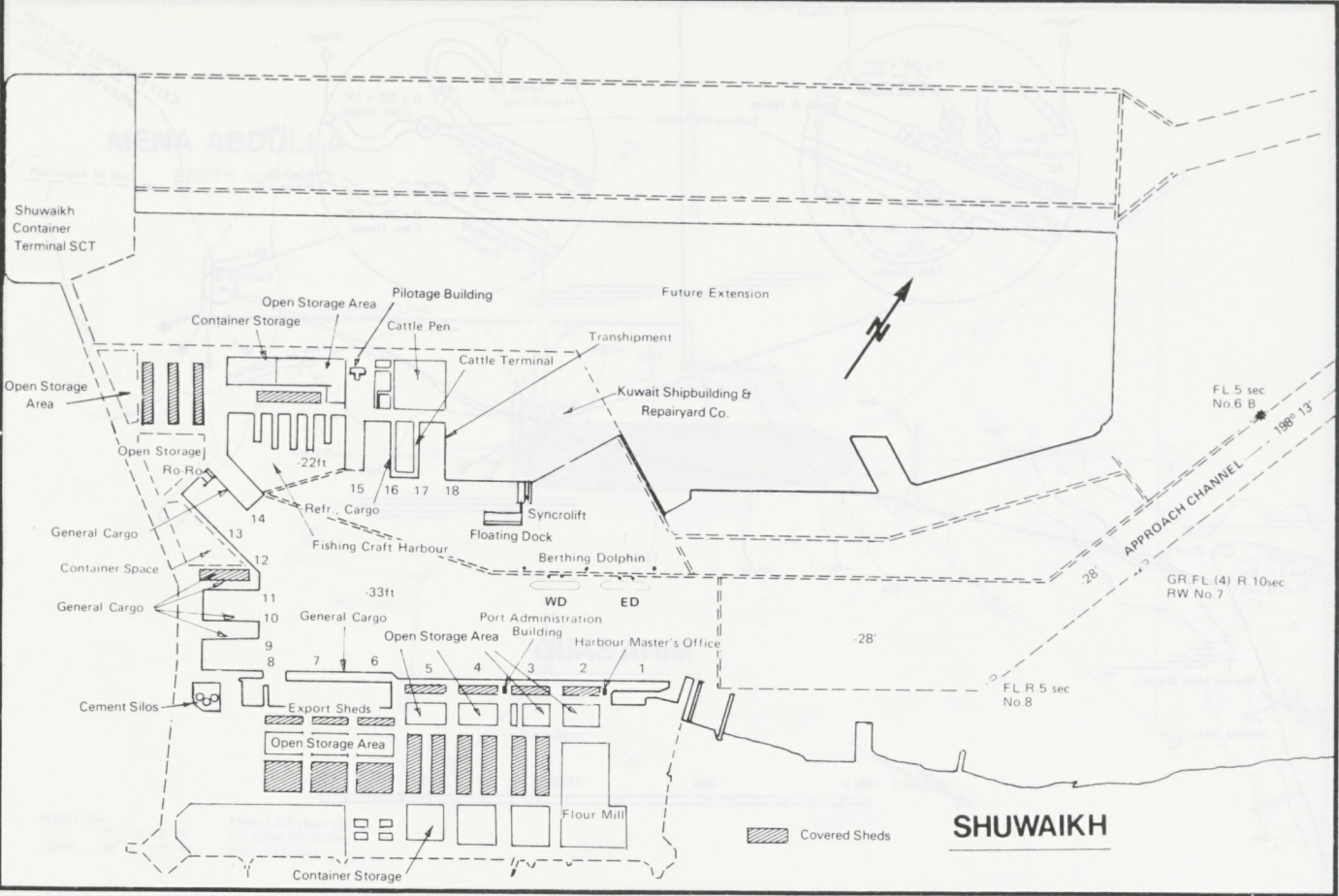
BERTH No.2



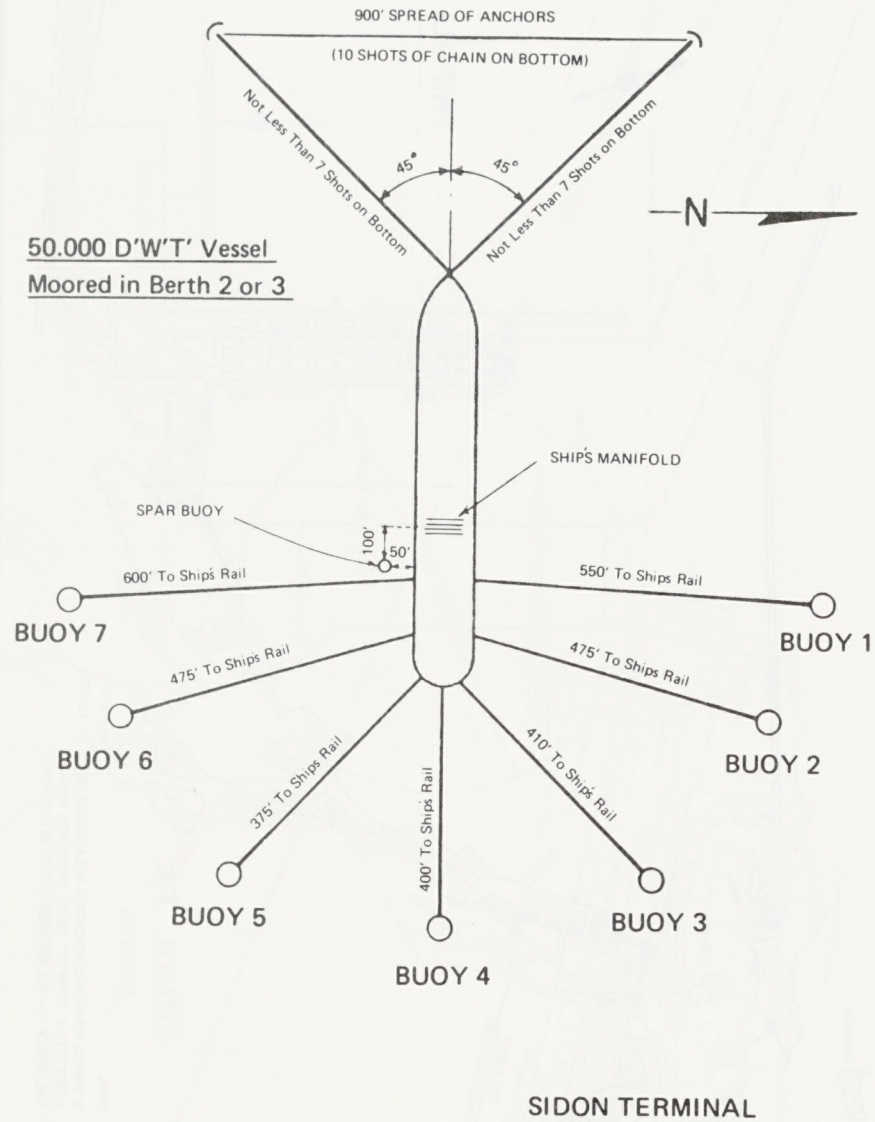
POSITION:
LAT: 29° 01' 51" N
LONG: 48° 12' 51" E

TYPES OF BUOYS:
No.1, 4, 5 Are 1st Class Admiralty Mooring Buoys
No.2 and No.3 are Lamgar Buoys



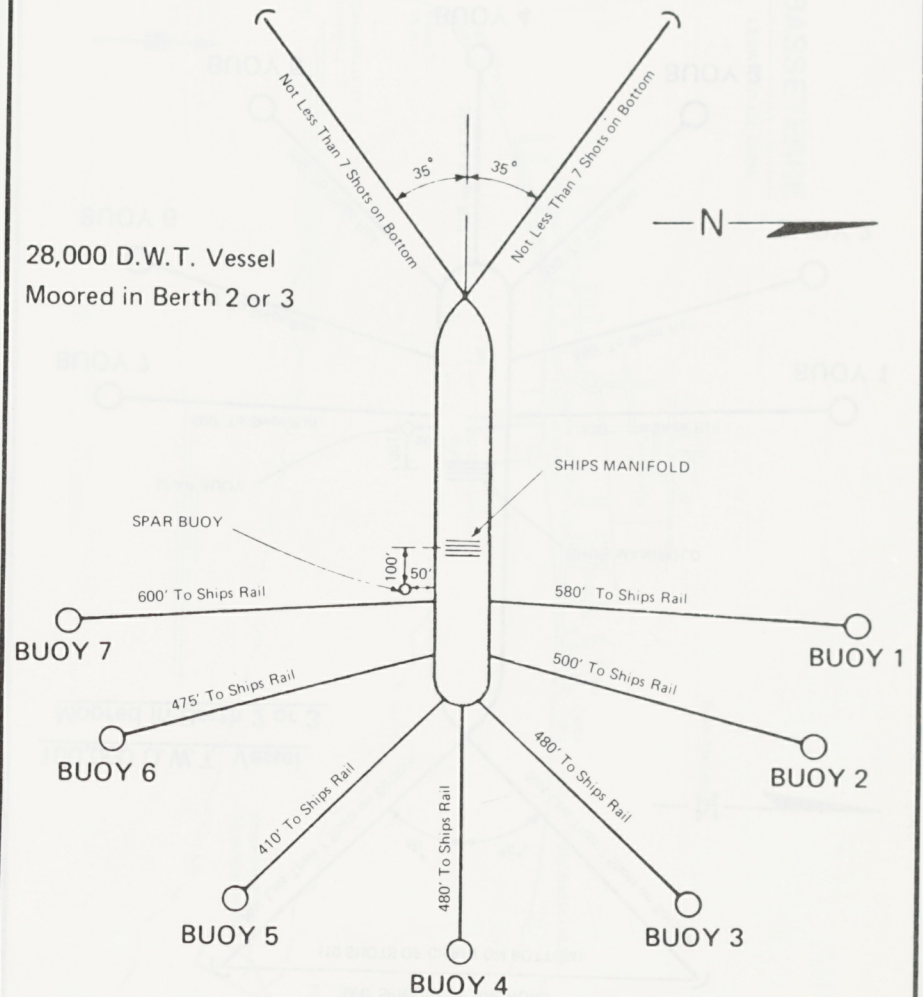


BERTH No. 2



SIDON TERMINAL

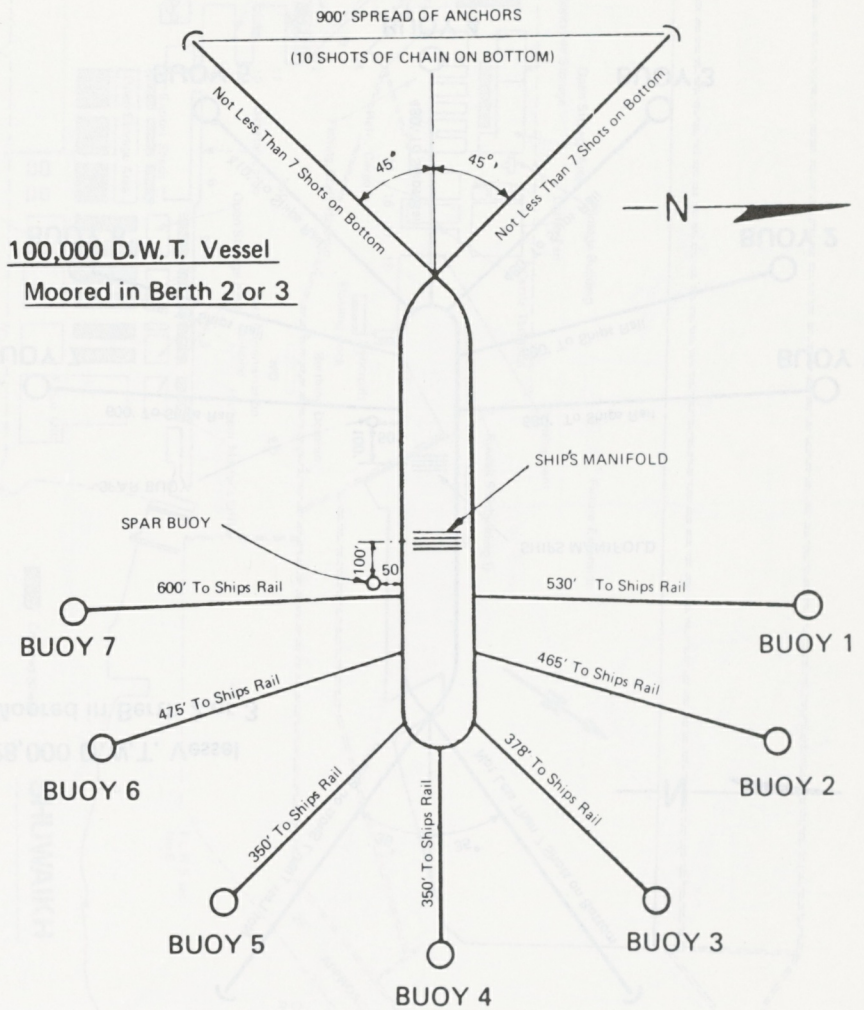
BERTH No. 2



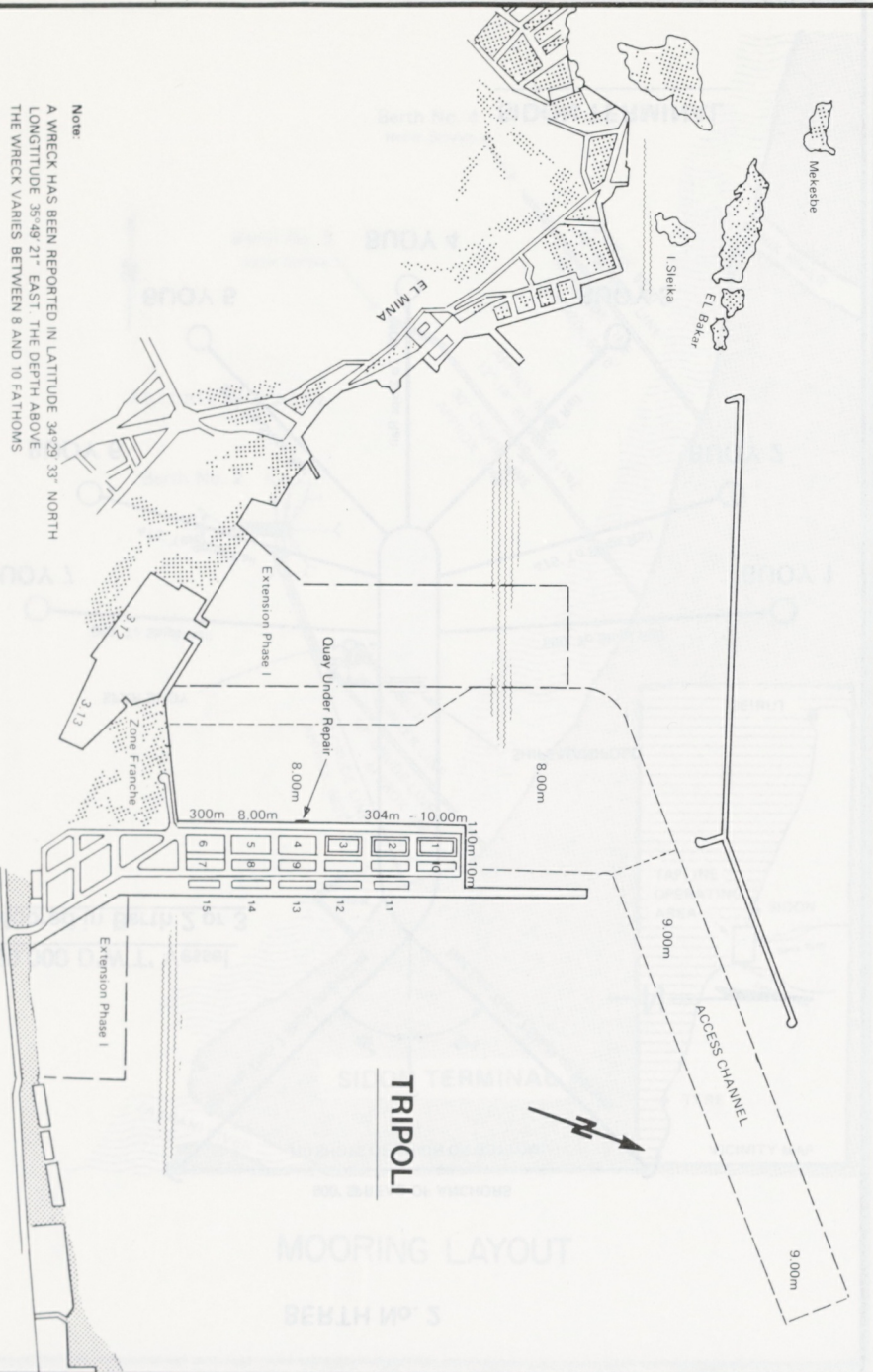
SIDON TERMINAL

BERTH No. 2

100,000 D.W.T. Vessel
Moored in Berth 2 or 3

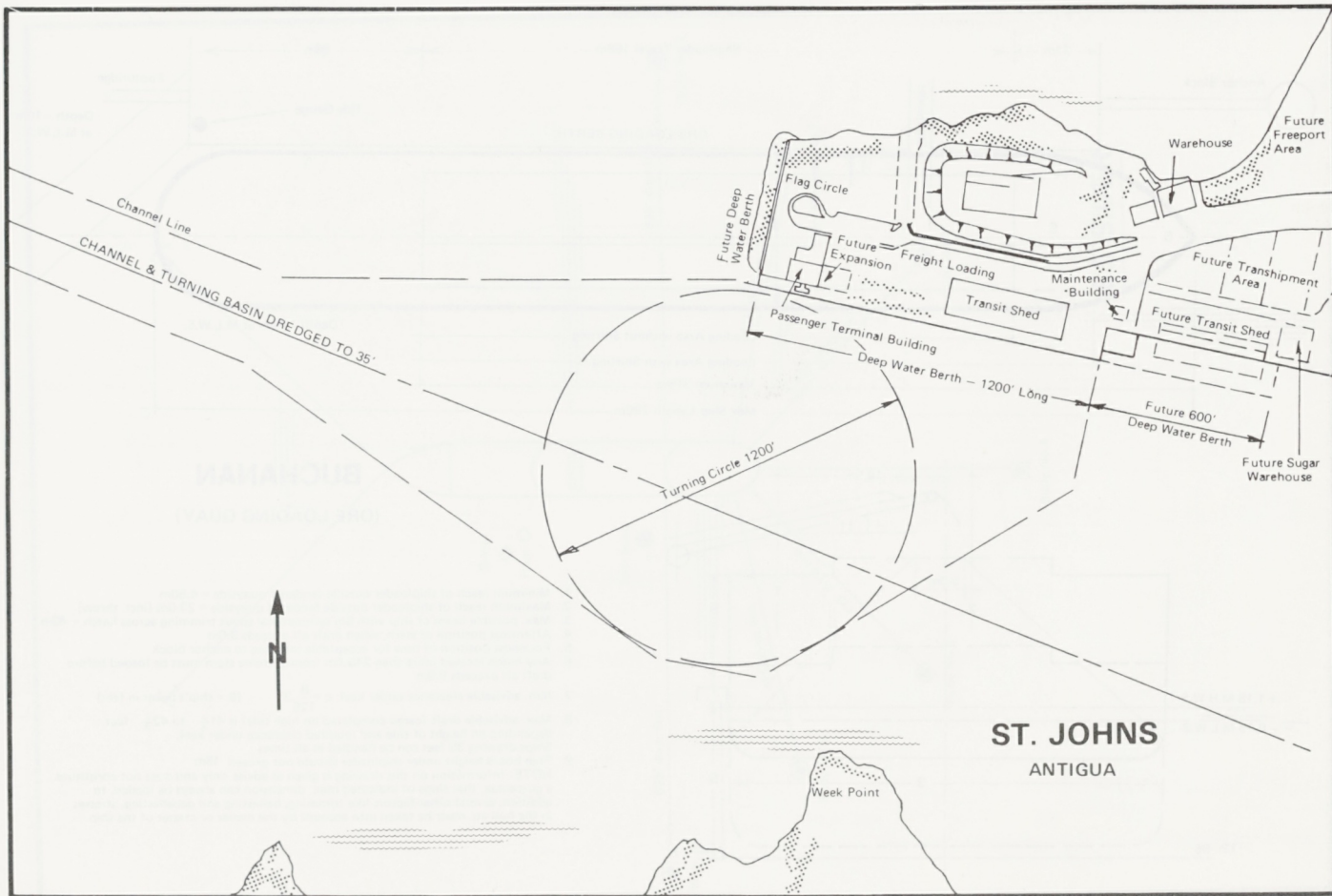
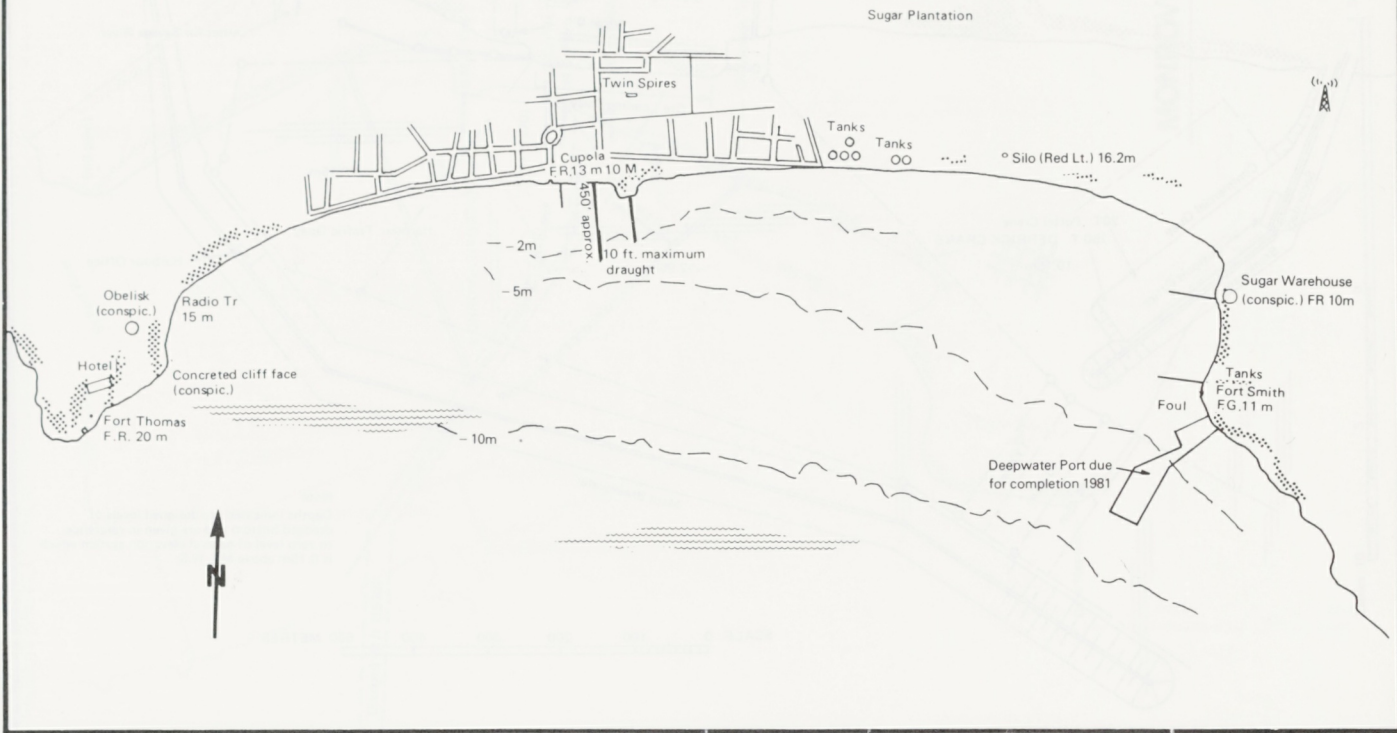


SIDON TERMINAL

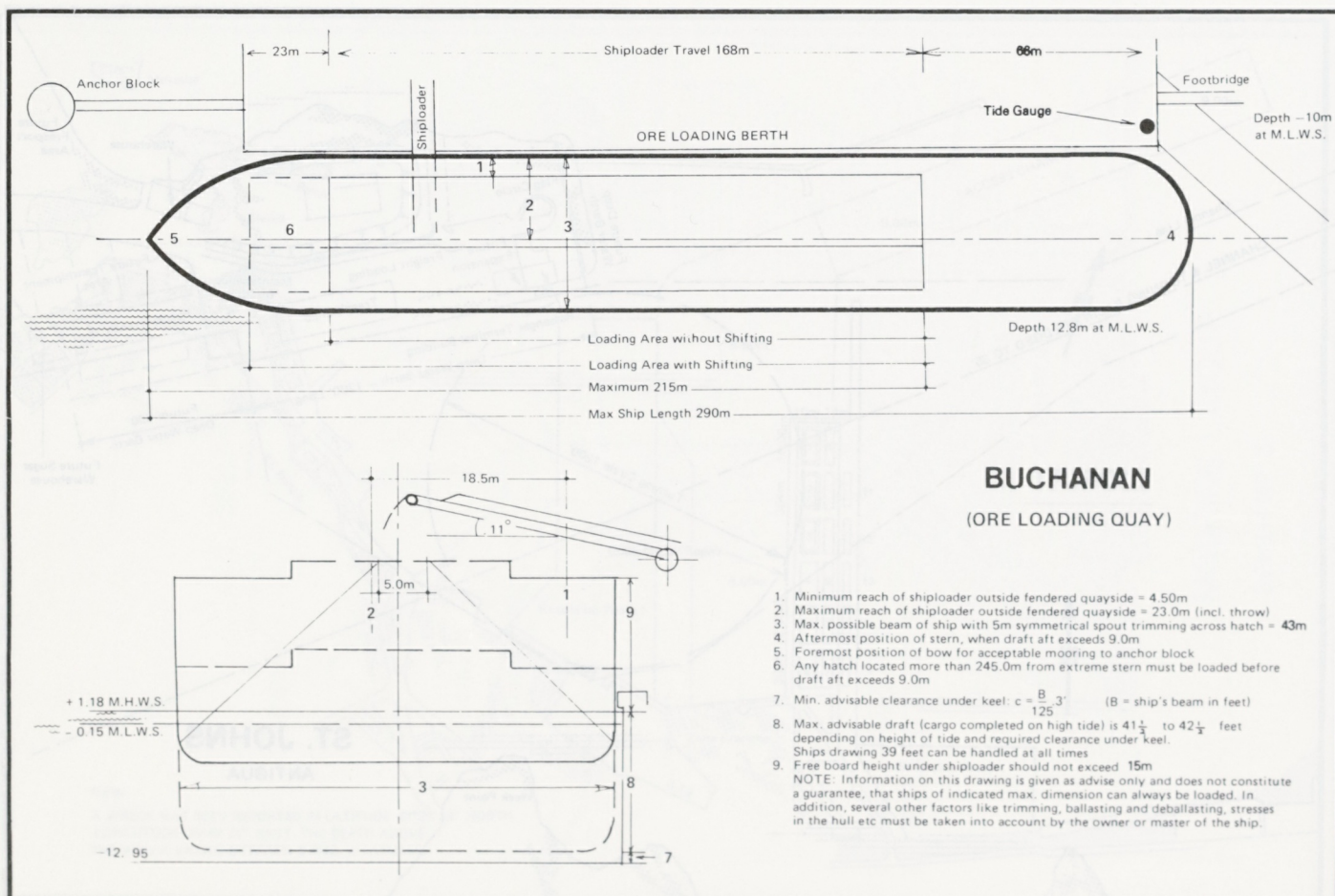
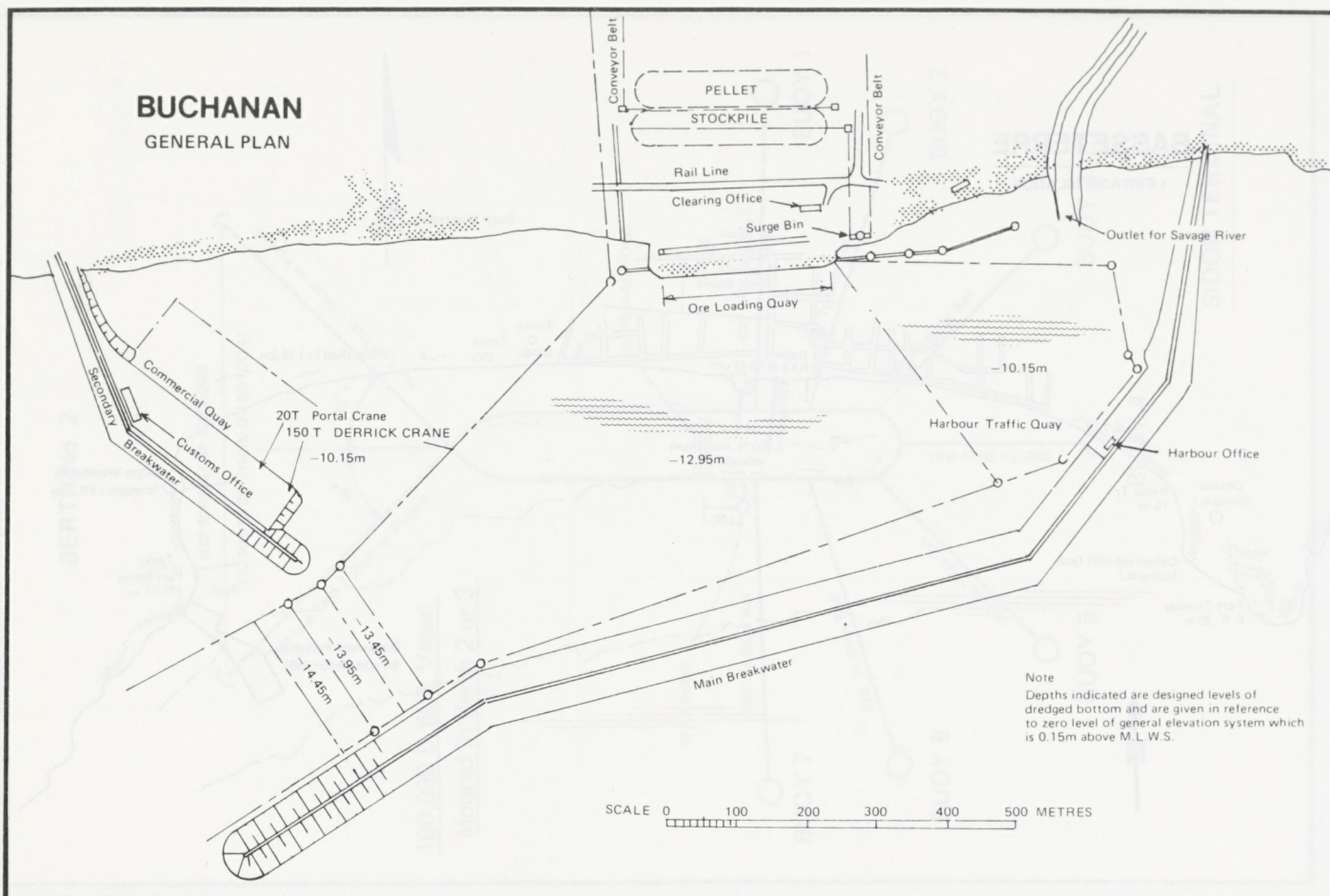


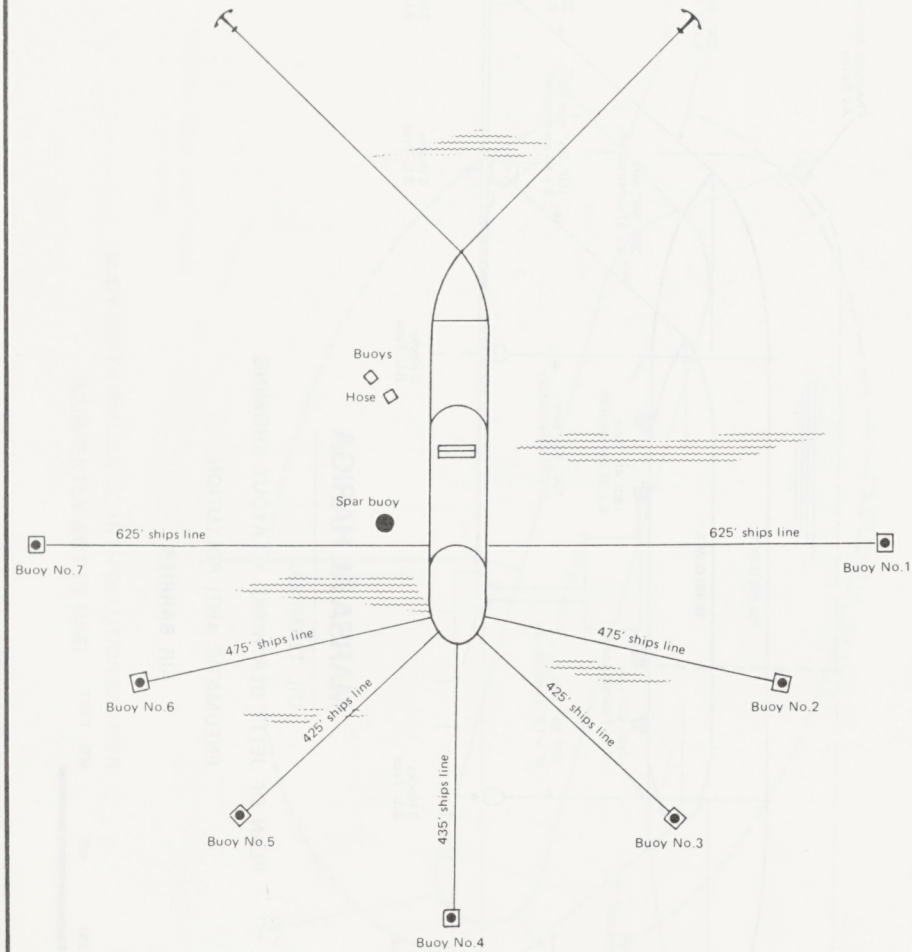
Note:
 A WRECK HAS BEEN REPORTED IN LATITUDE 34°29' 33" NORTH
 LONGITUDE 35°49' 21" EAST. THE DEPTH ABOVE
 THE WRECK VARIES BETWEEN 8 AND 10 FATHOMS

BASSETERRE
LEEWARD ISLANDS

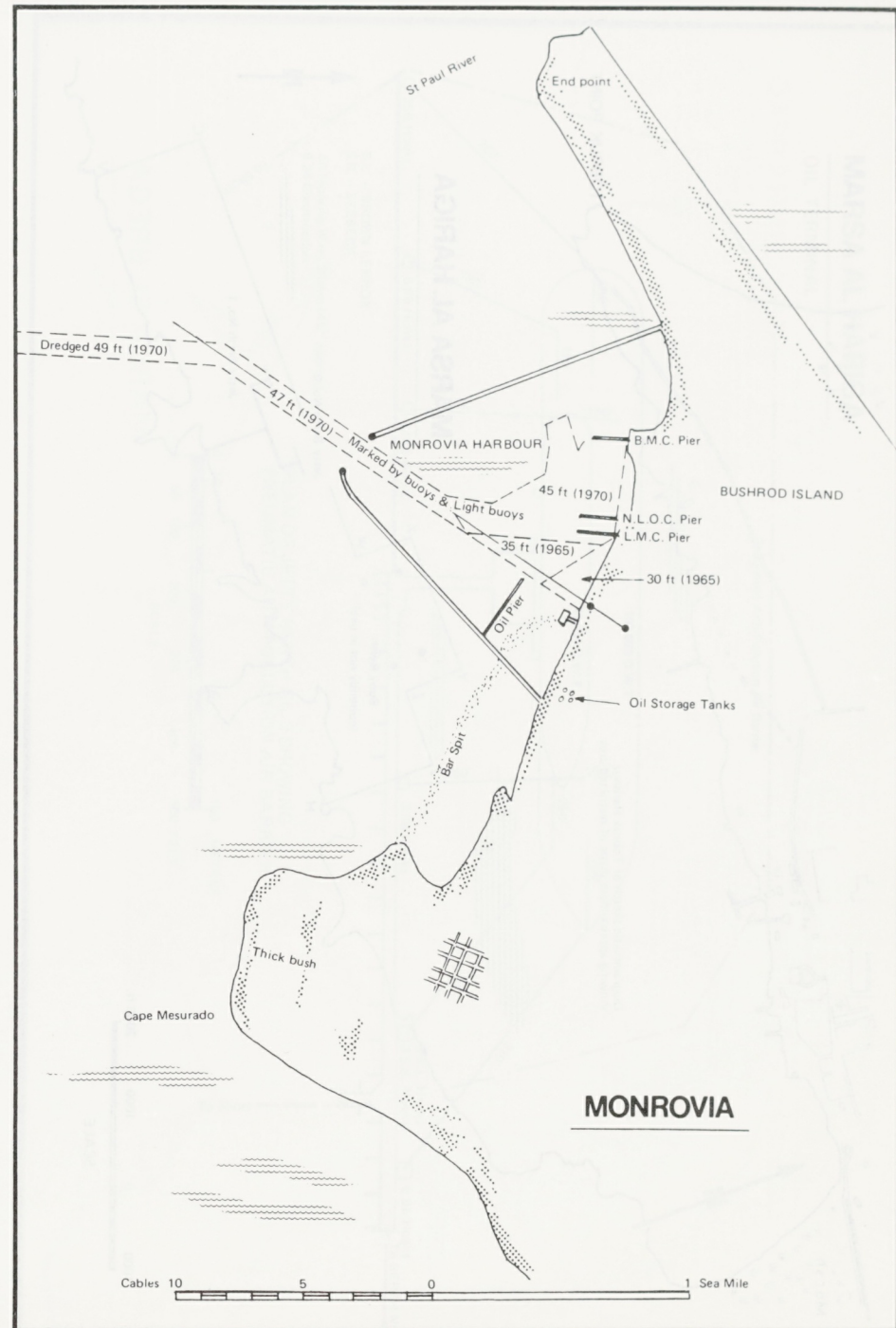


BUCHANAN GENERAL PLAN



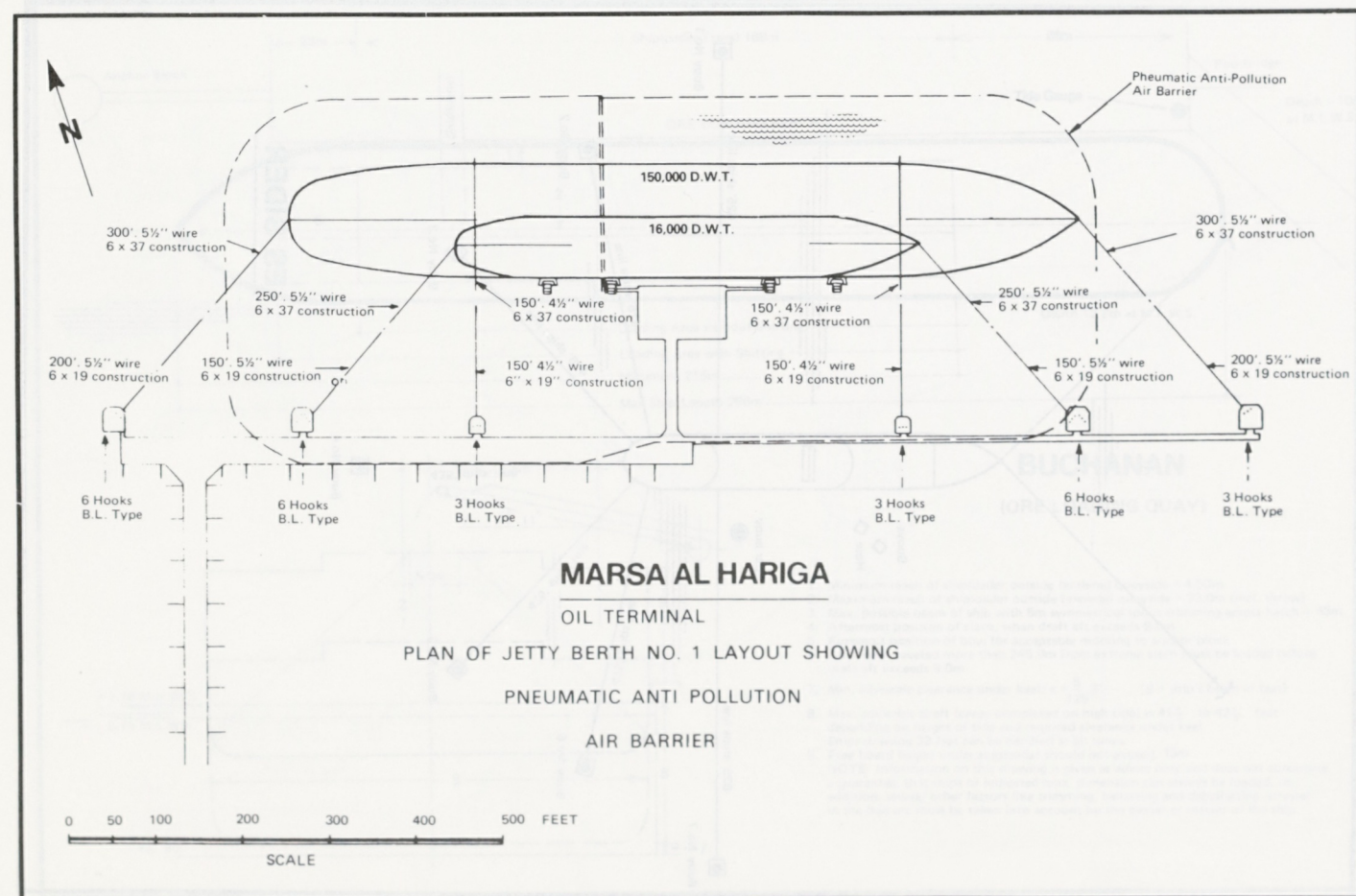
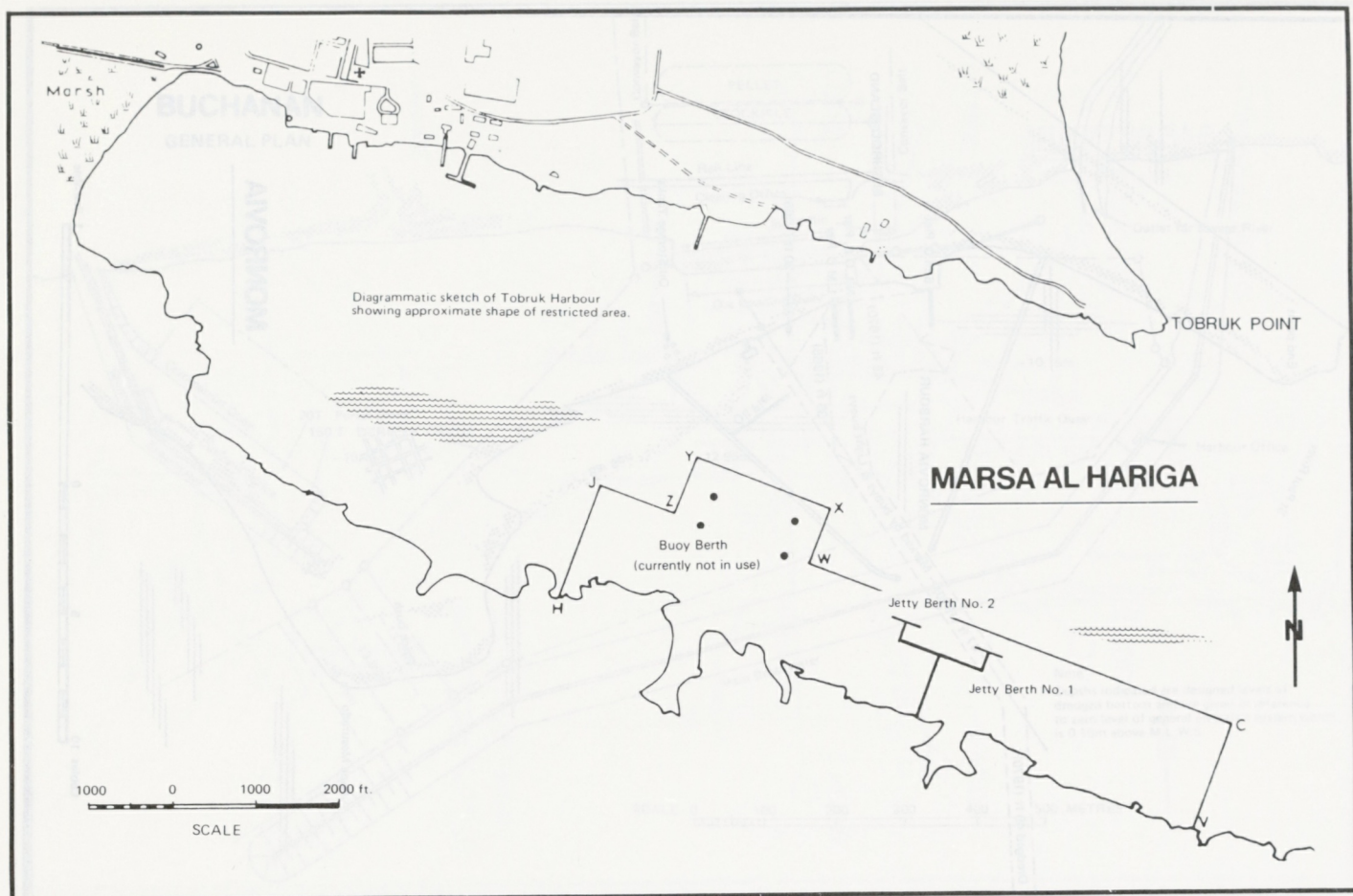


ES SIDER



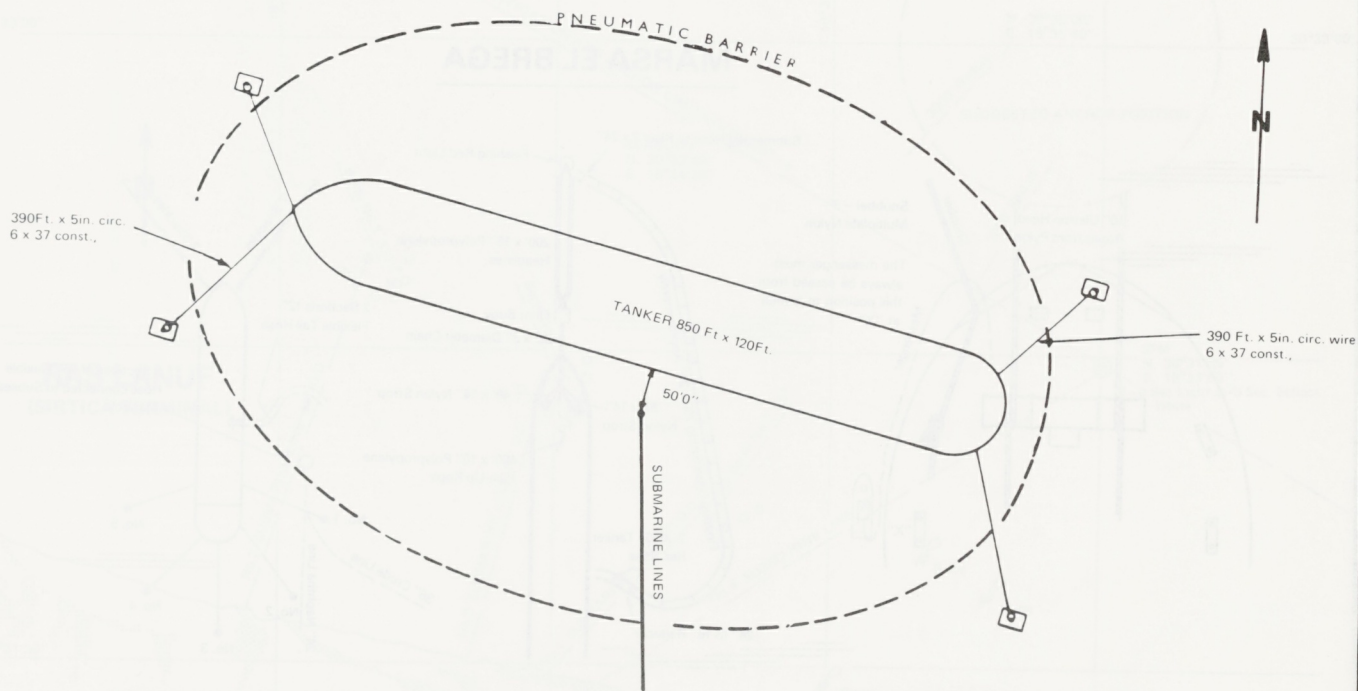
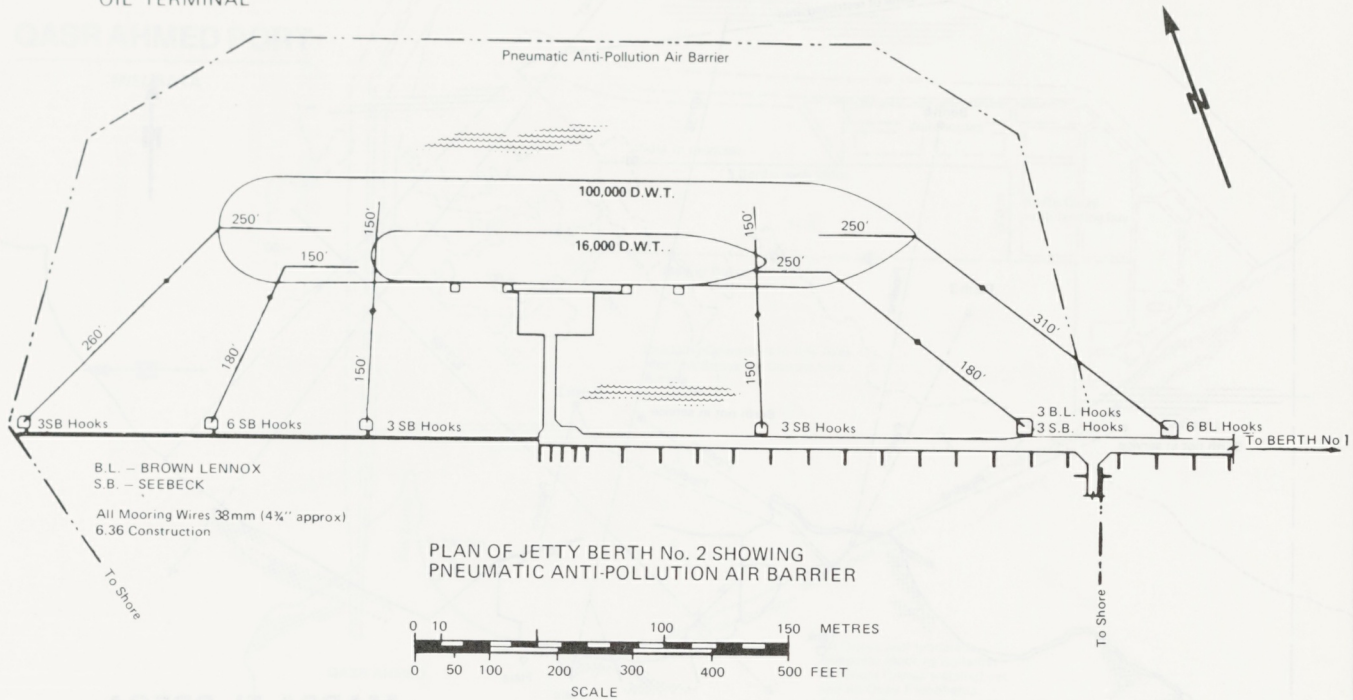
MONROVIA

Cables 10 5 0 1 Sea Mile



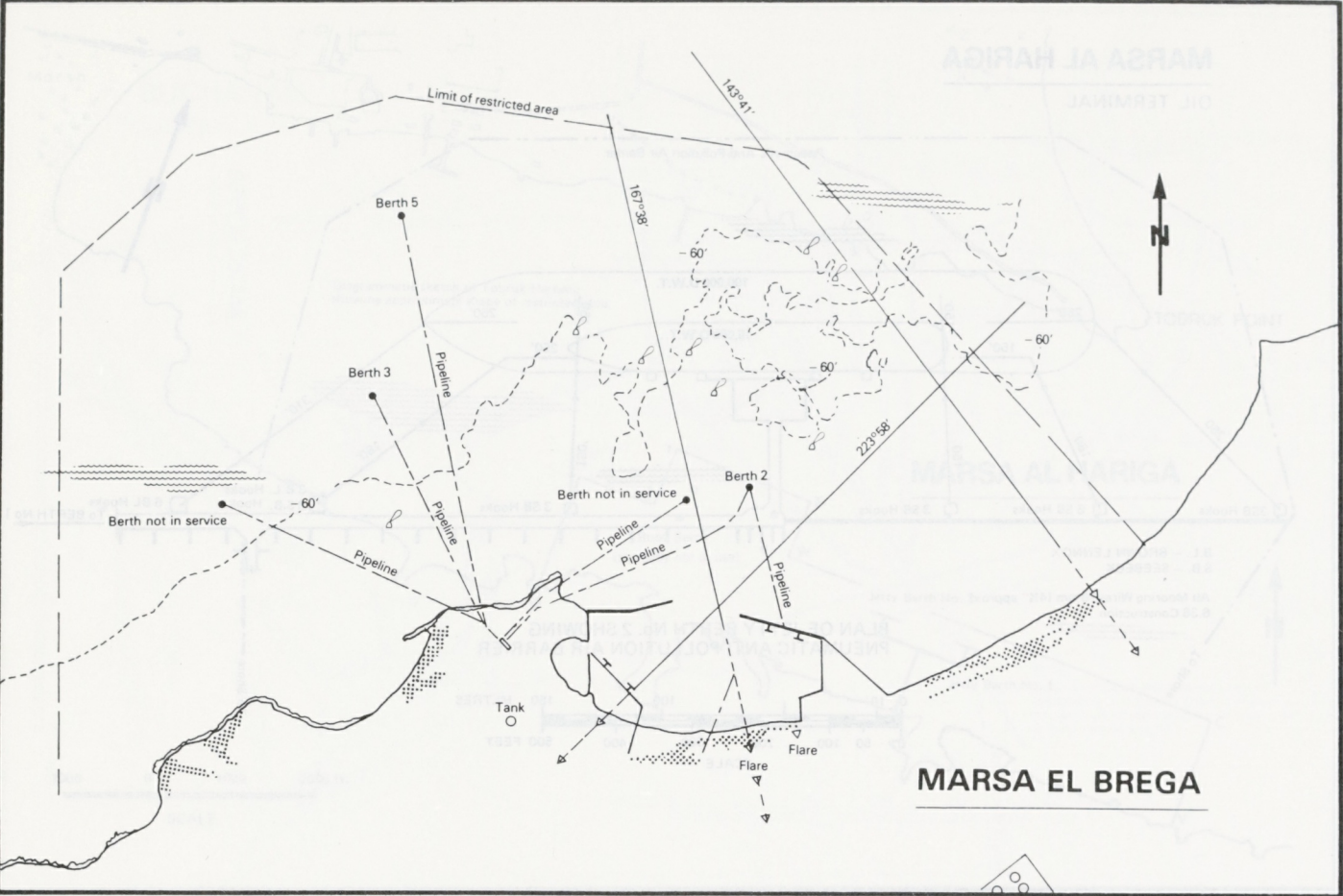
MARSA AL HARIGA

OIL TERMINAL

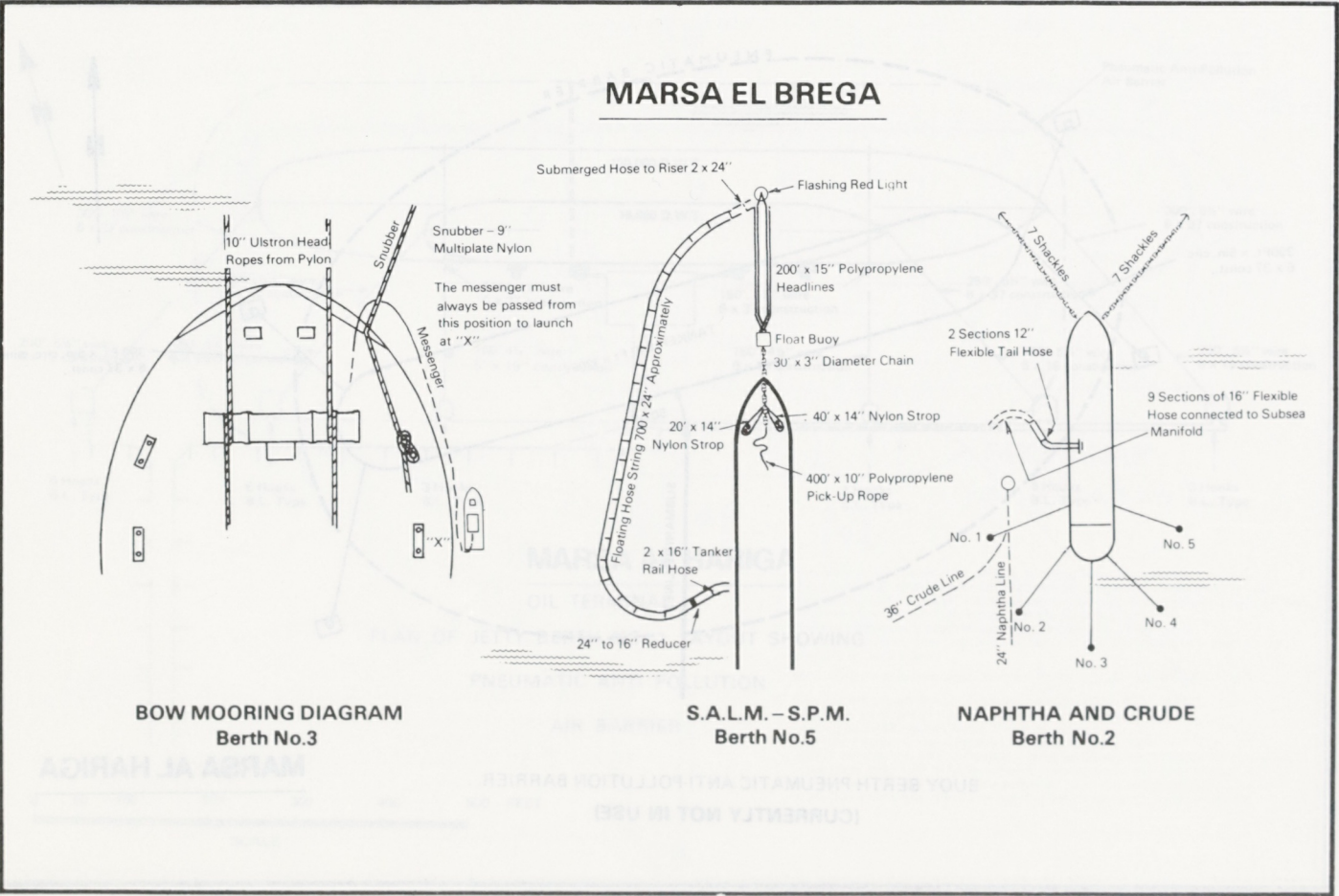


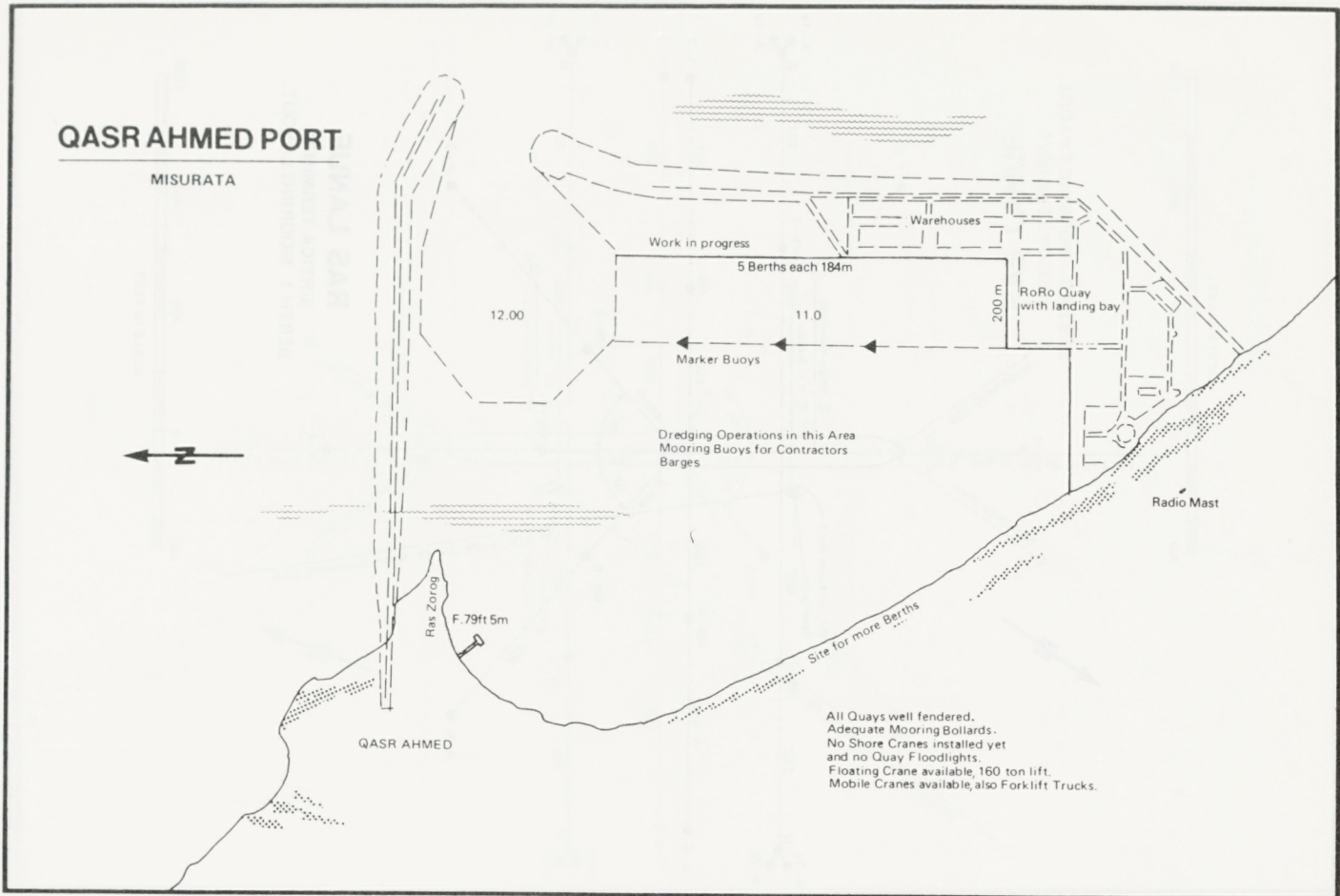
BUOY BERTH PNEUMATIC ANTI-POLLUTION BARRIER.
(CURRENTLY NOT IN USE)

MARSA AL HARIGA

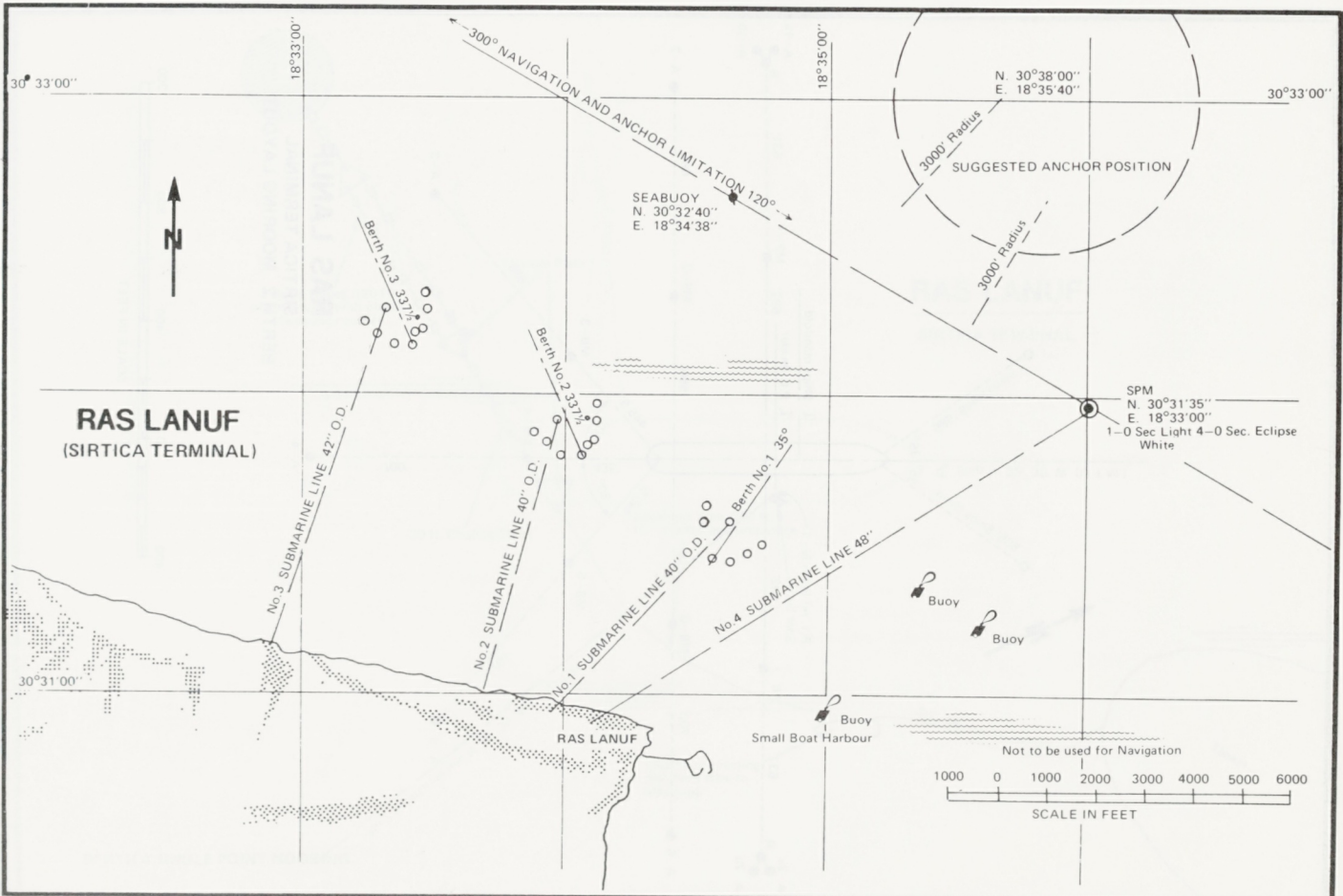


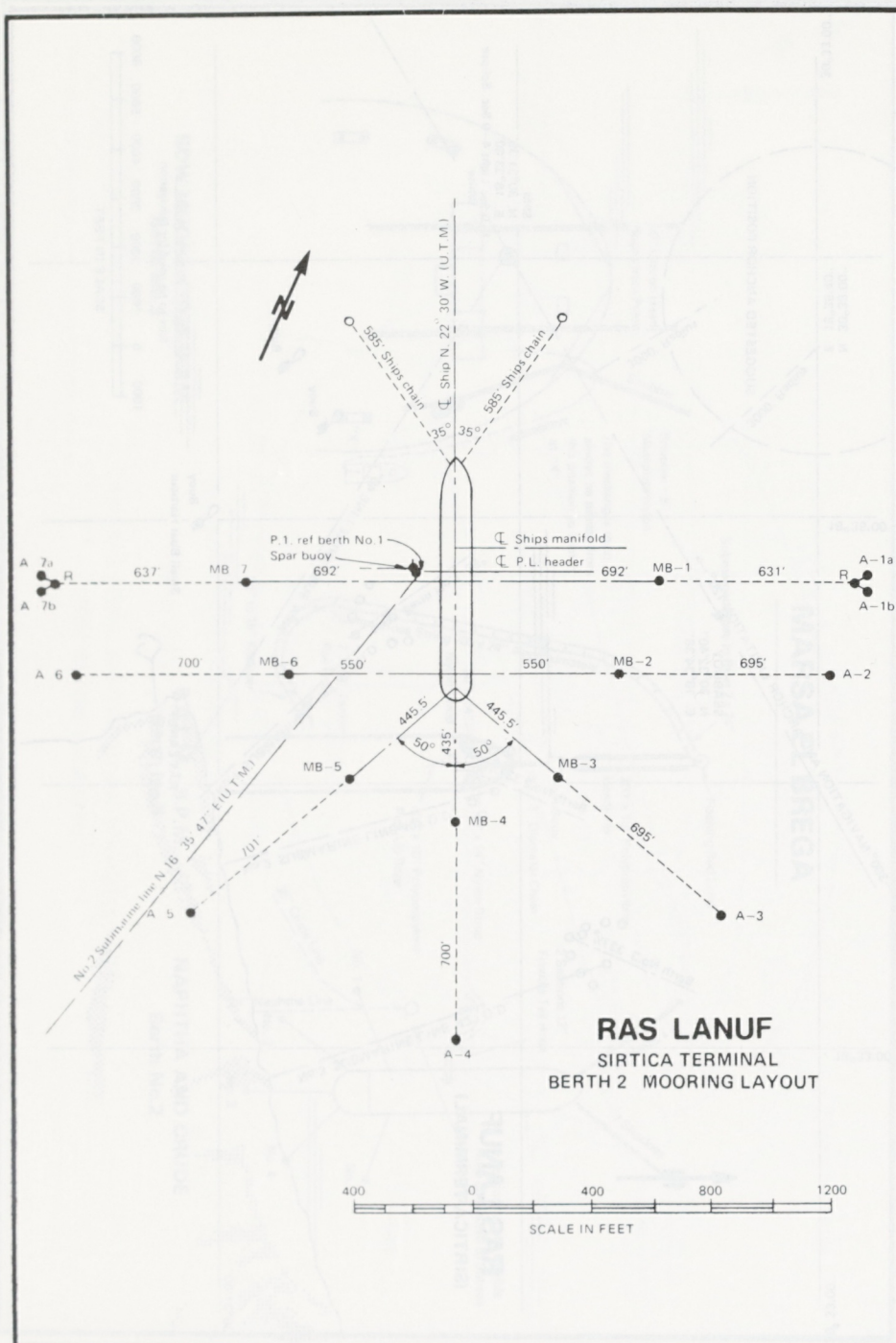
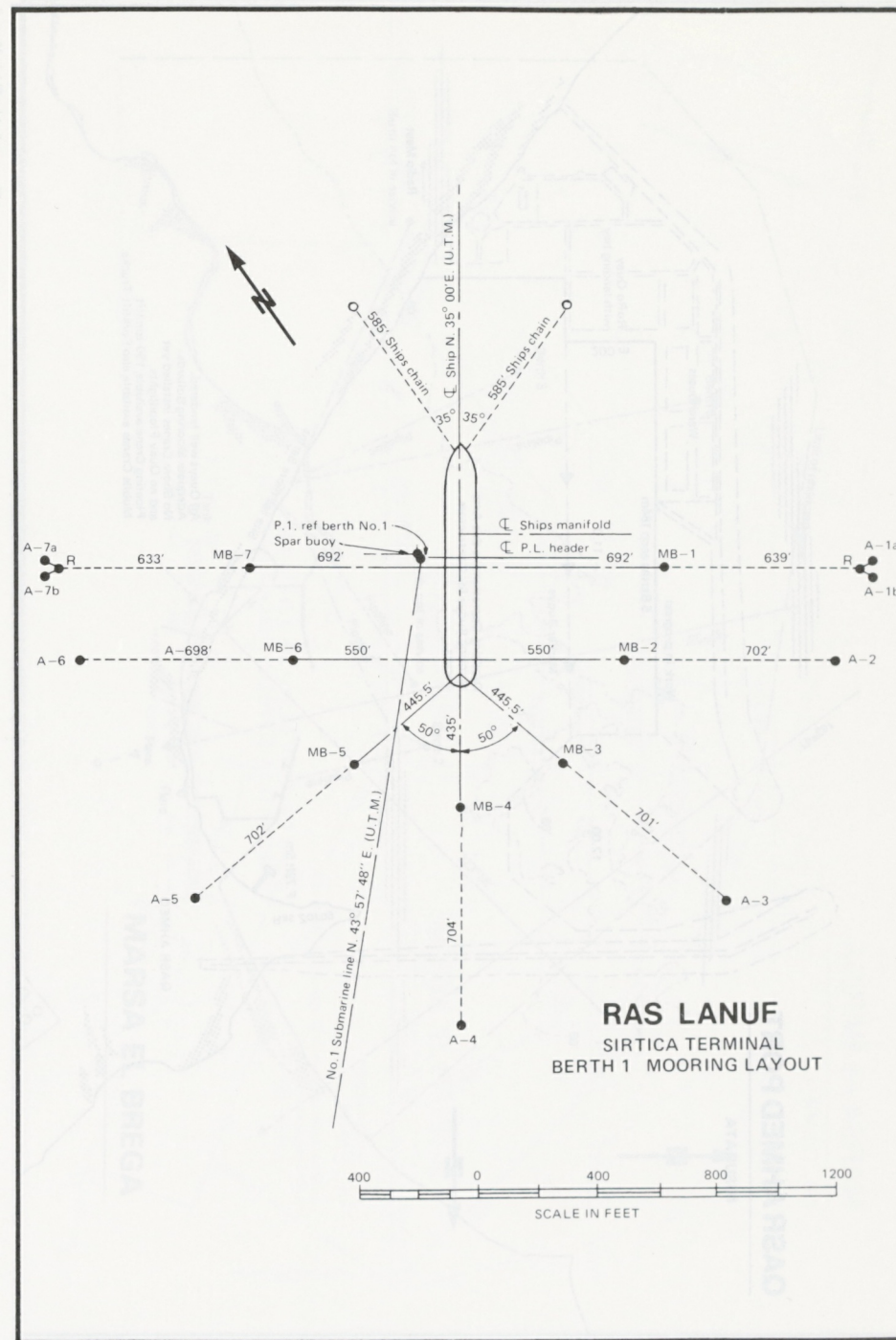
MARSA EL BREGA

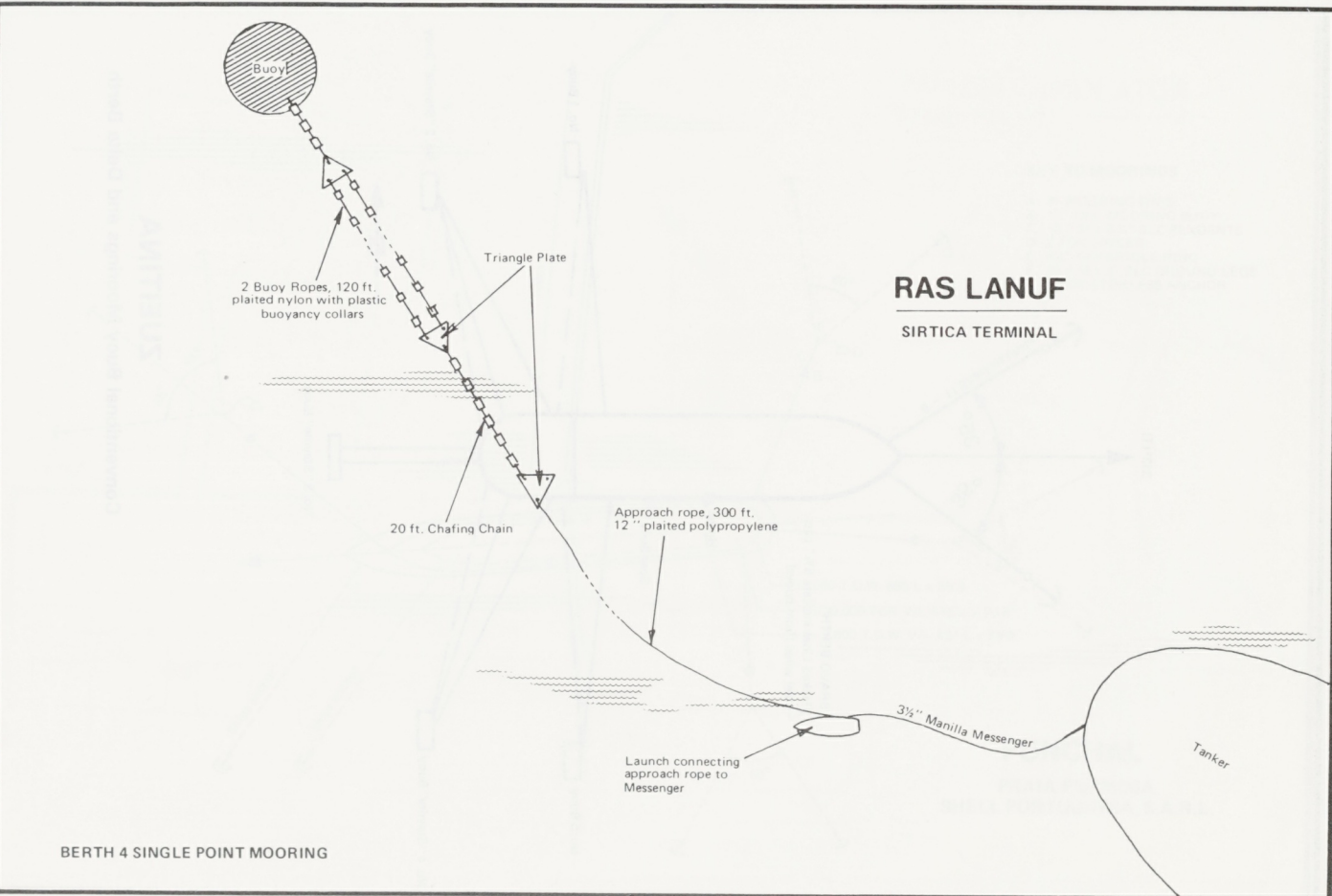
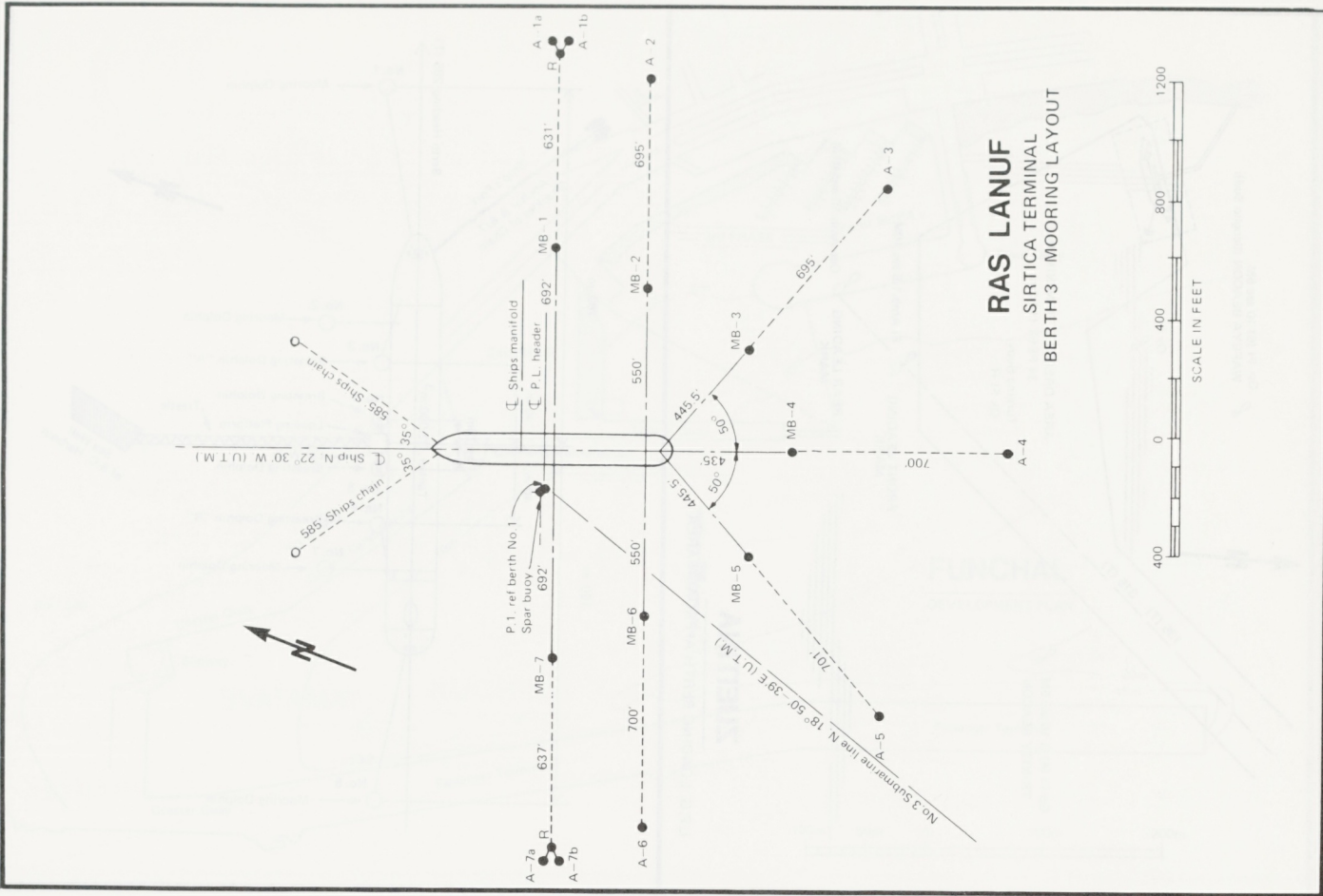


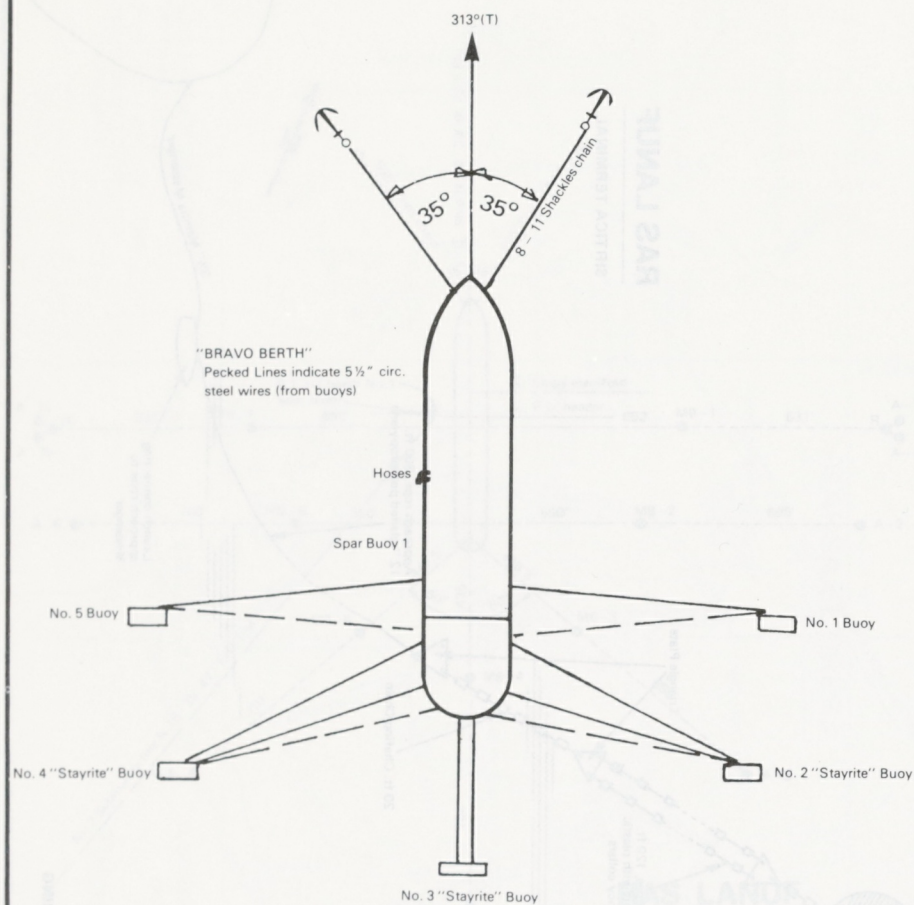


"Plan supplied by Ship's Master"



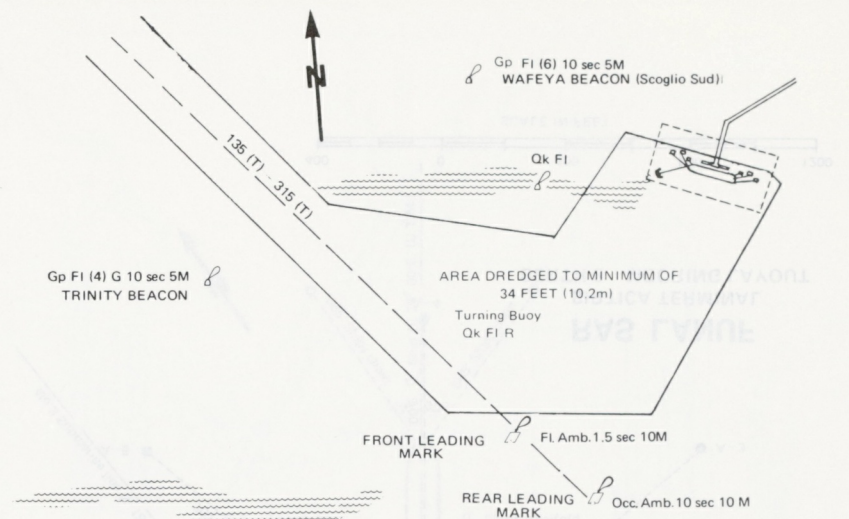






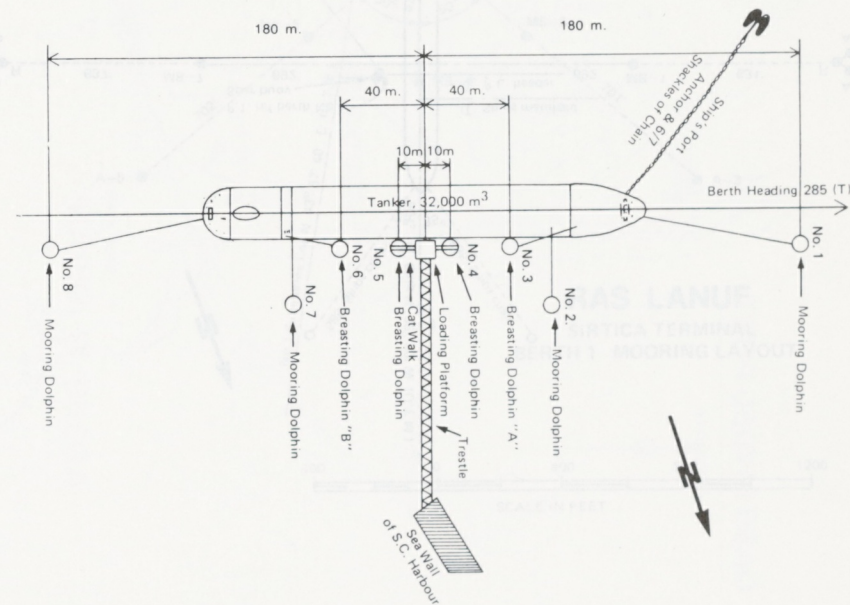
ZUEITINA

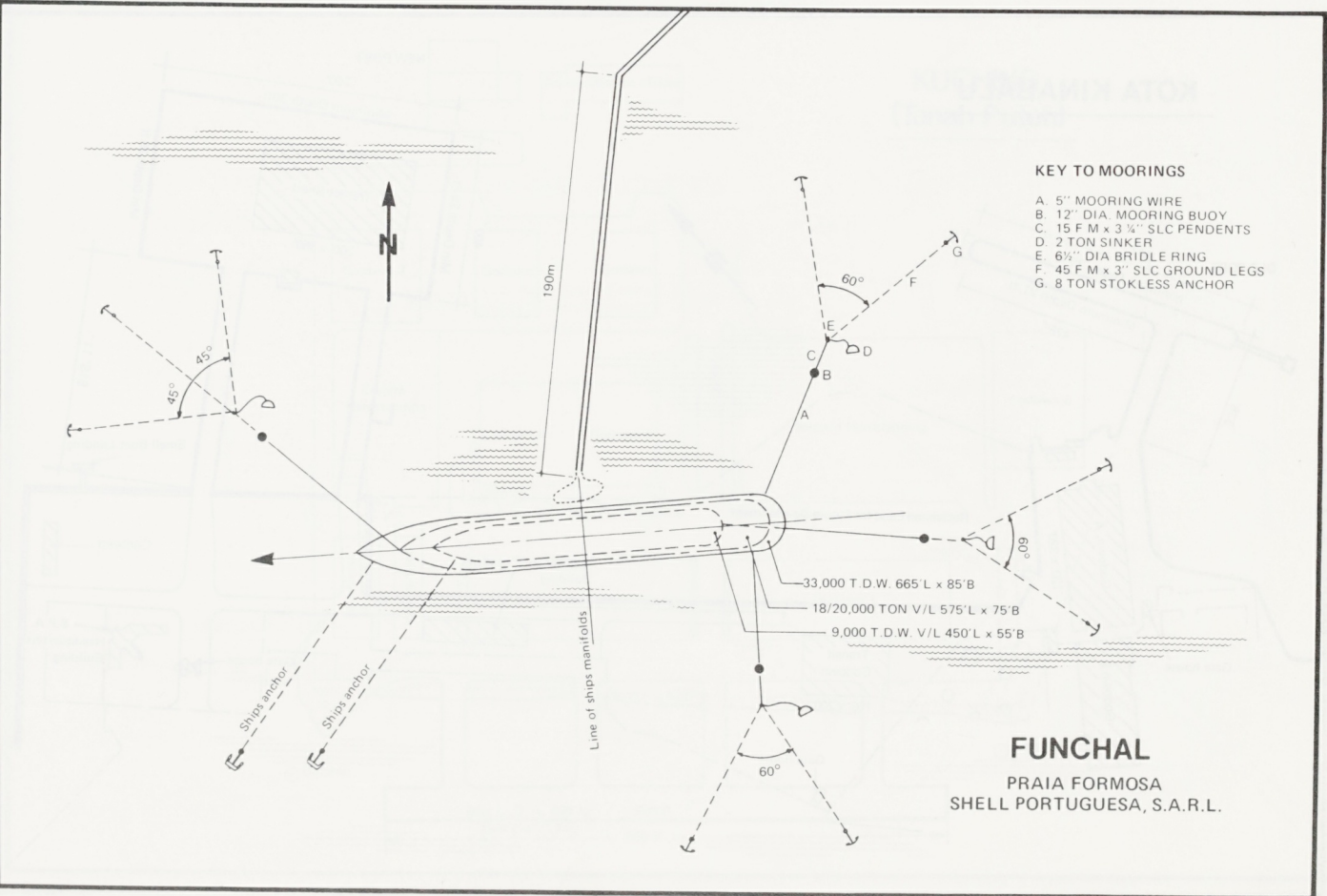
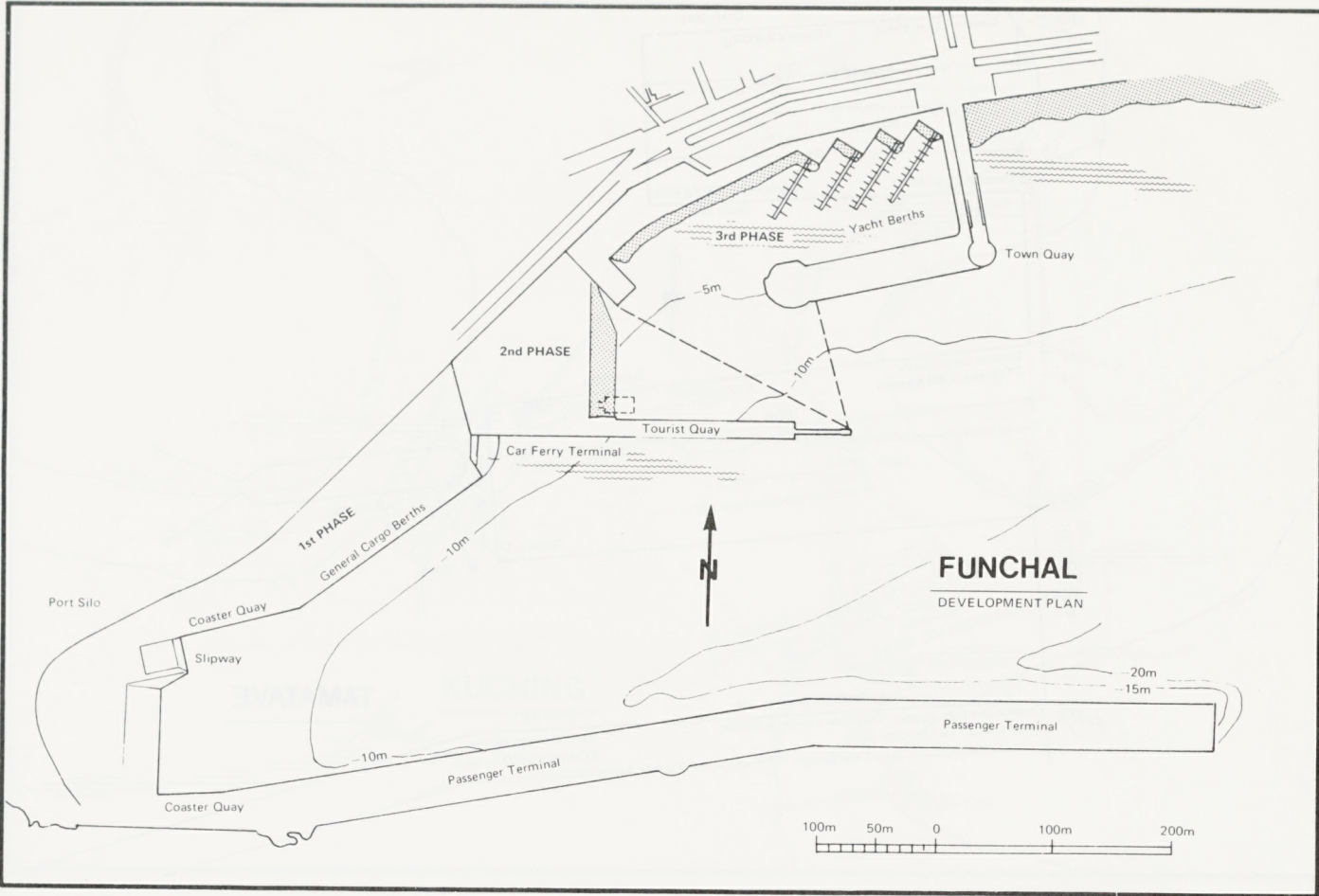
Conventional Buoy Moorings and Delta Berth

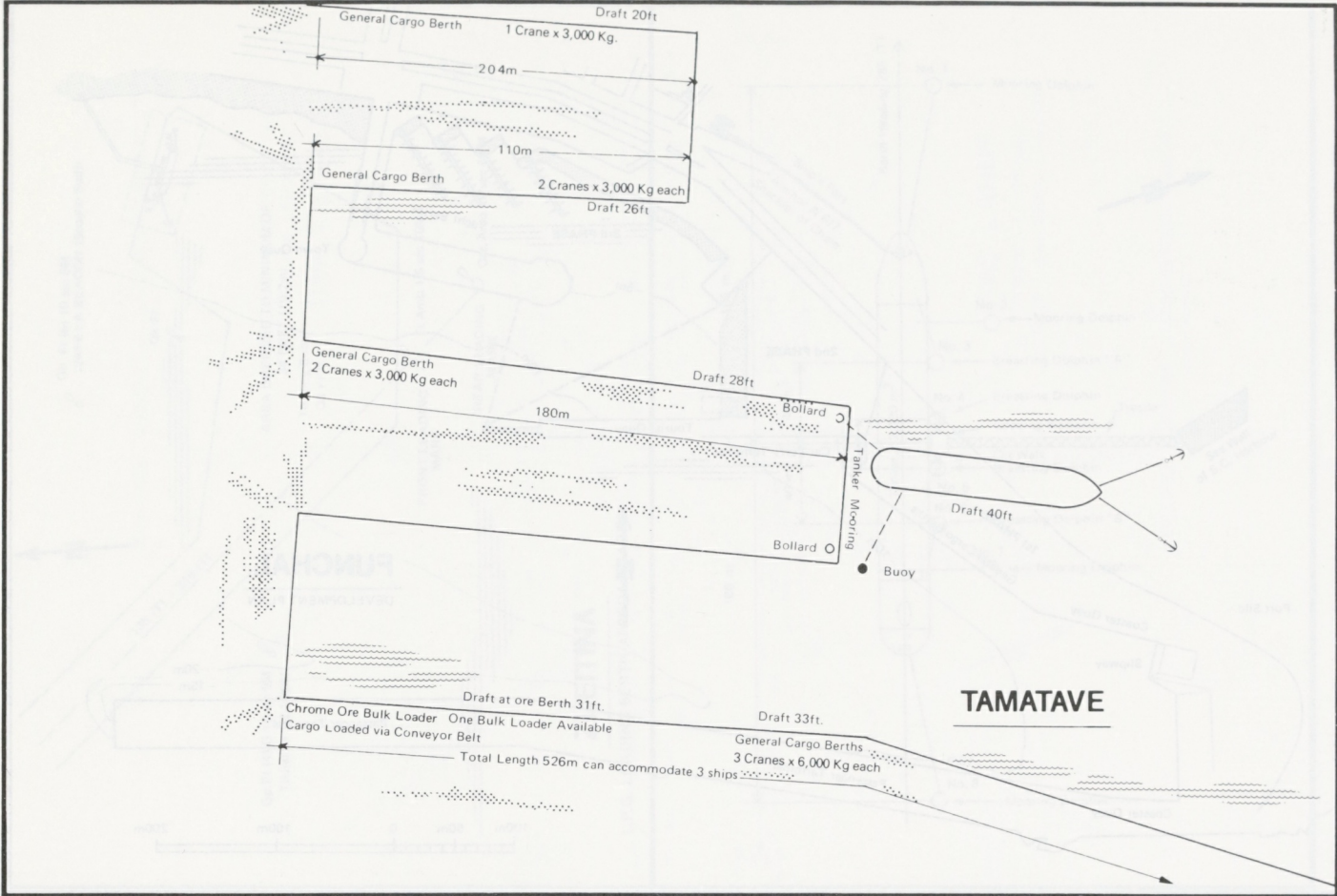


ZUEITINA

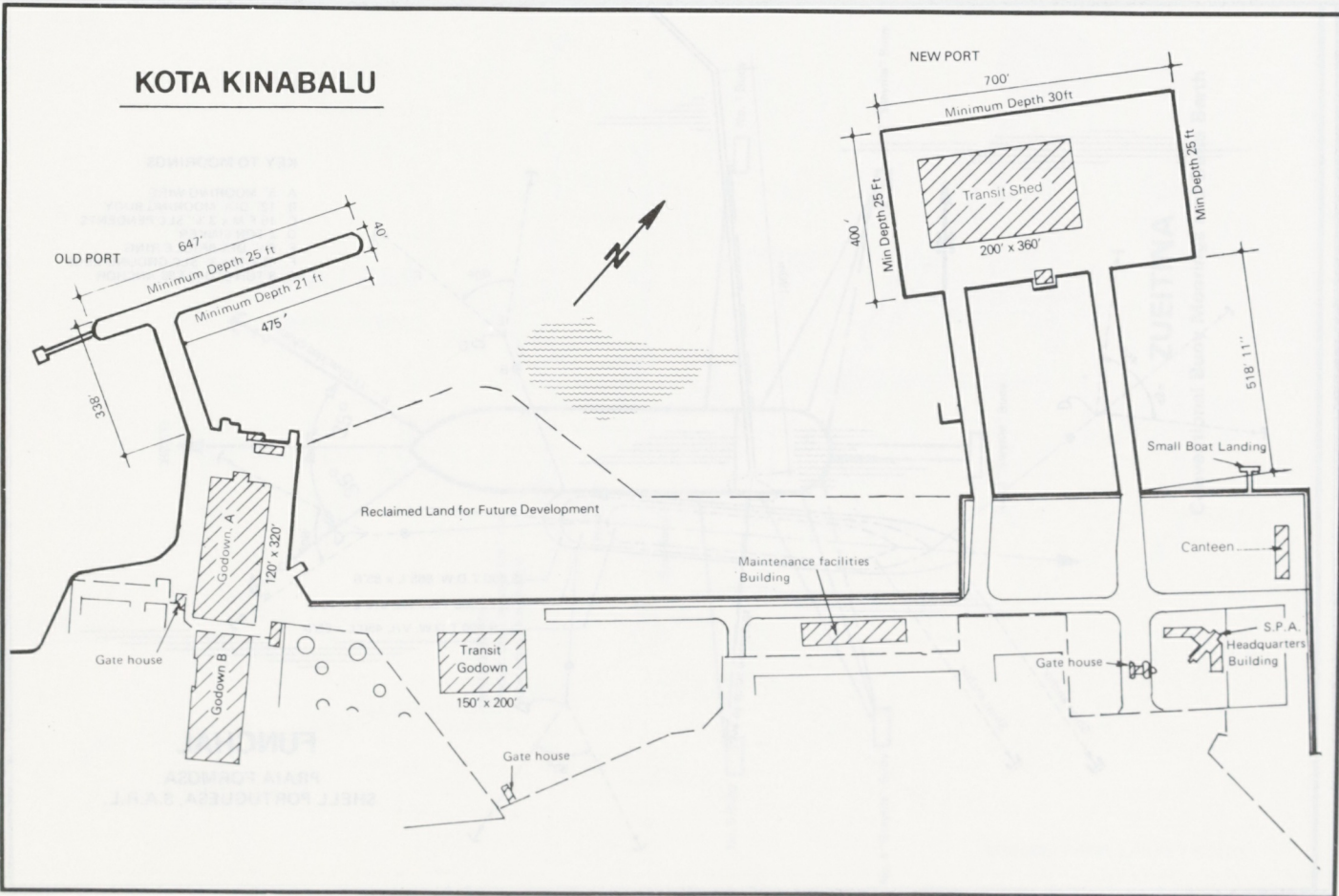
L.P.G. LOADING BERTH APPROACH AREA

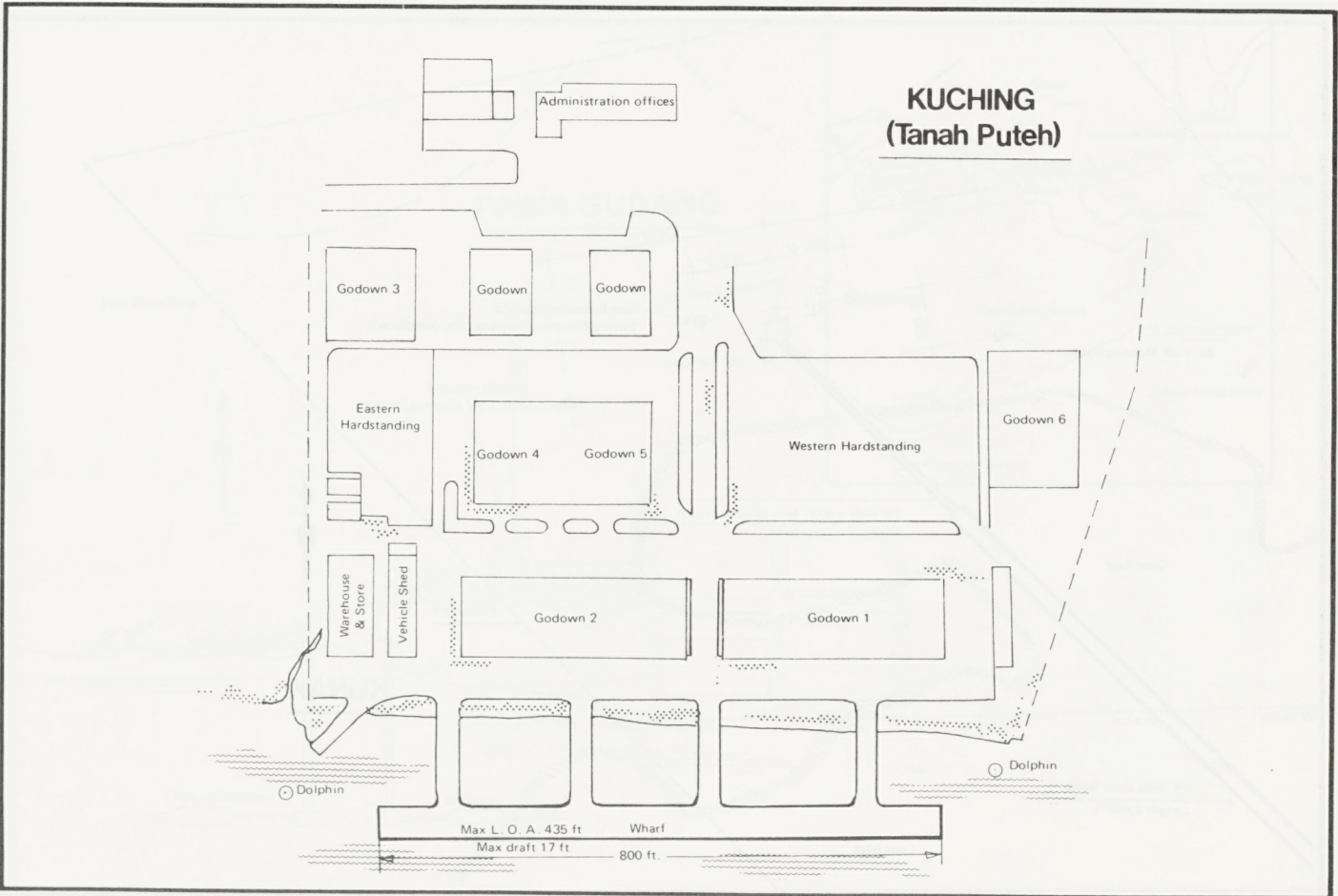
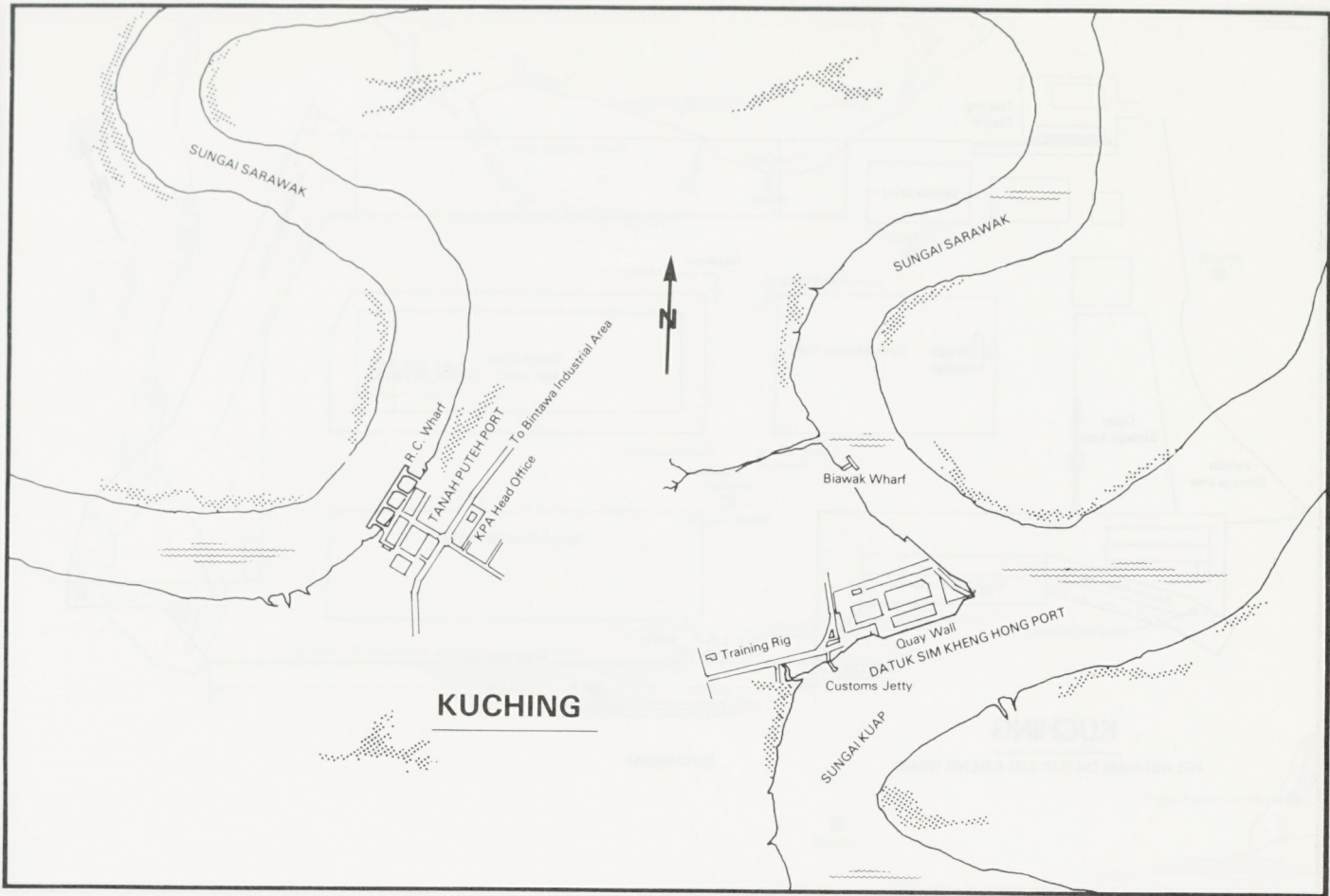


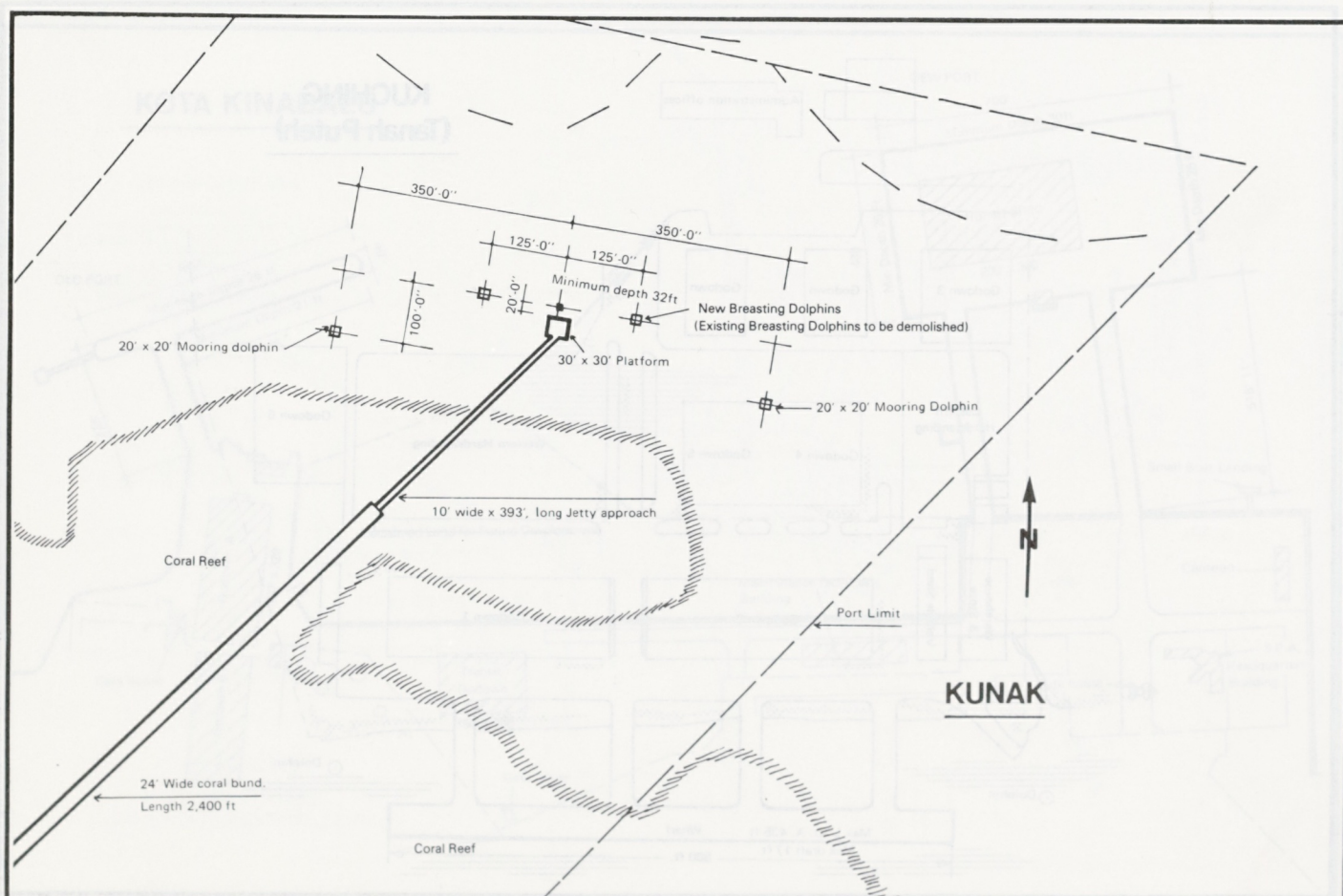
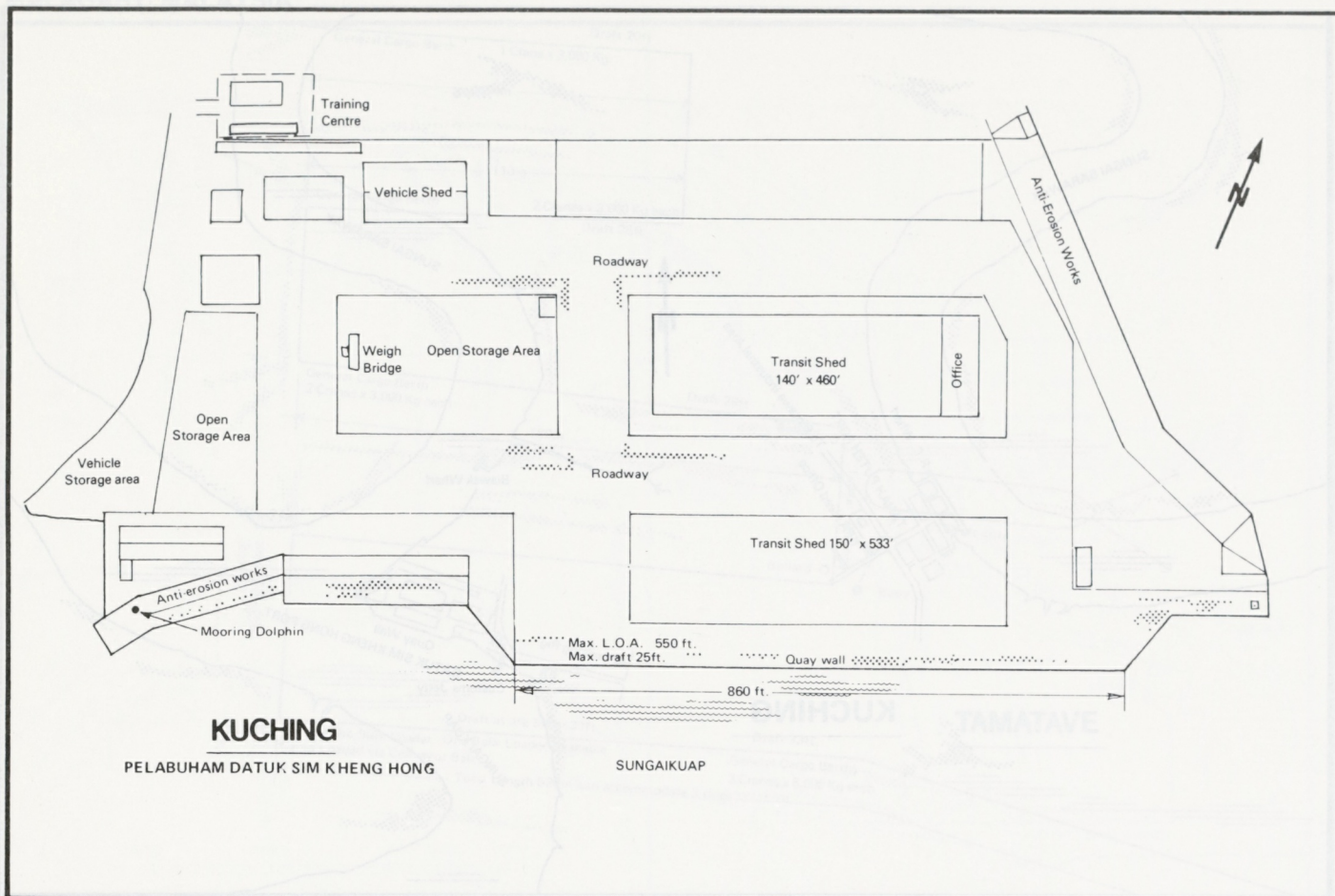


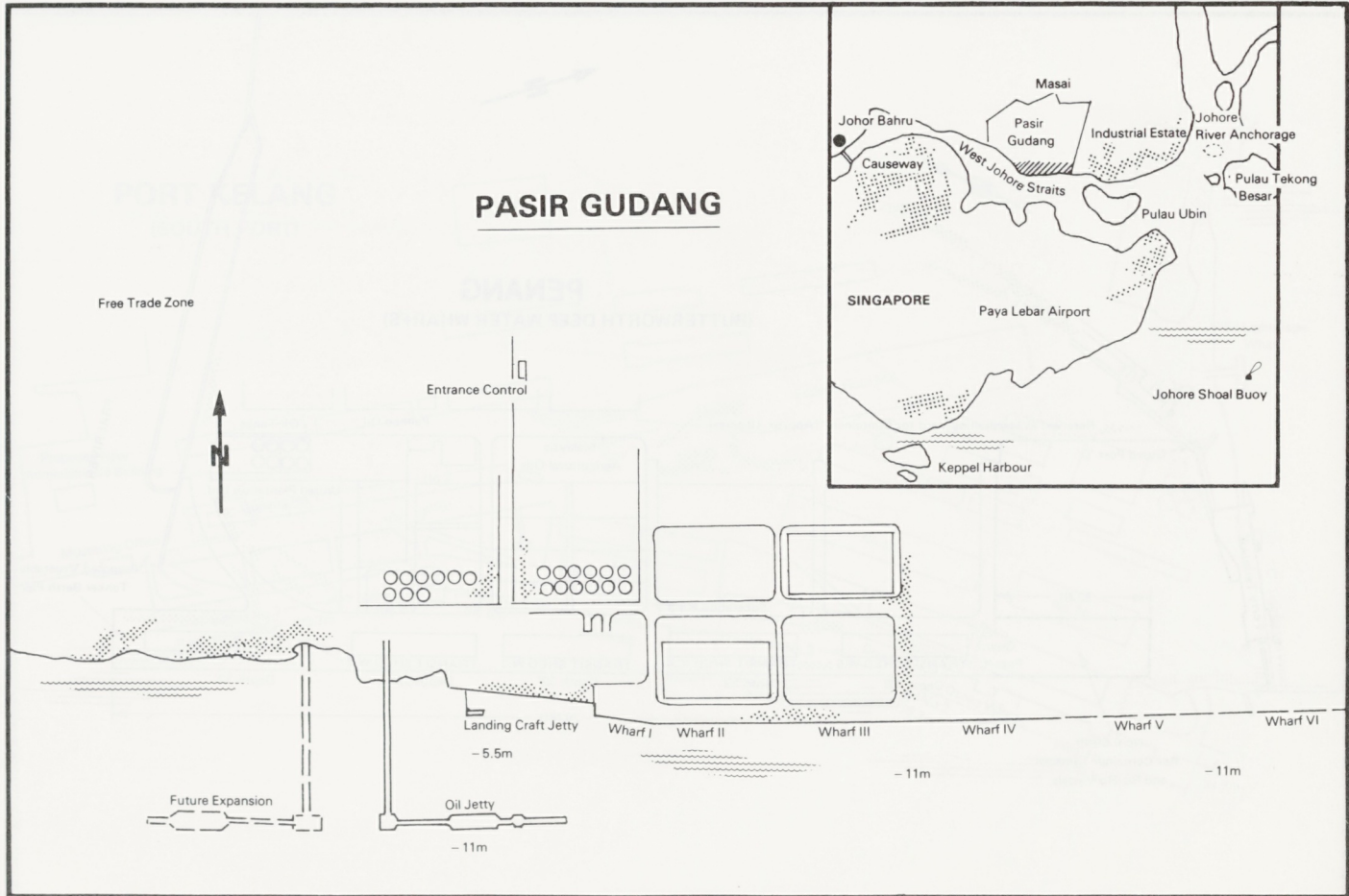
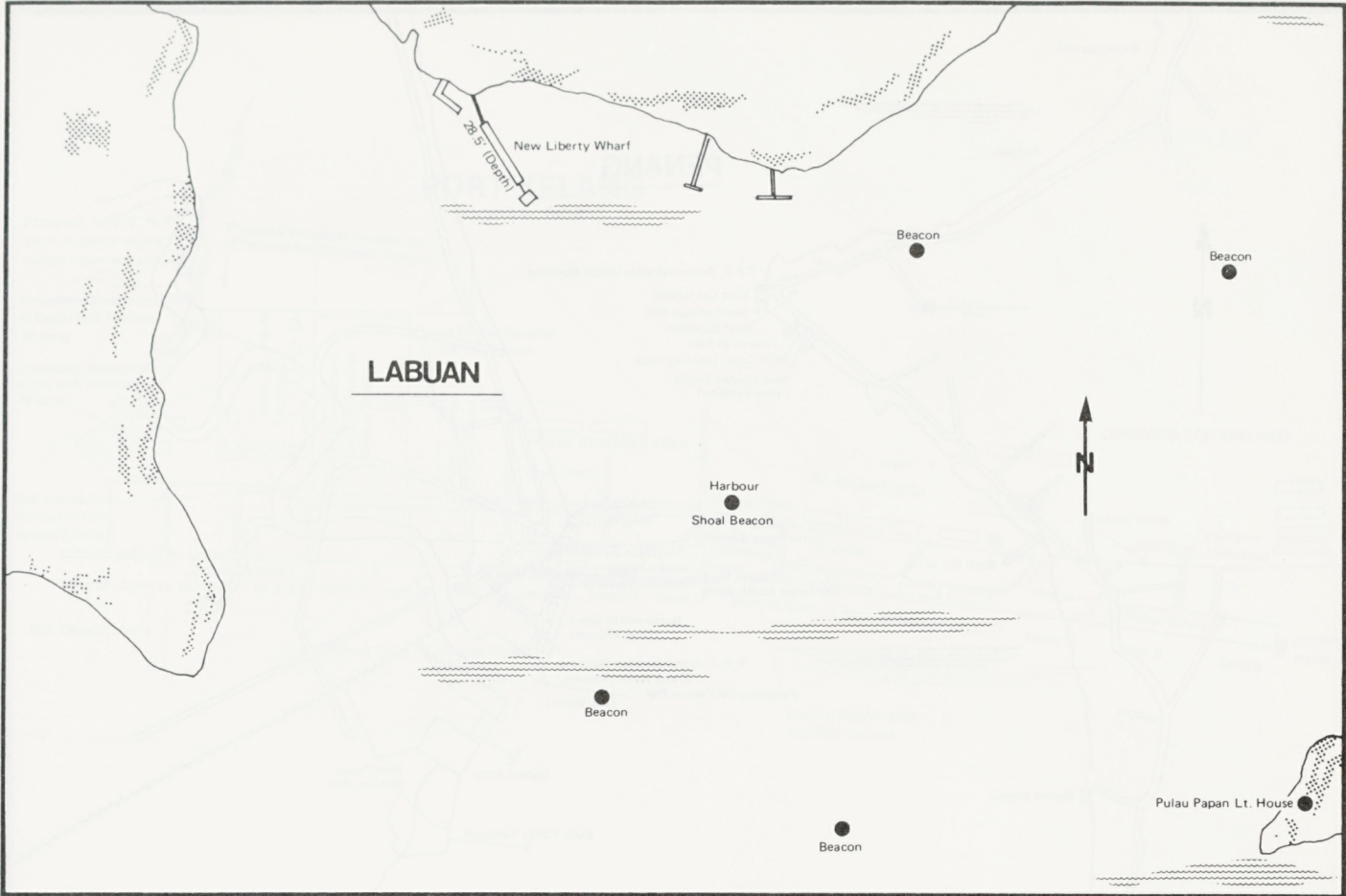


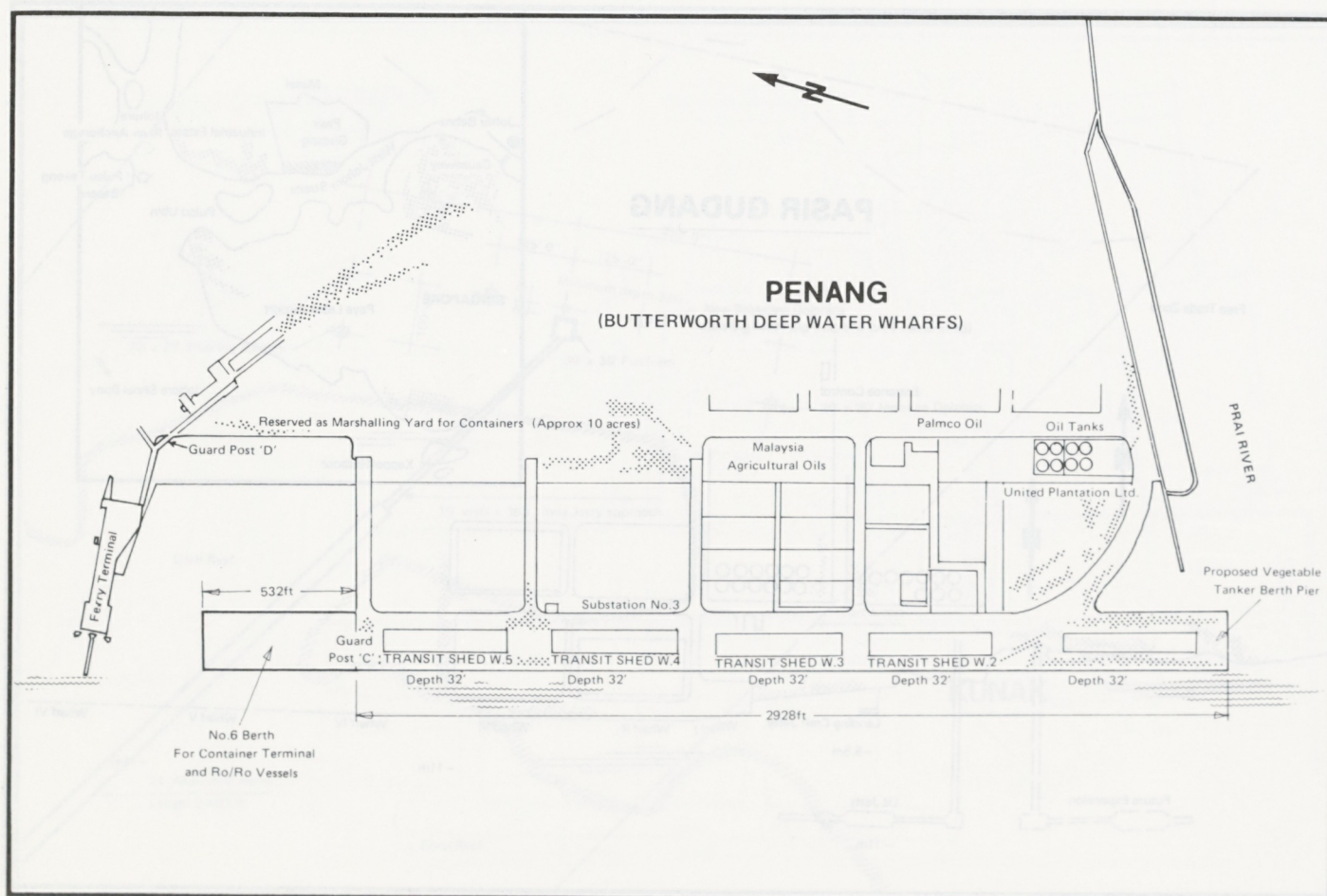
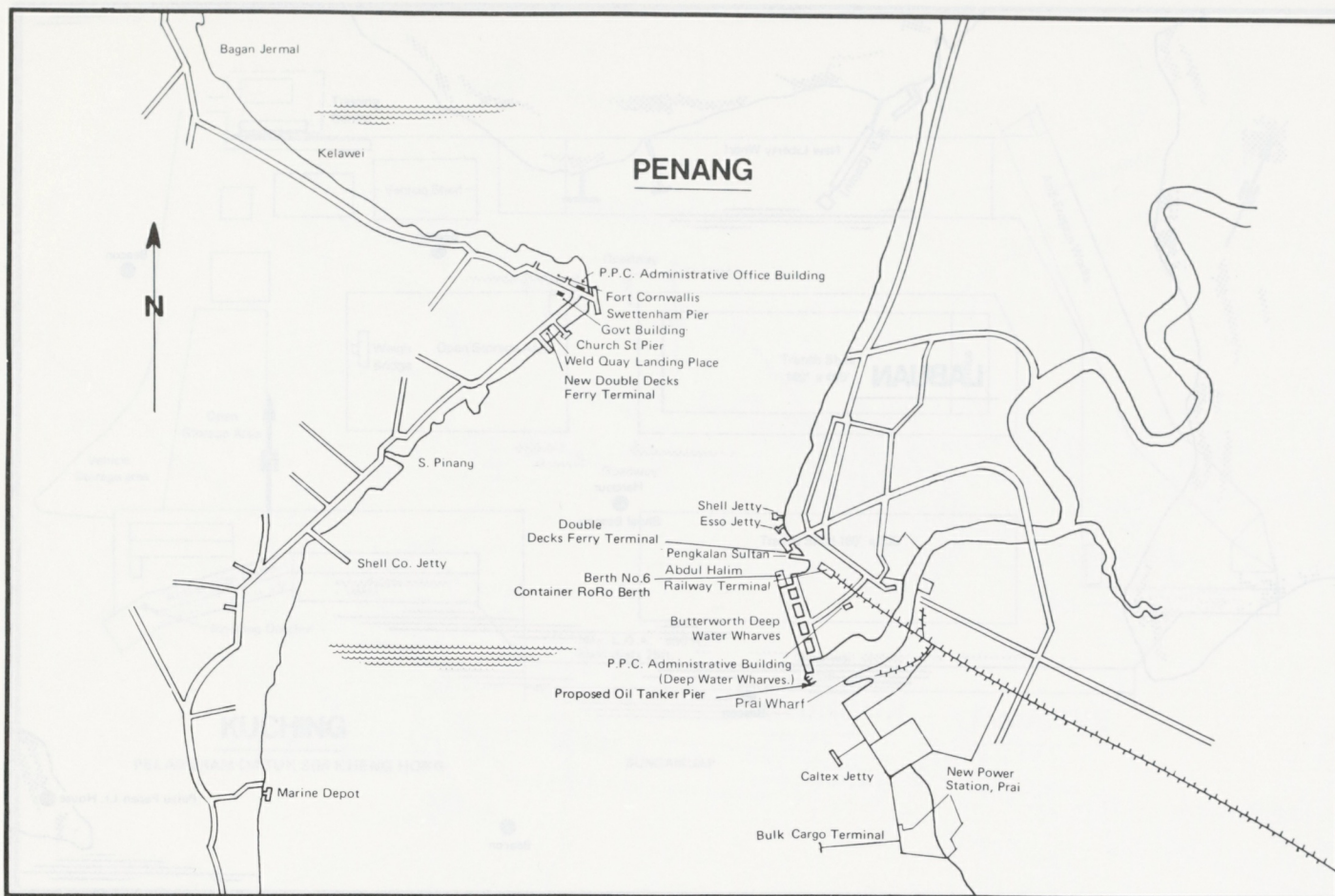
"Plan supplied by Ship's Master"



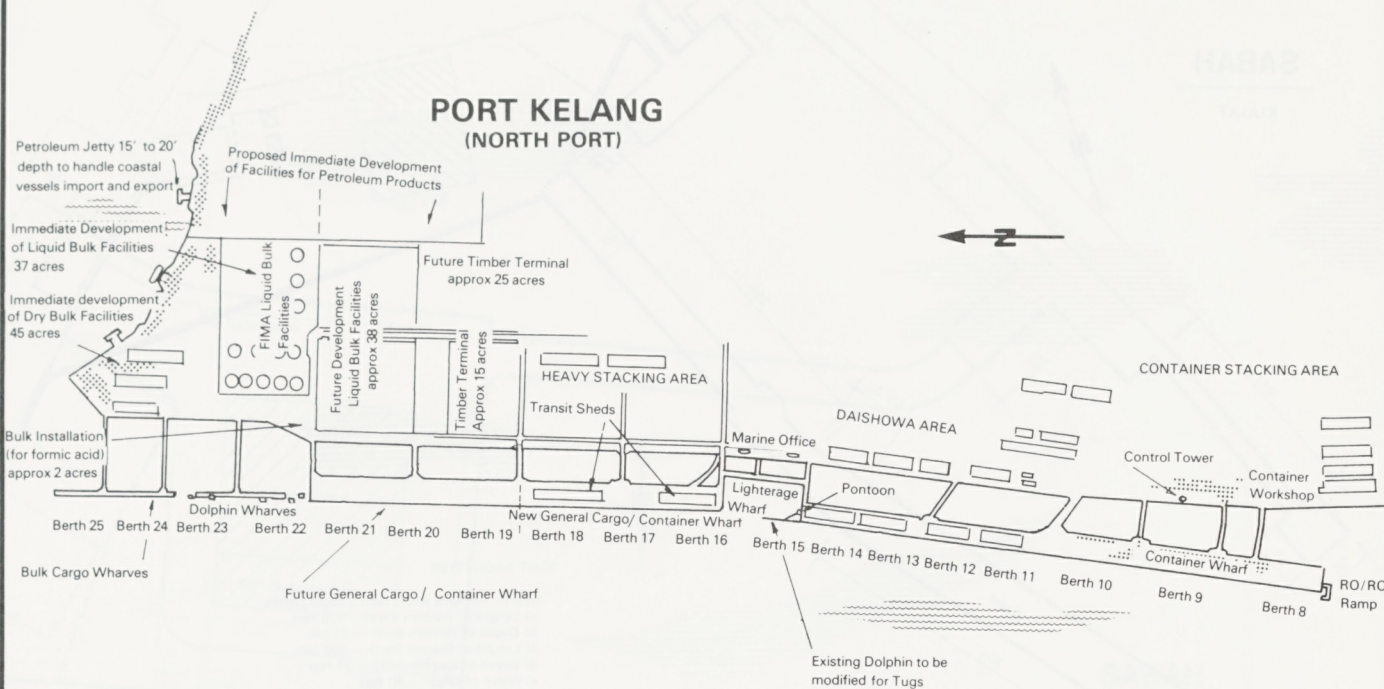




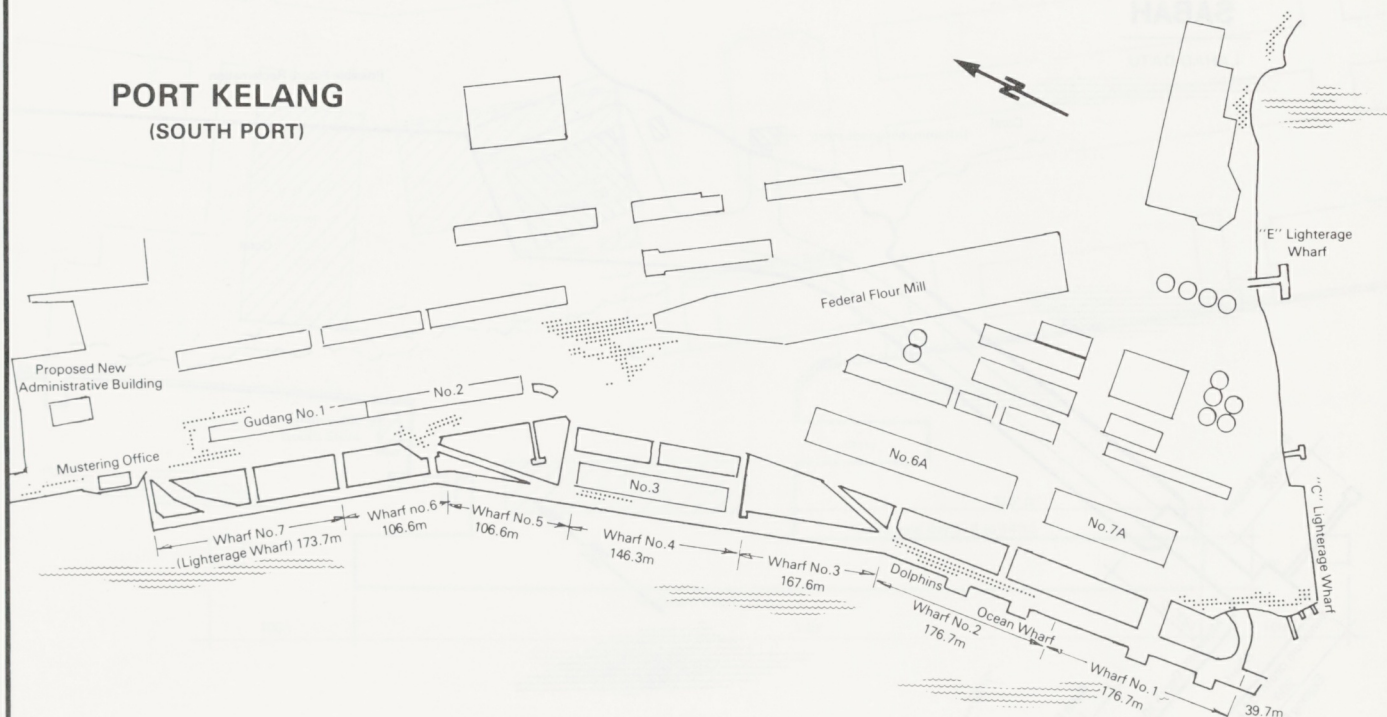




PORT KELANG (NORTH PORT)

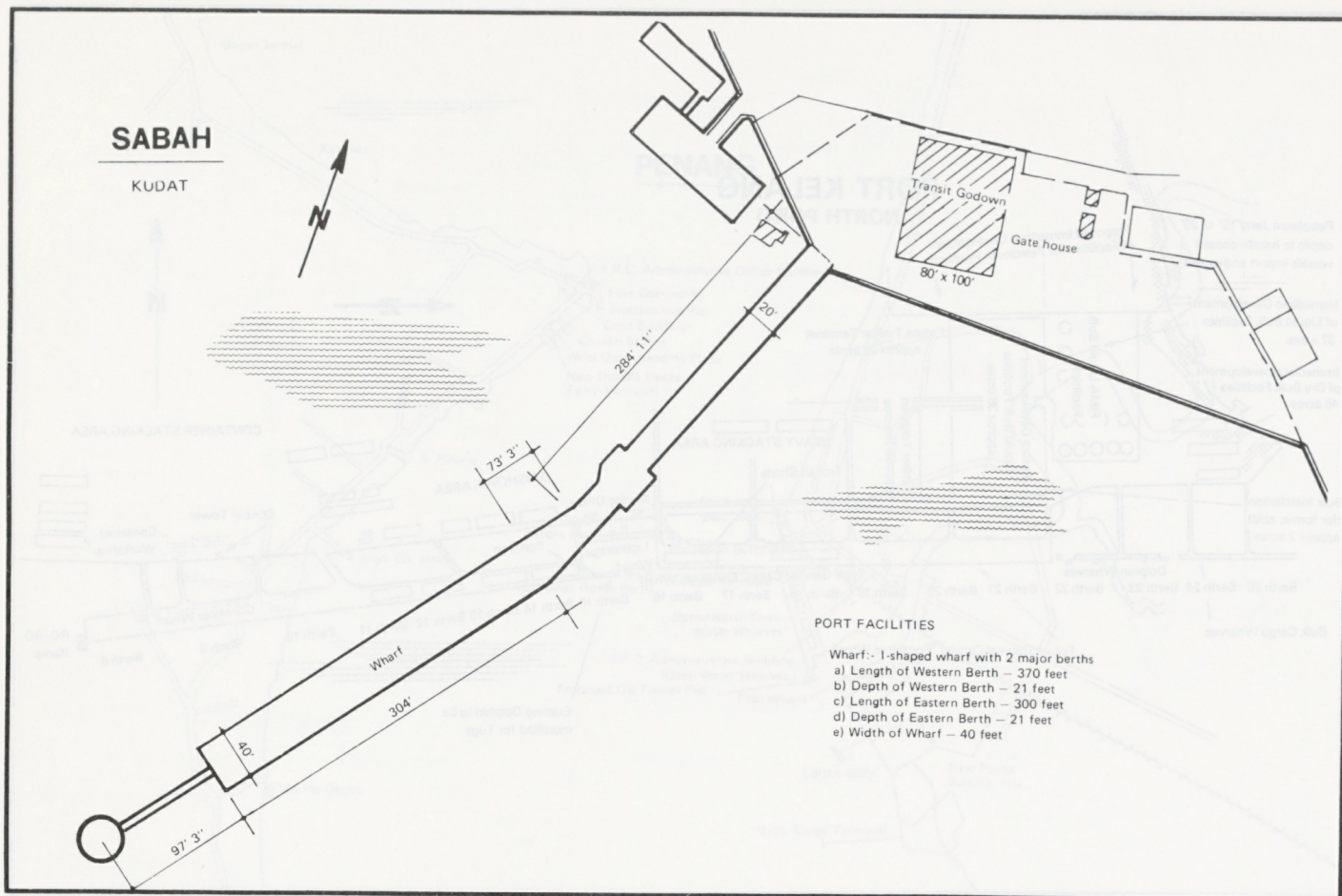


PORT KELANG (SOUTH PORT)



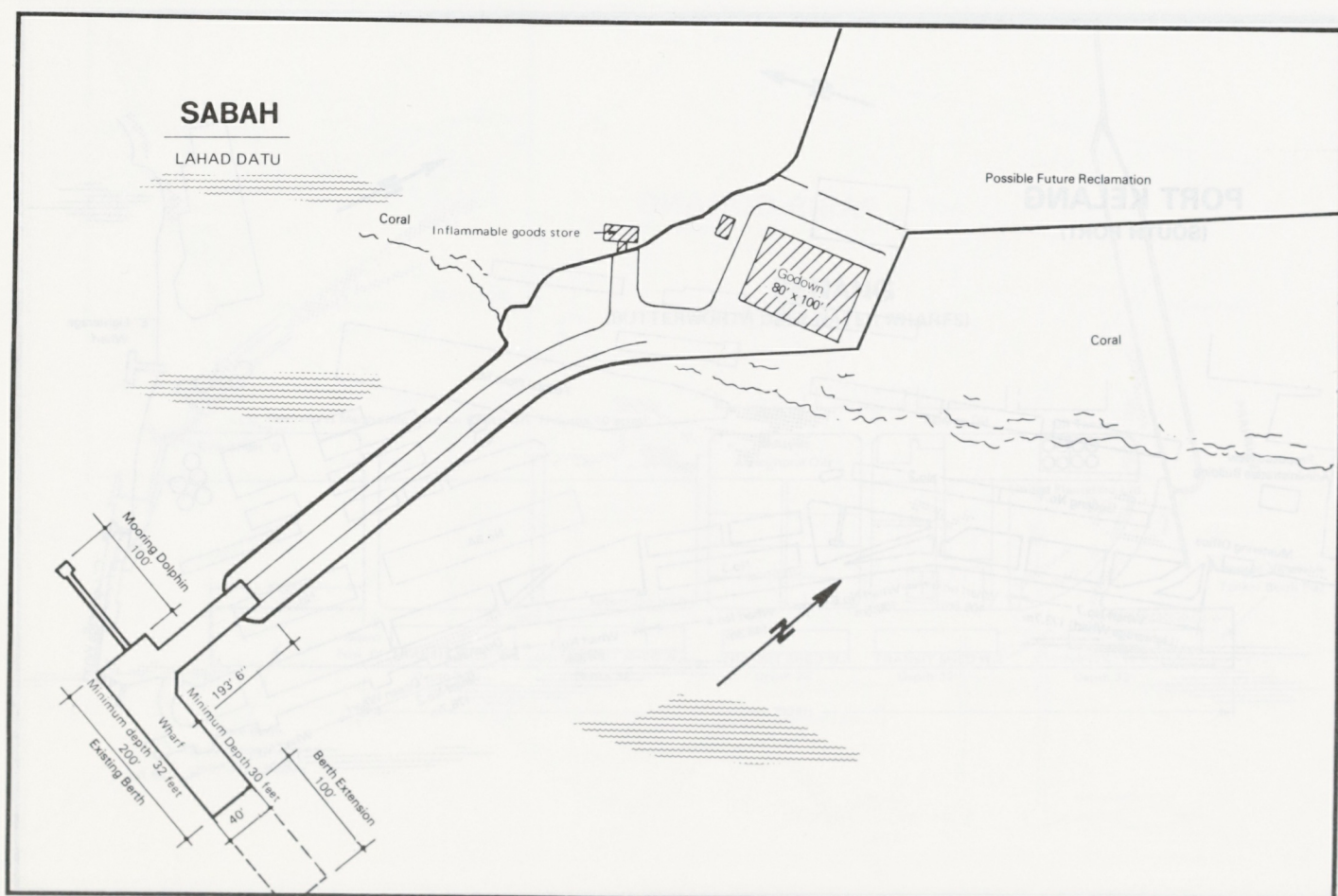
SABAH

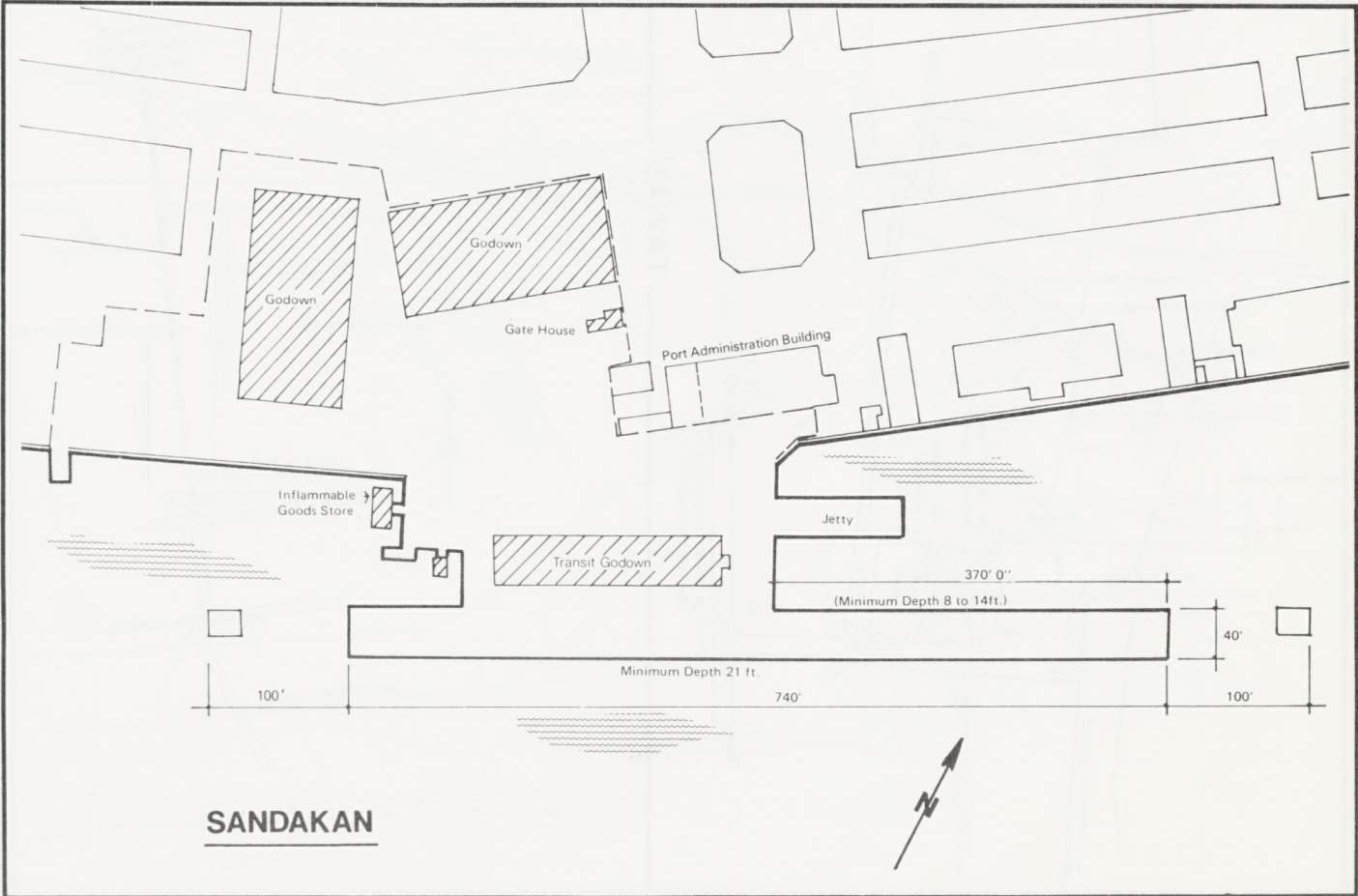
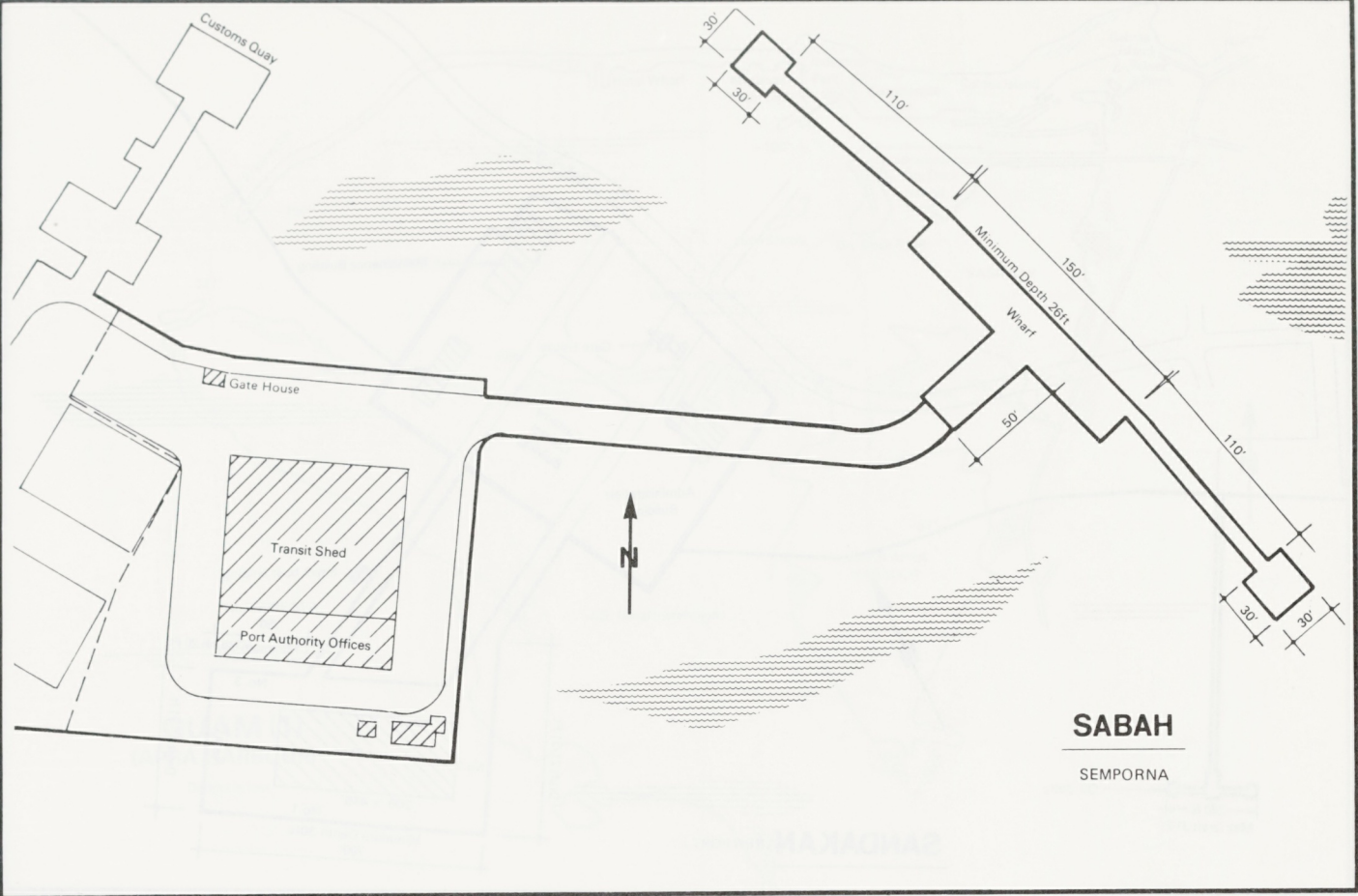
KUDAT

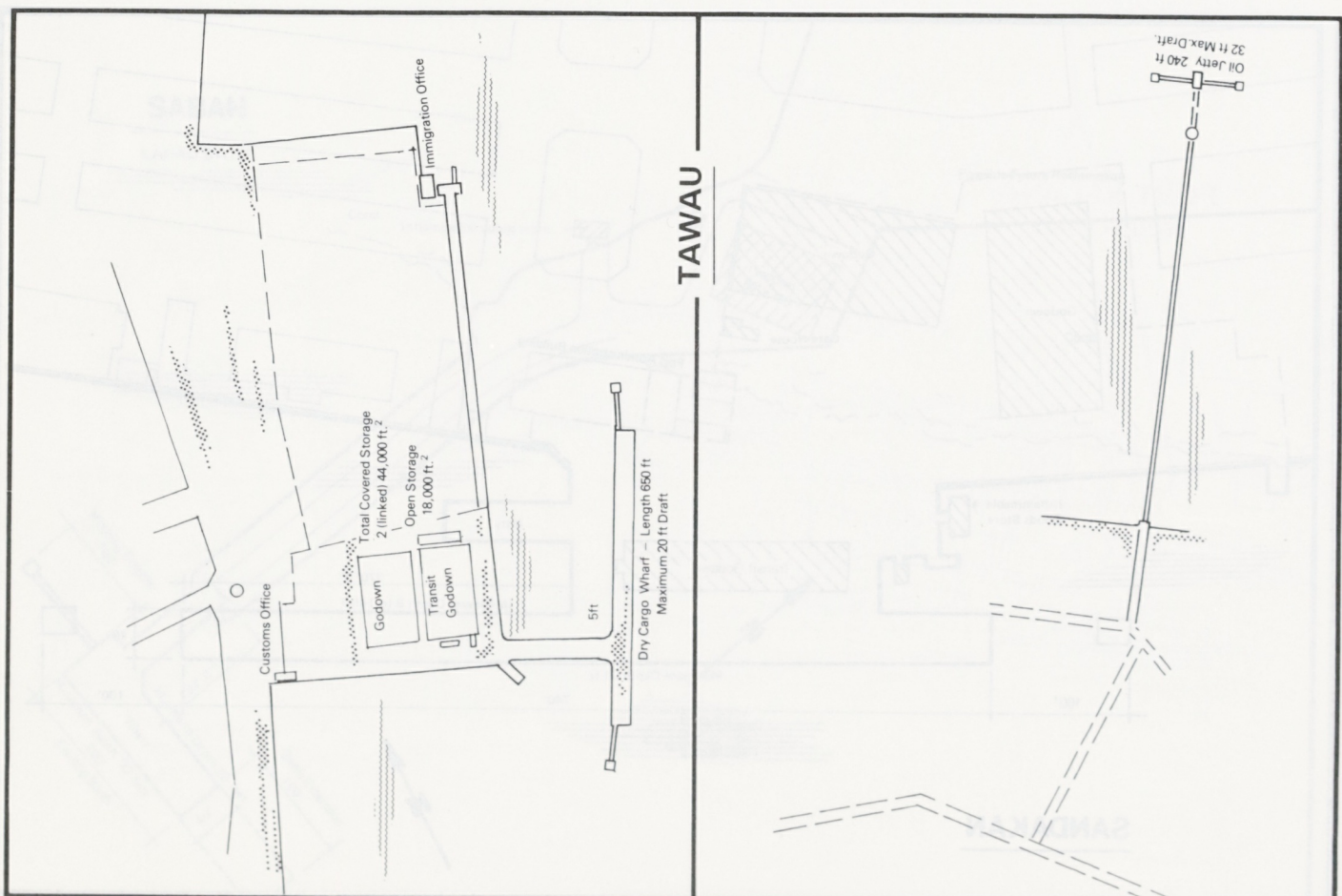
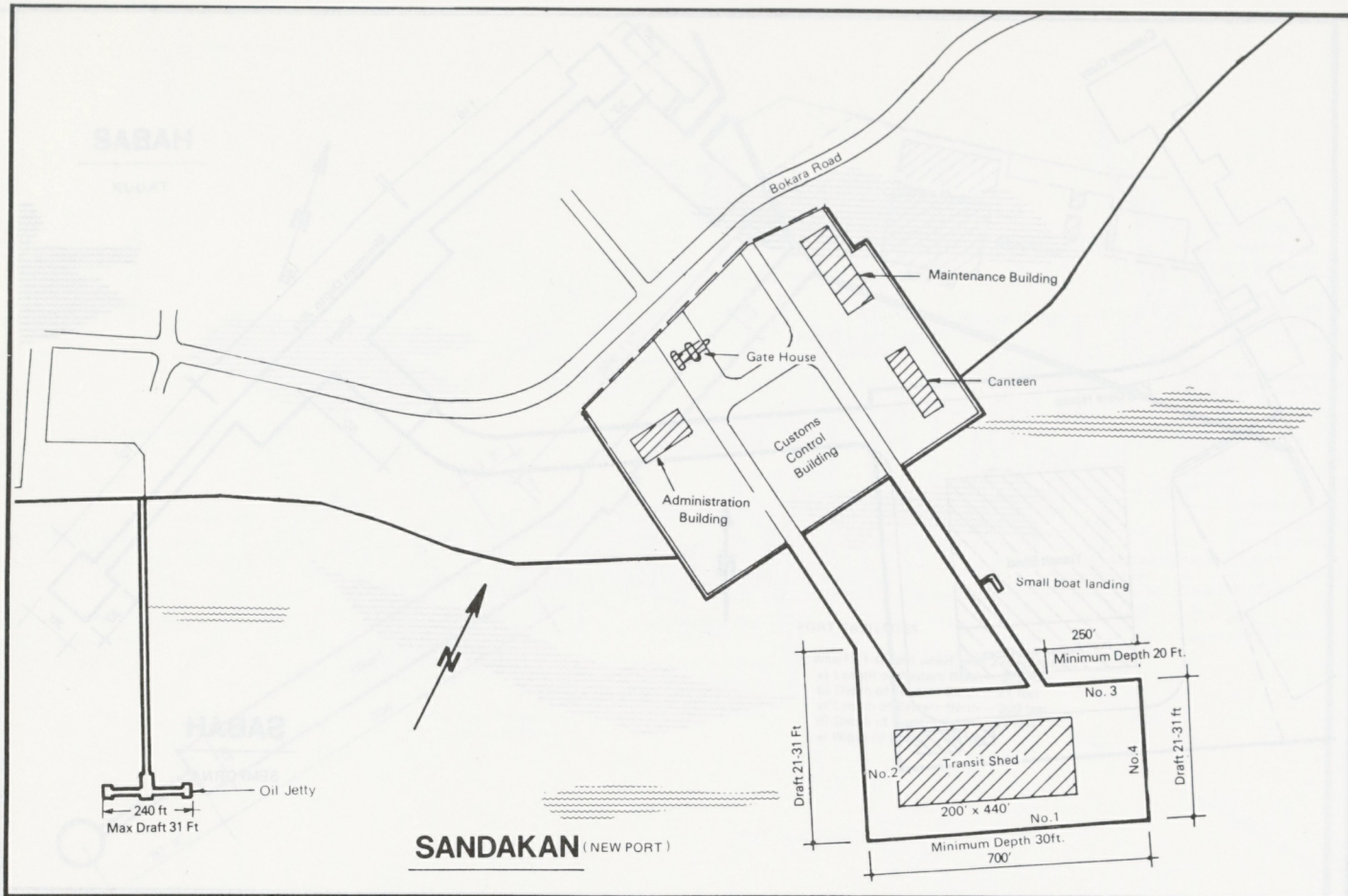


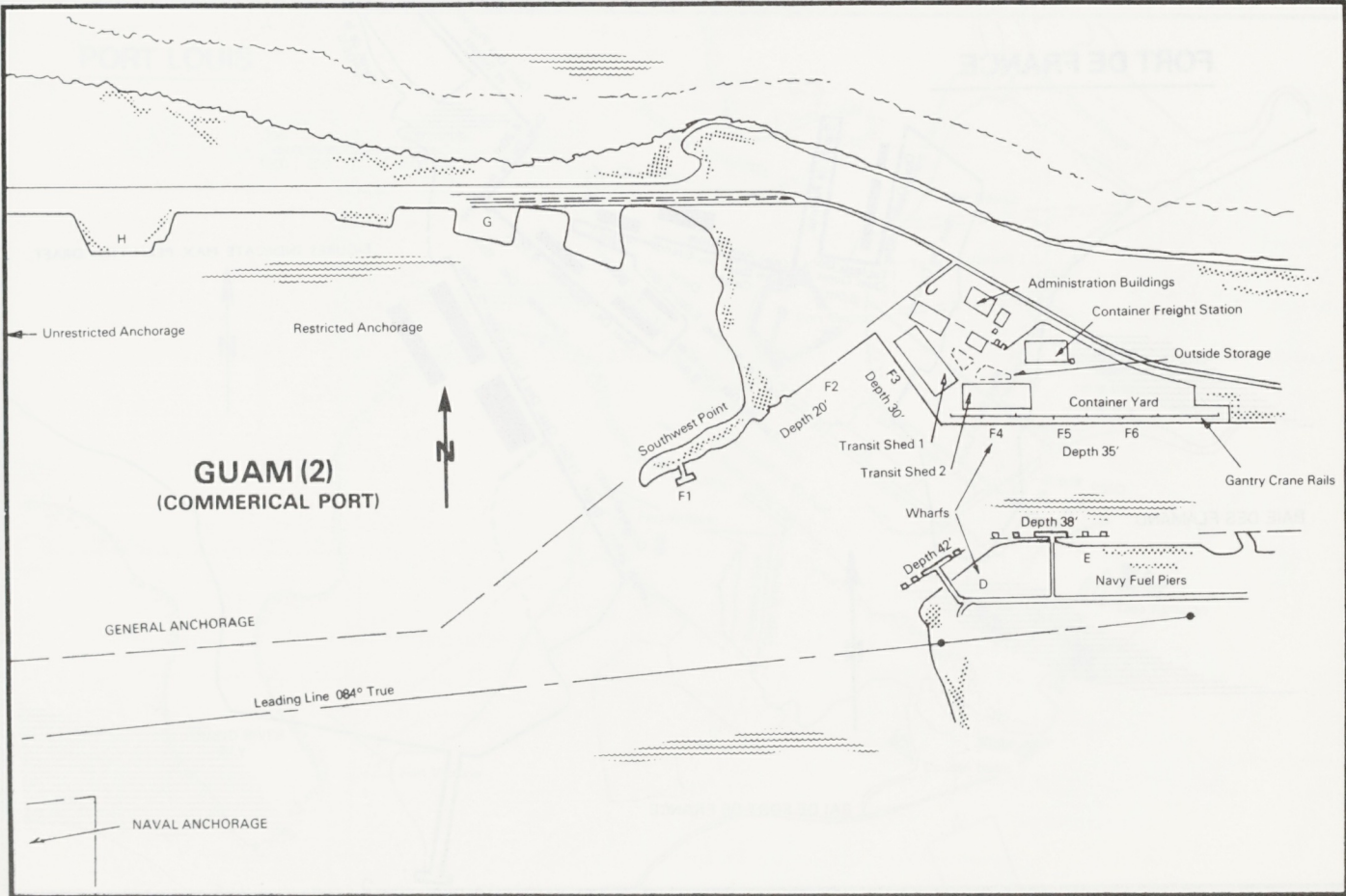
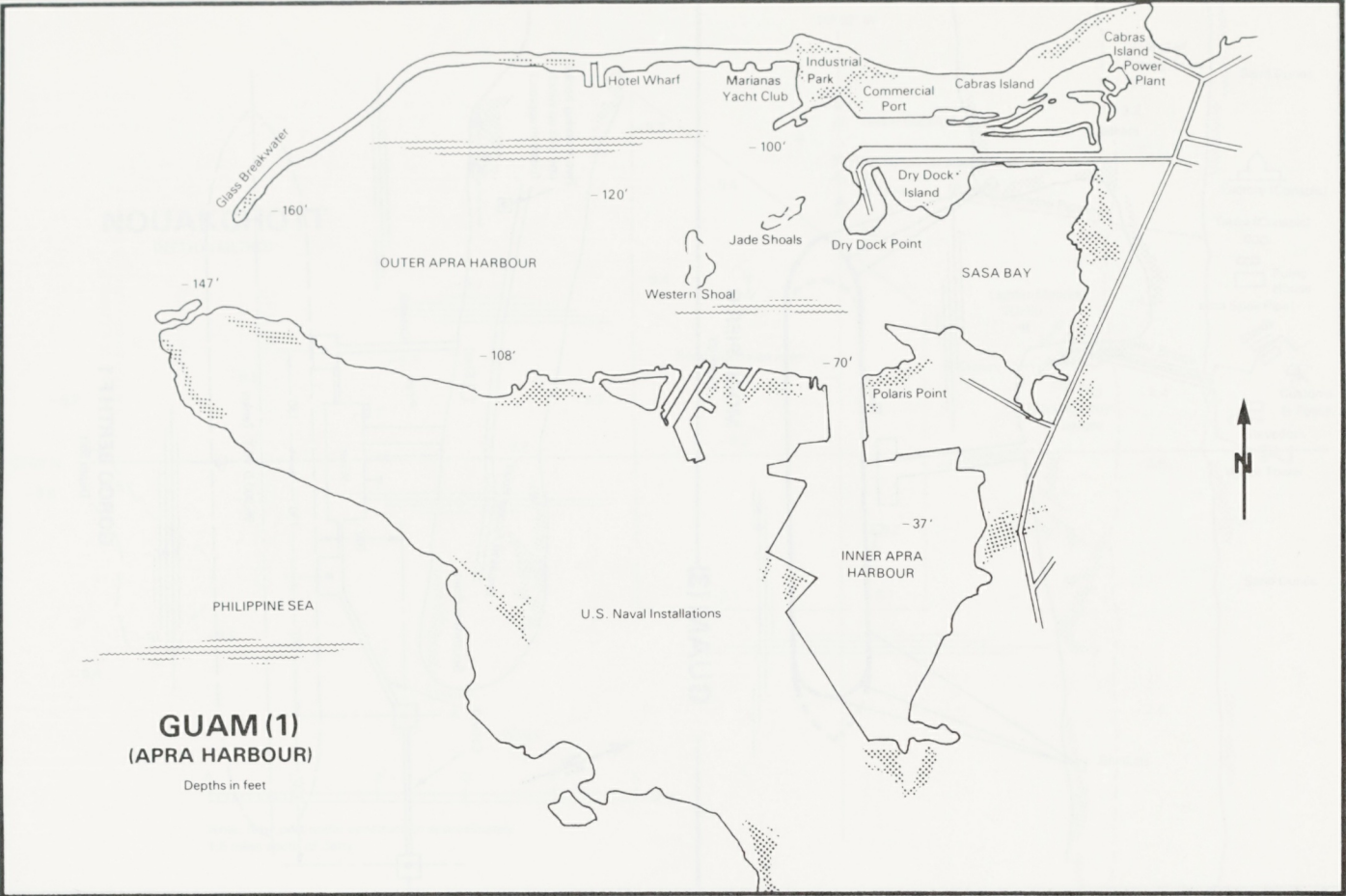
SABAH

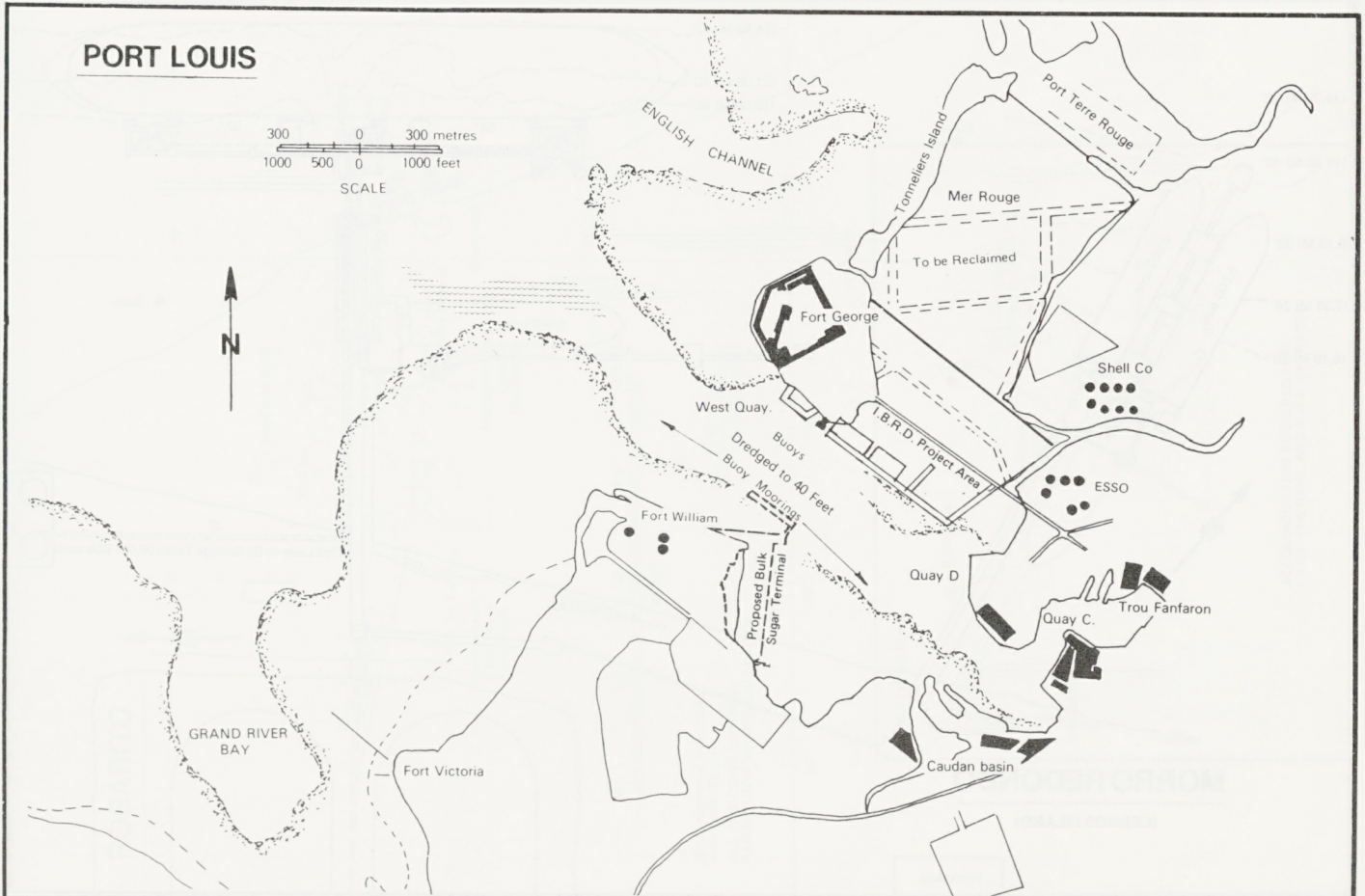
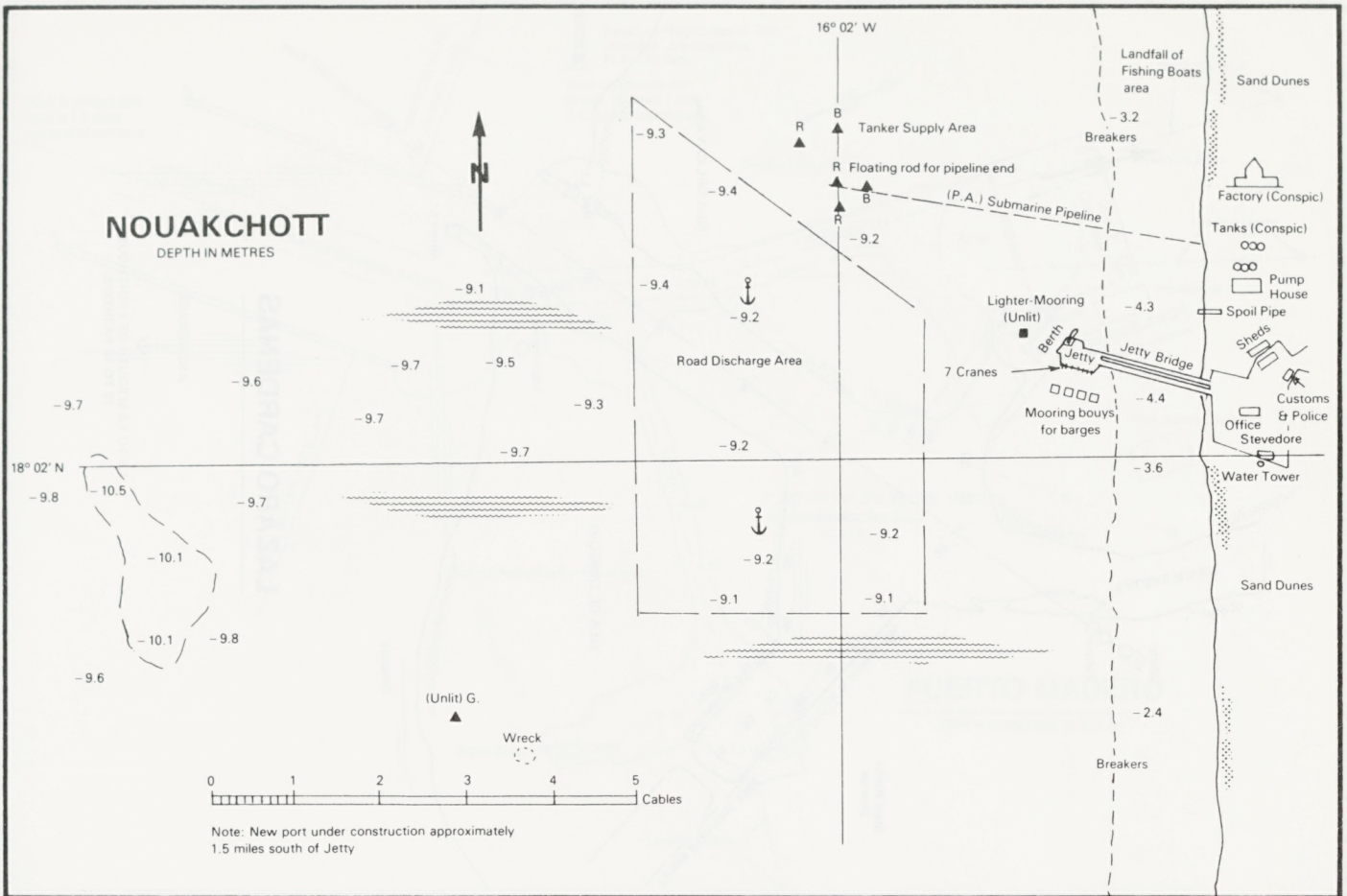
LAHAD DATU

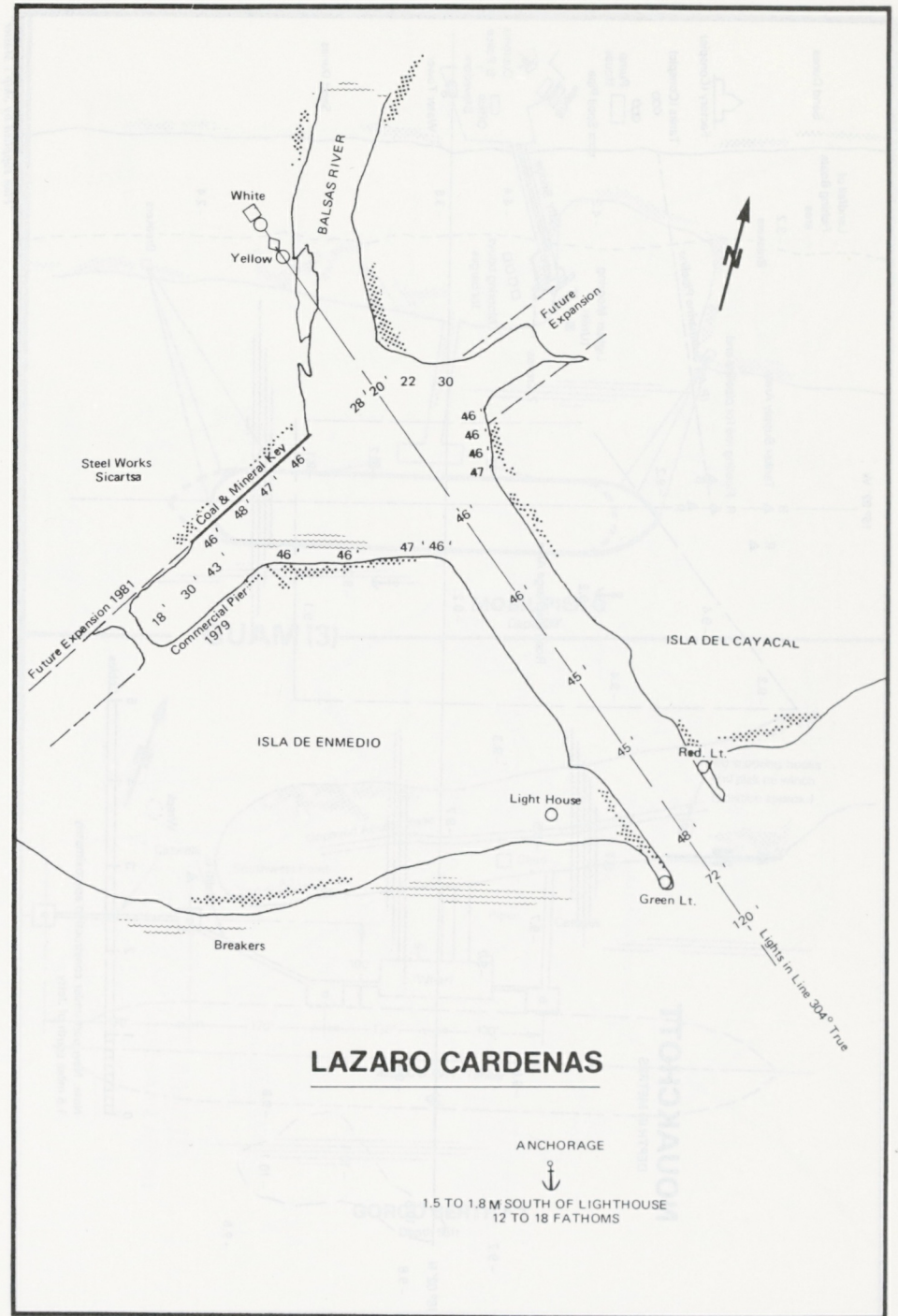




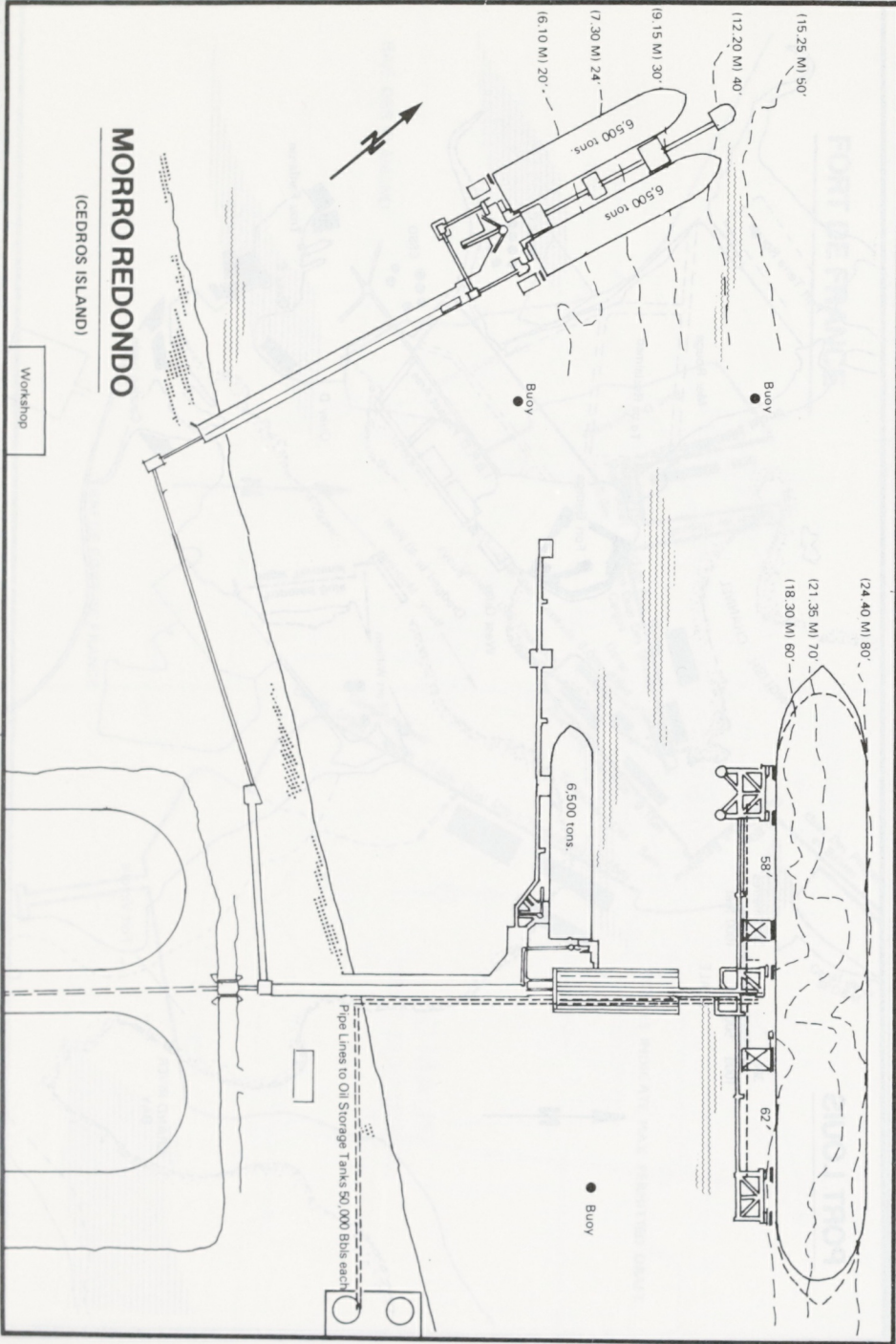








"Plan supplied by Ship's Master"



ROSARITO



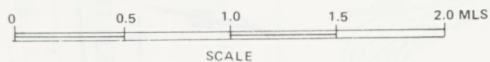
South Coronado Is Lt
282°T x 7.6 Mls.



14 Fathoms
Anchored with
5 Shackles to
a wait Berth

Ammonia Berth
FL 4 Sec B
5 White Mooring Buoys
Sea Buoy FL 1 Sec
5. 4.
1. 2. 3.
5 White Mooring Buoys (Numbered)
Depth 50ft @ Berth
Breakwater

ROSARITO
Oil Tanks (Conspic)



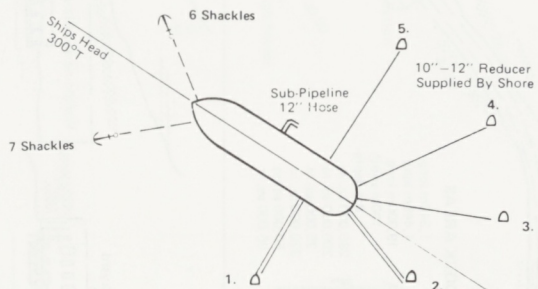
Good Approach from South
with Radar Targets
ALL POSITIONS TAKEN BY
RADAR FROM SOUTH BUOY BERTH

Single Point
Mooring Platform
(Good Ra, Target)

08' 07' 06' 32° 20'

117° 05' W

BERTHING PLAN



ACCOMMODATION REQUIRED FOR
PILOT, CUSTOMS, AND V.H.F. OPERATOR

"Plan supplied by Ship's Master"

PUERTO MADERO

DEPTH IN METRES at 30.6.80

Leading Lights

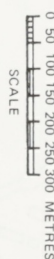
Naval Zone

Navy Quay

Fish Quay

Fish Quays Under Construction

Planned Radio Station in this area.



Port Admin. Building

Warehouse

Fruit Loading Berth

Leading Lights

Turning Basin

Low Water

1050 feet

Dredged Deposits



Structure Height approx. 24m
Intended Characteristics
FL. Et. 30 Secs.
New Lighthouse not
in use. Located 1 mile
S.E. of old Lighthouse

APPROXIMATE SHORE LINE

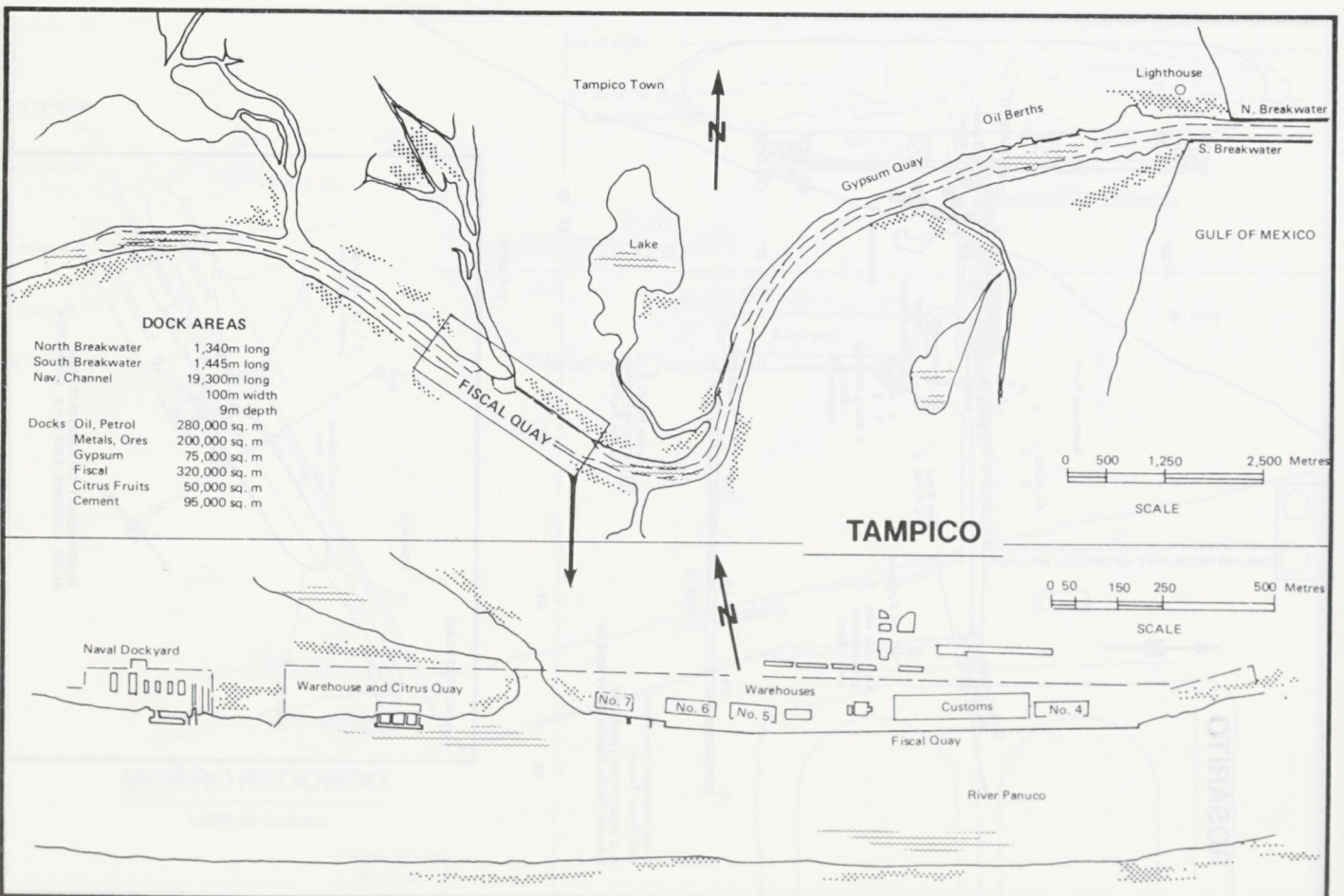
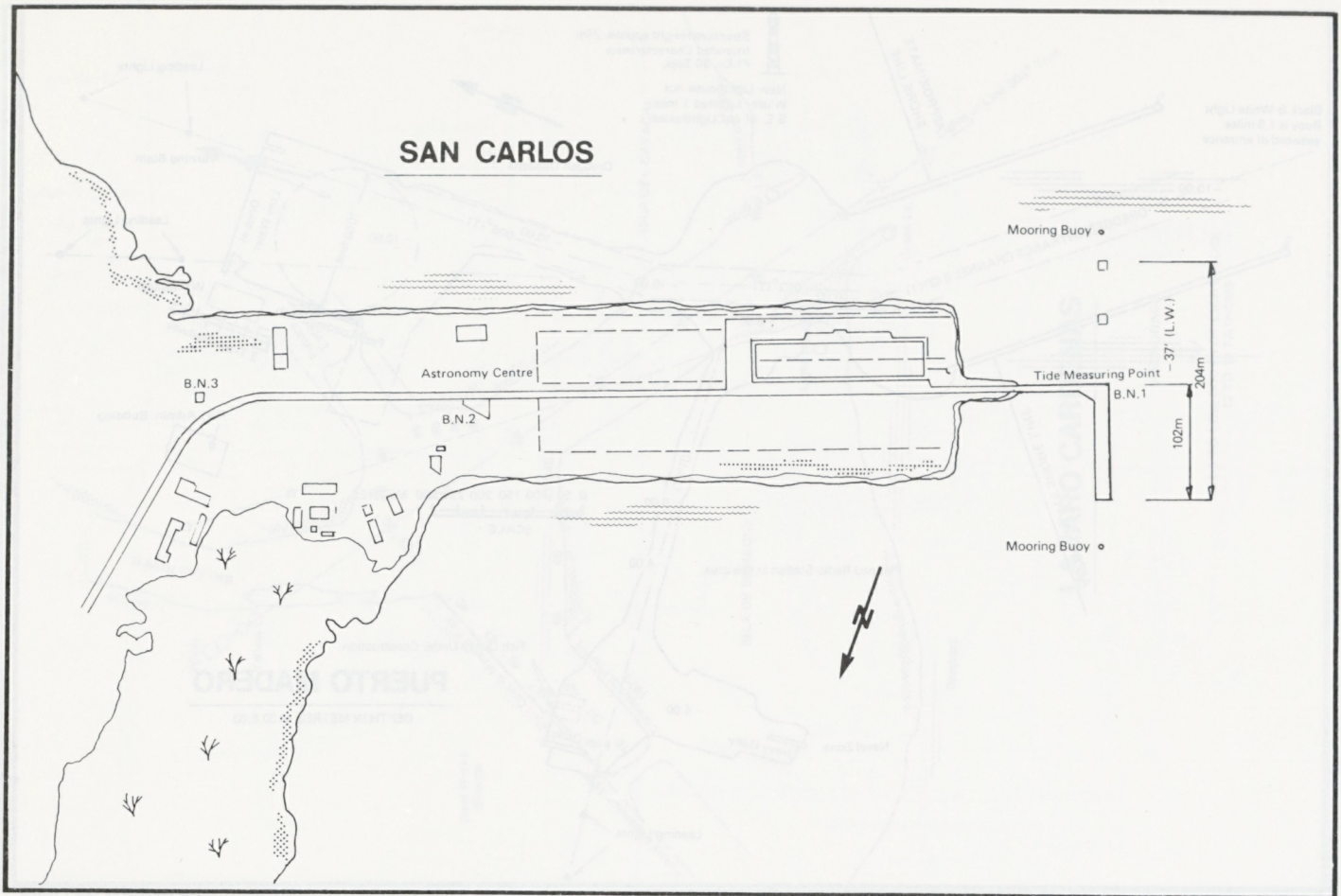
APPROXIMATE SHORE LINE

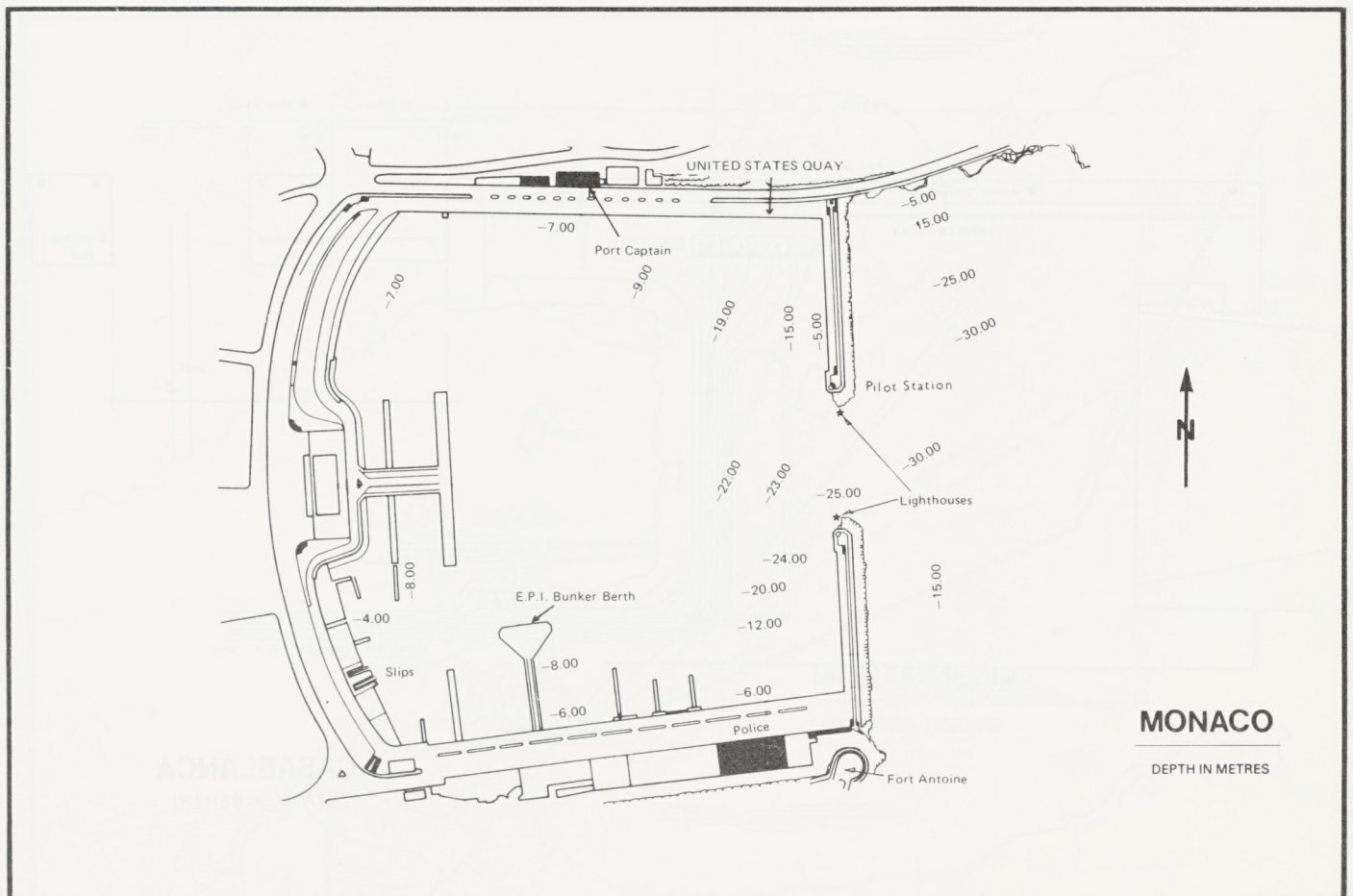
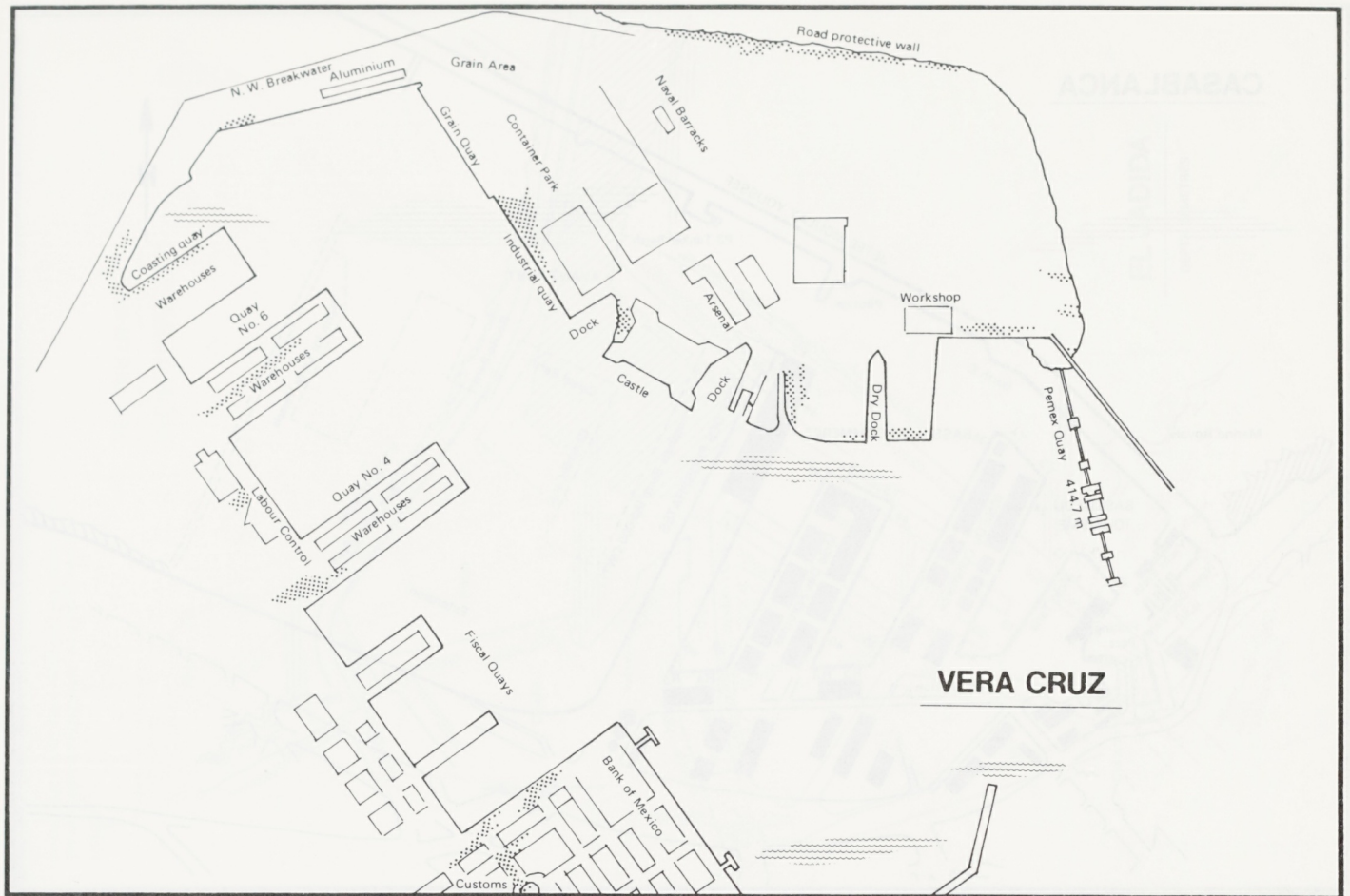
DREDGED ENTRANCE CHANNEL 0.3°(T)

Black & White Light
Buoy is 1.5 miles
seaward of entrance

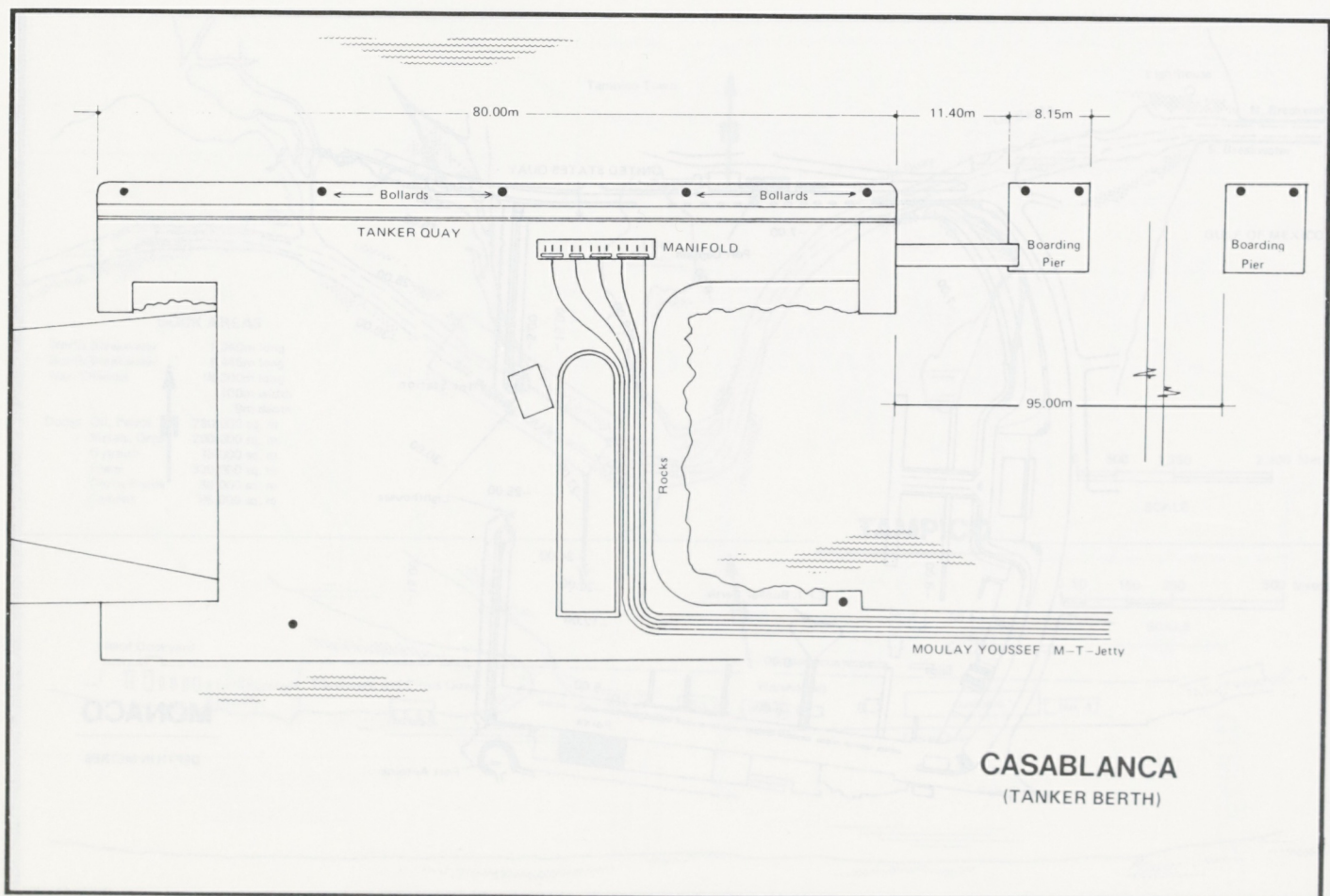
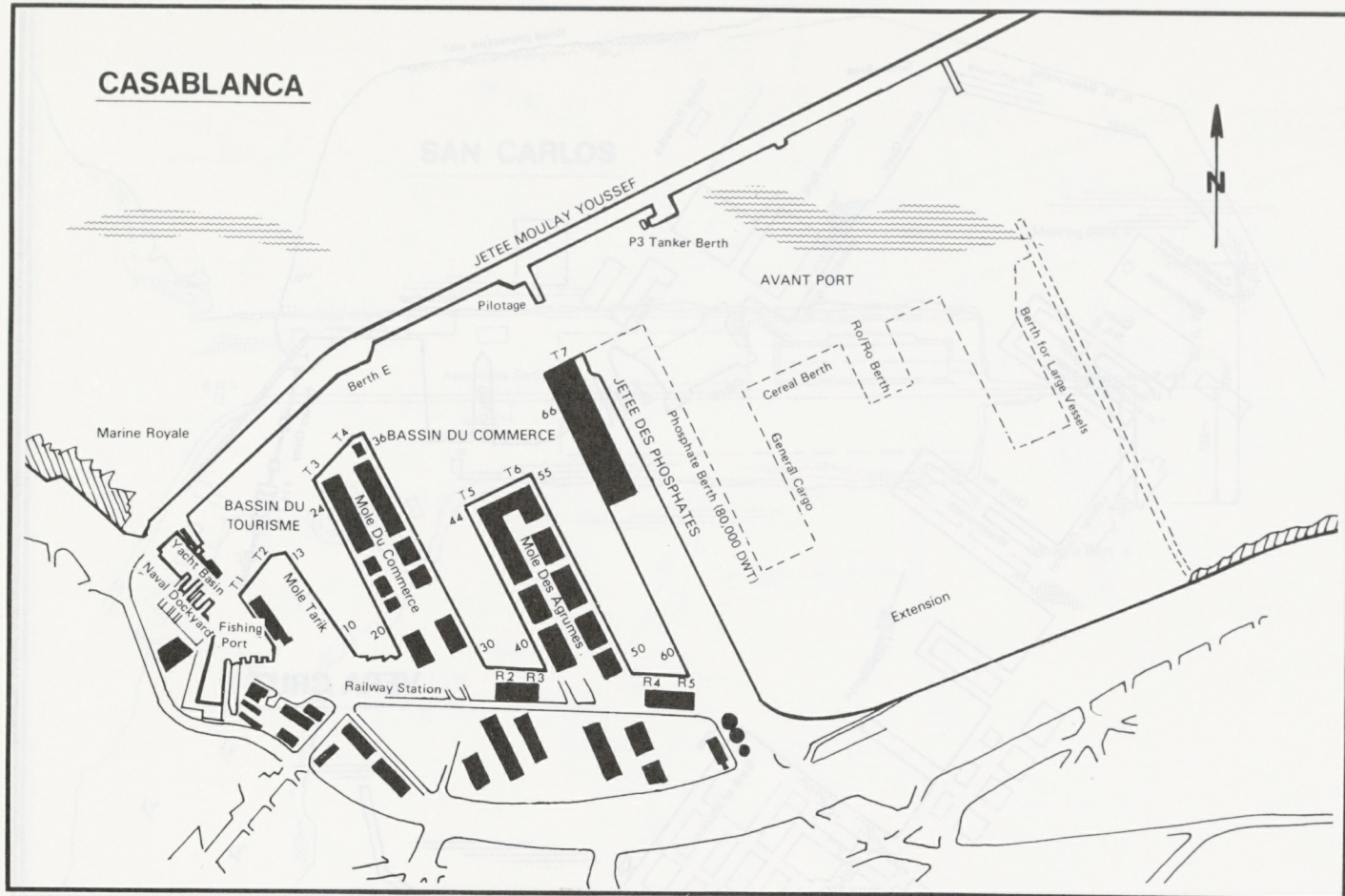
"Plan supplied by Ship's Master"

SAN CARLOS

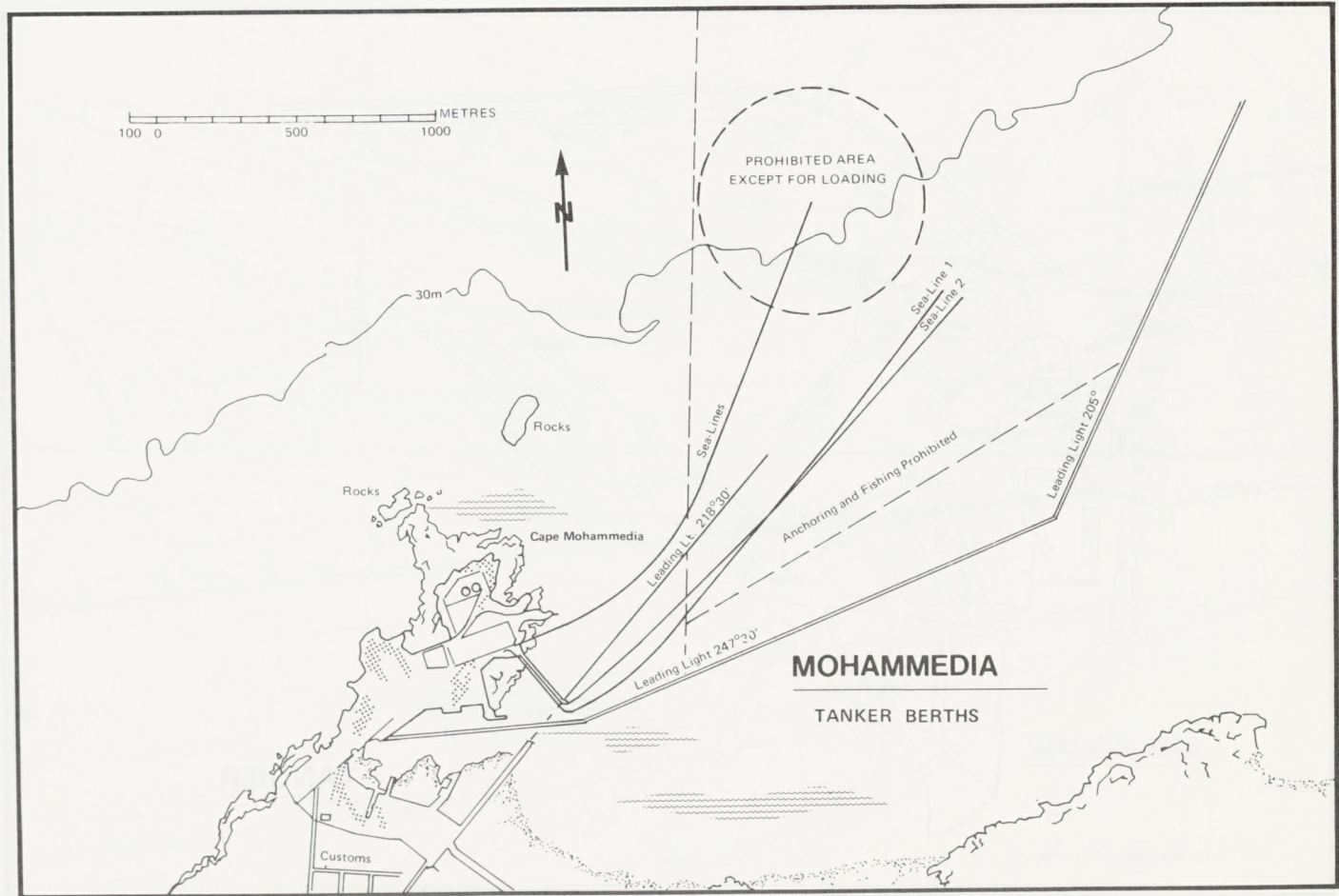
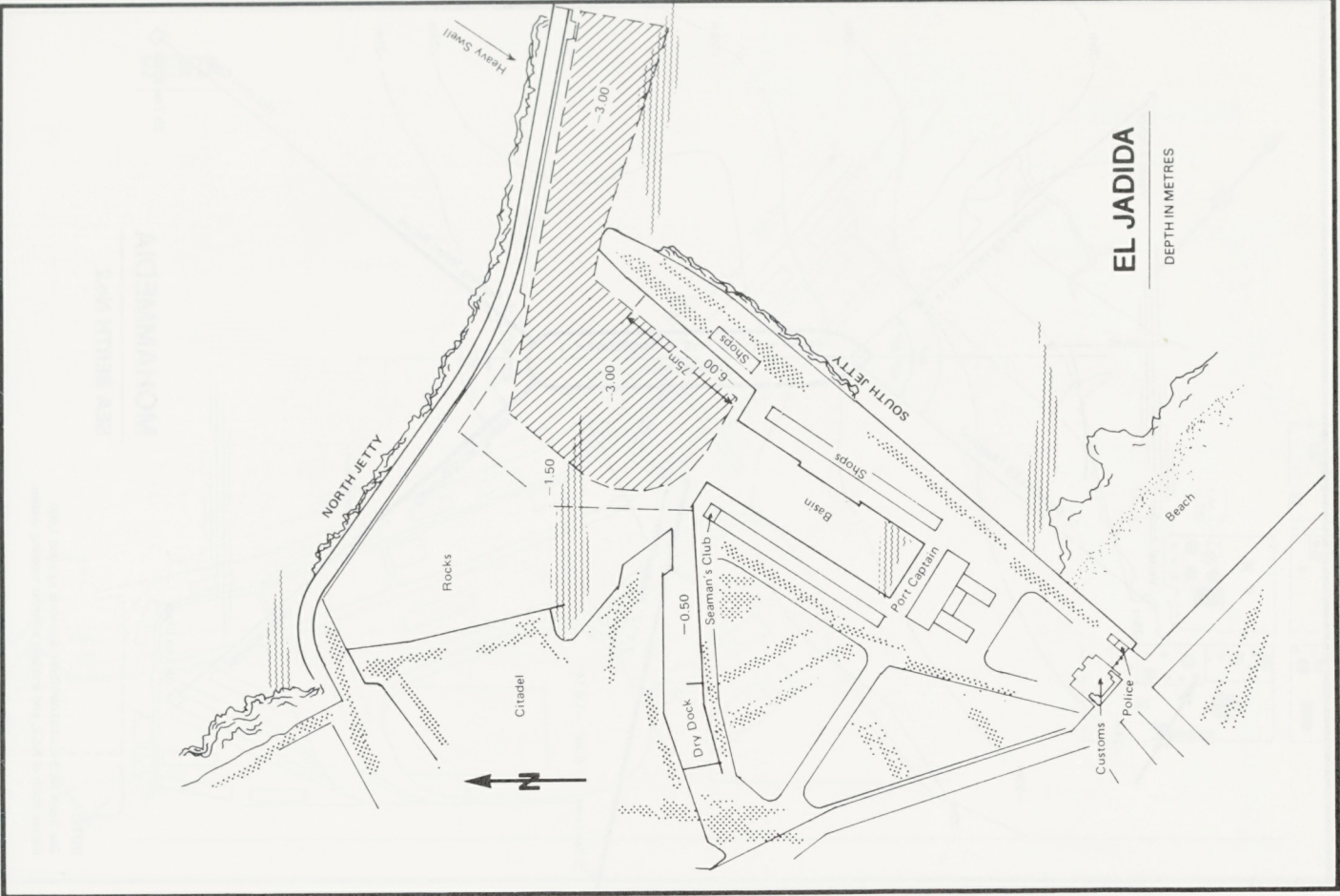


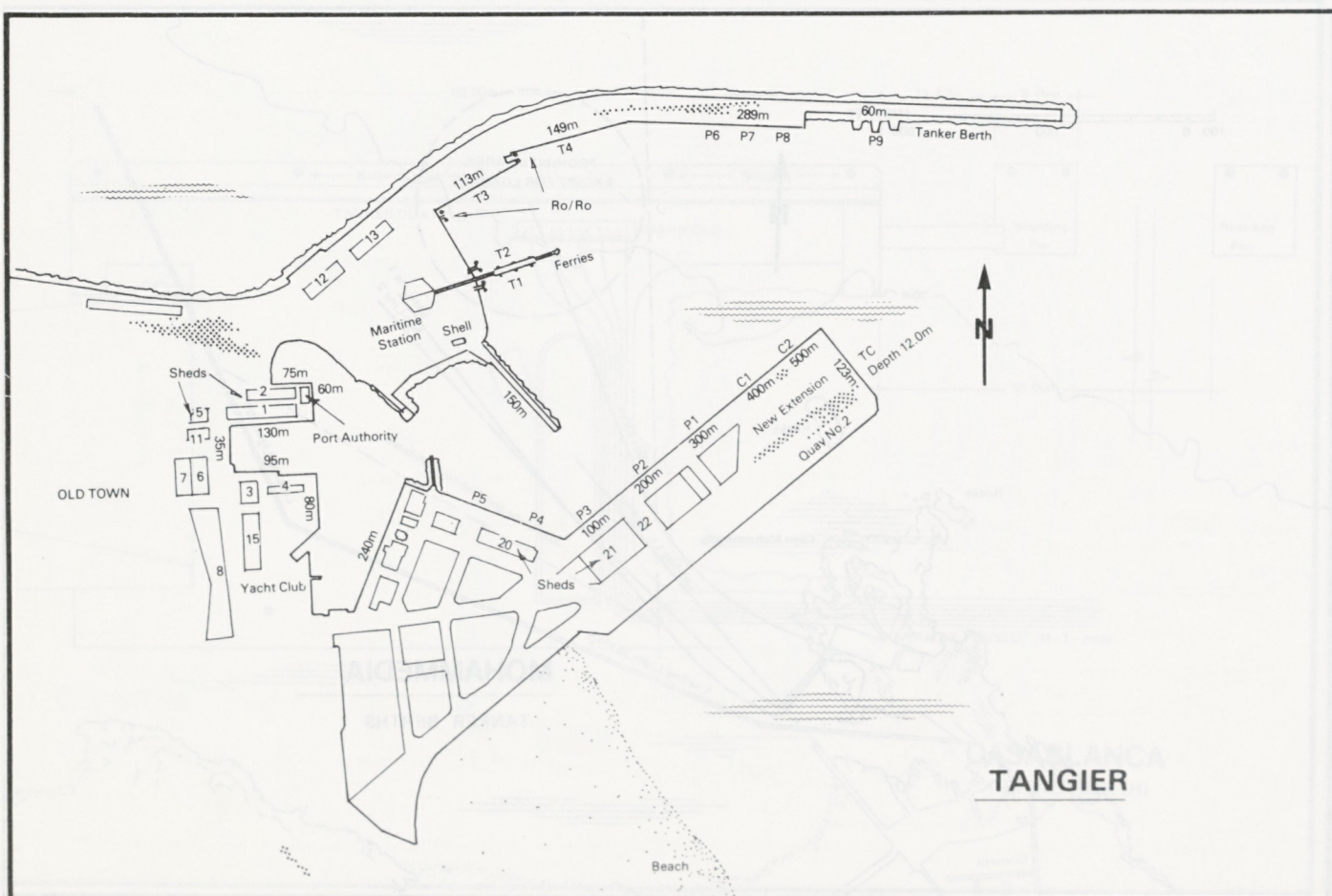
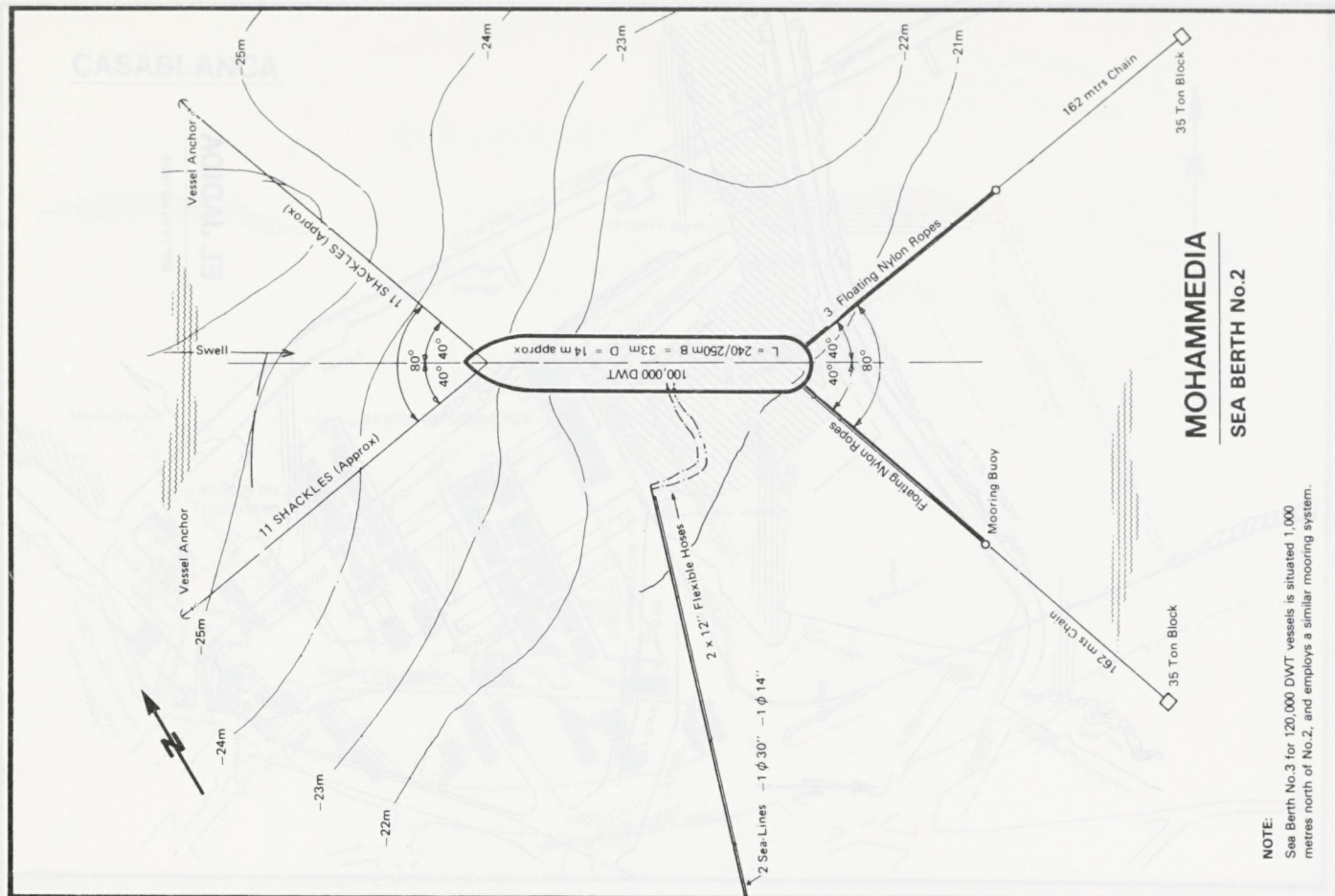


CASABLANCA

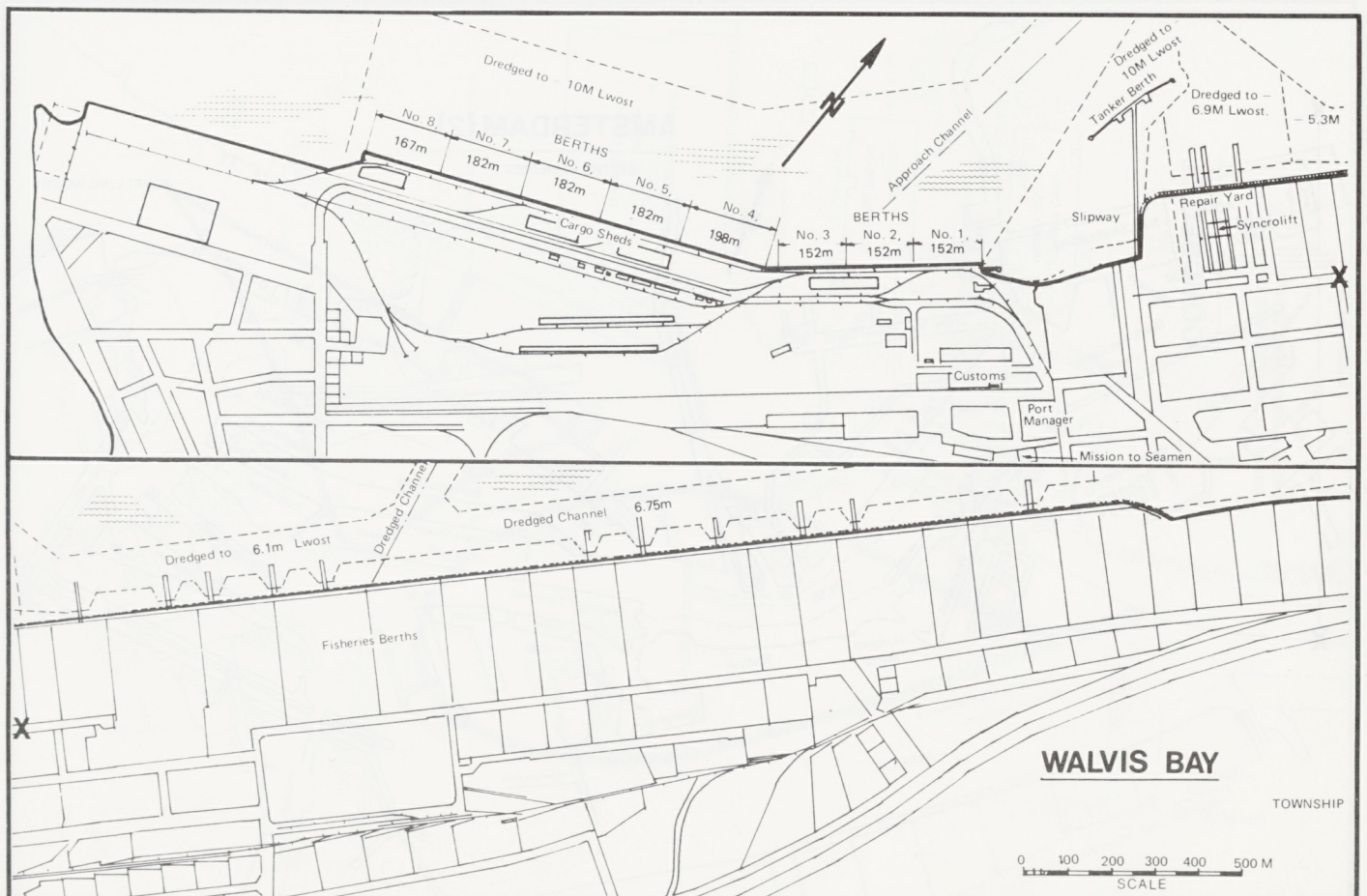
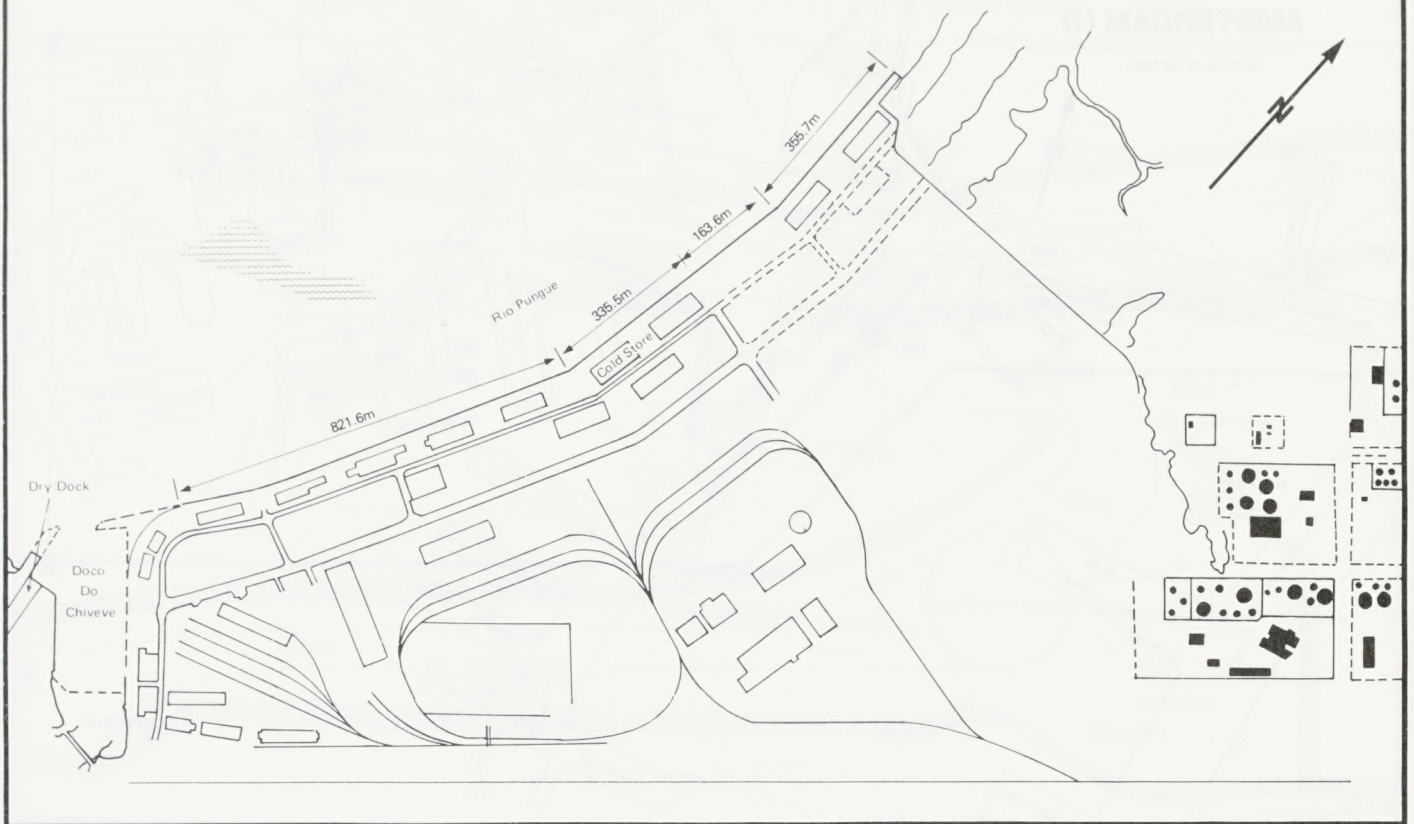


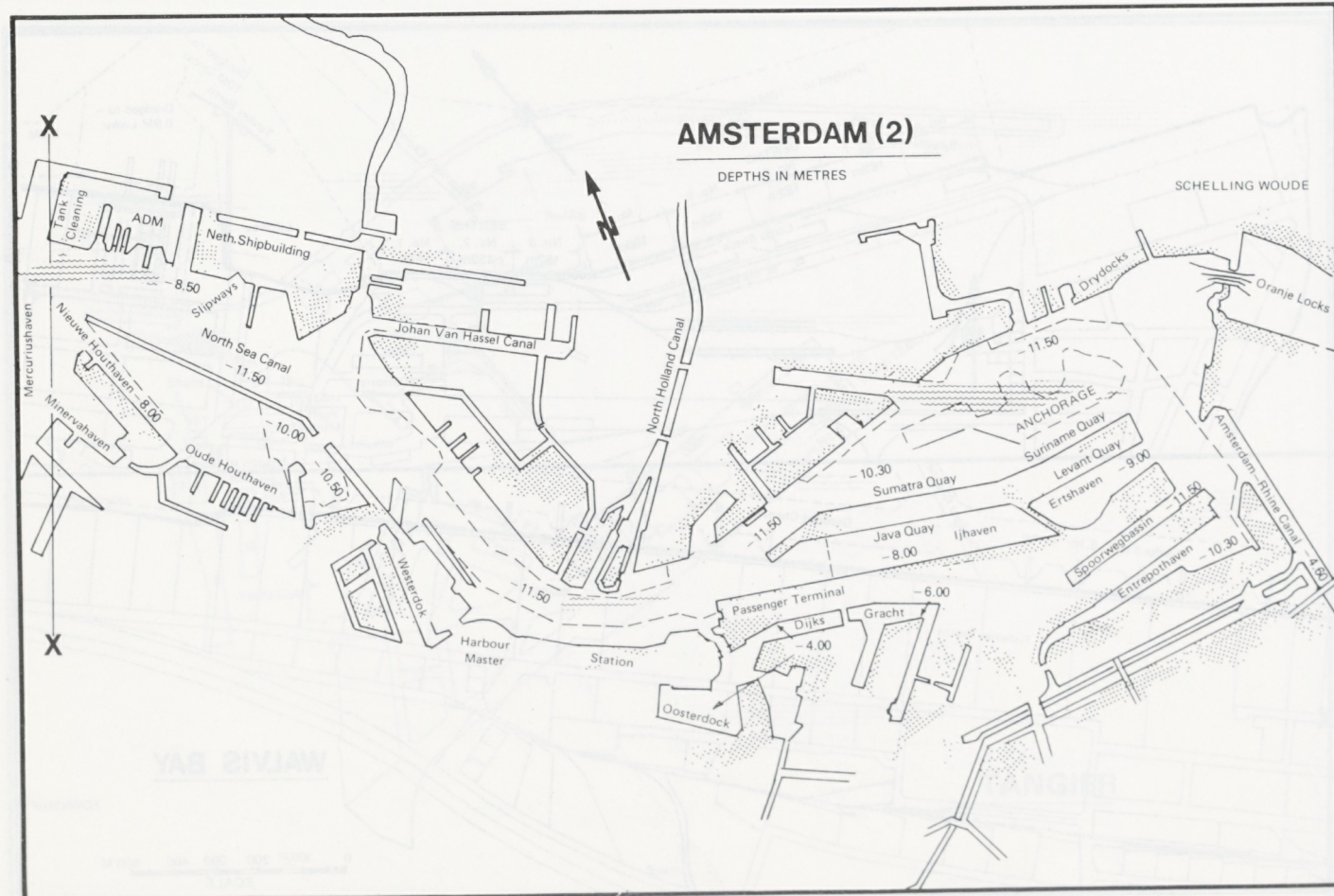
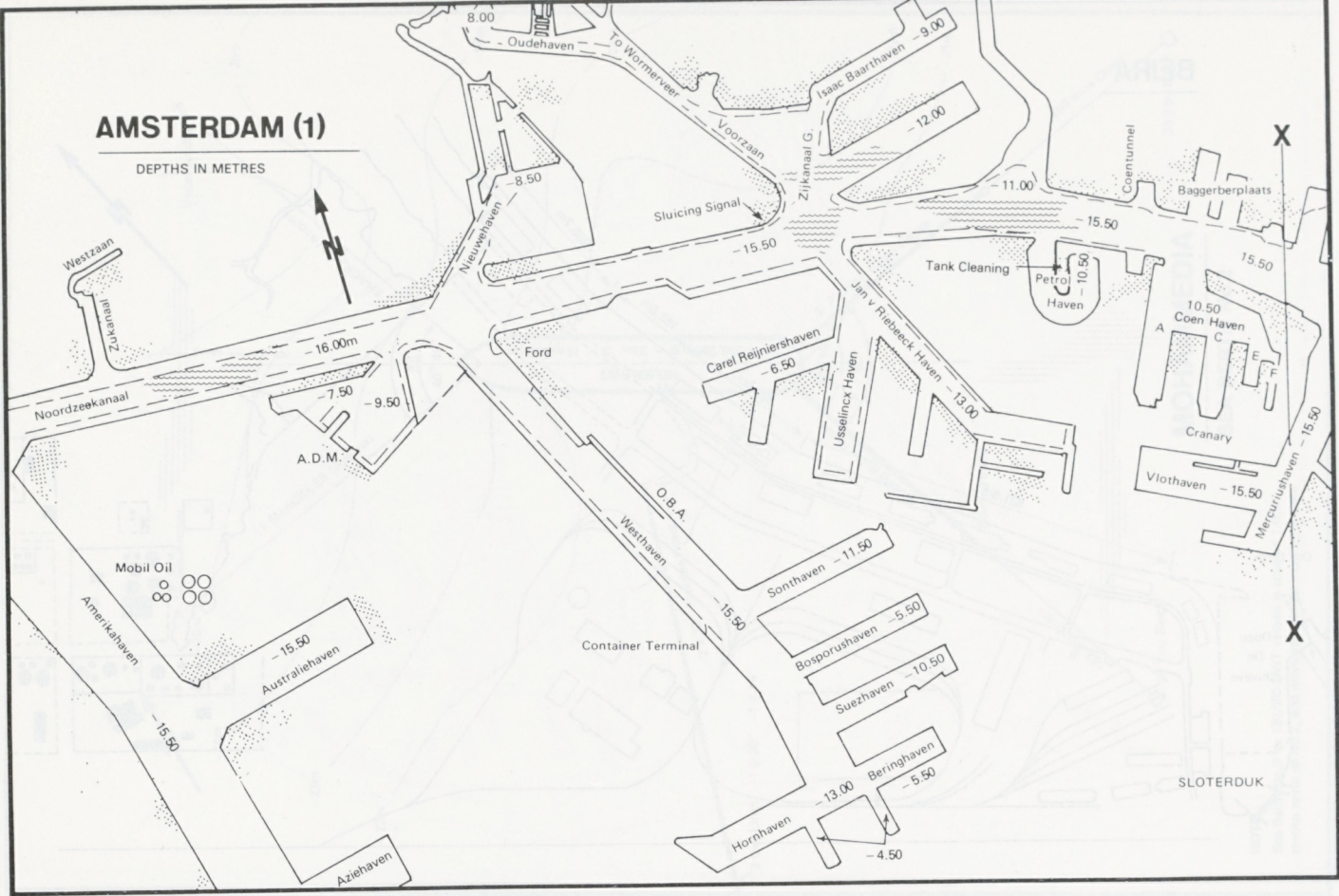
CASABLANCA
(TANKER BERTH)

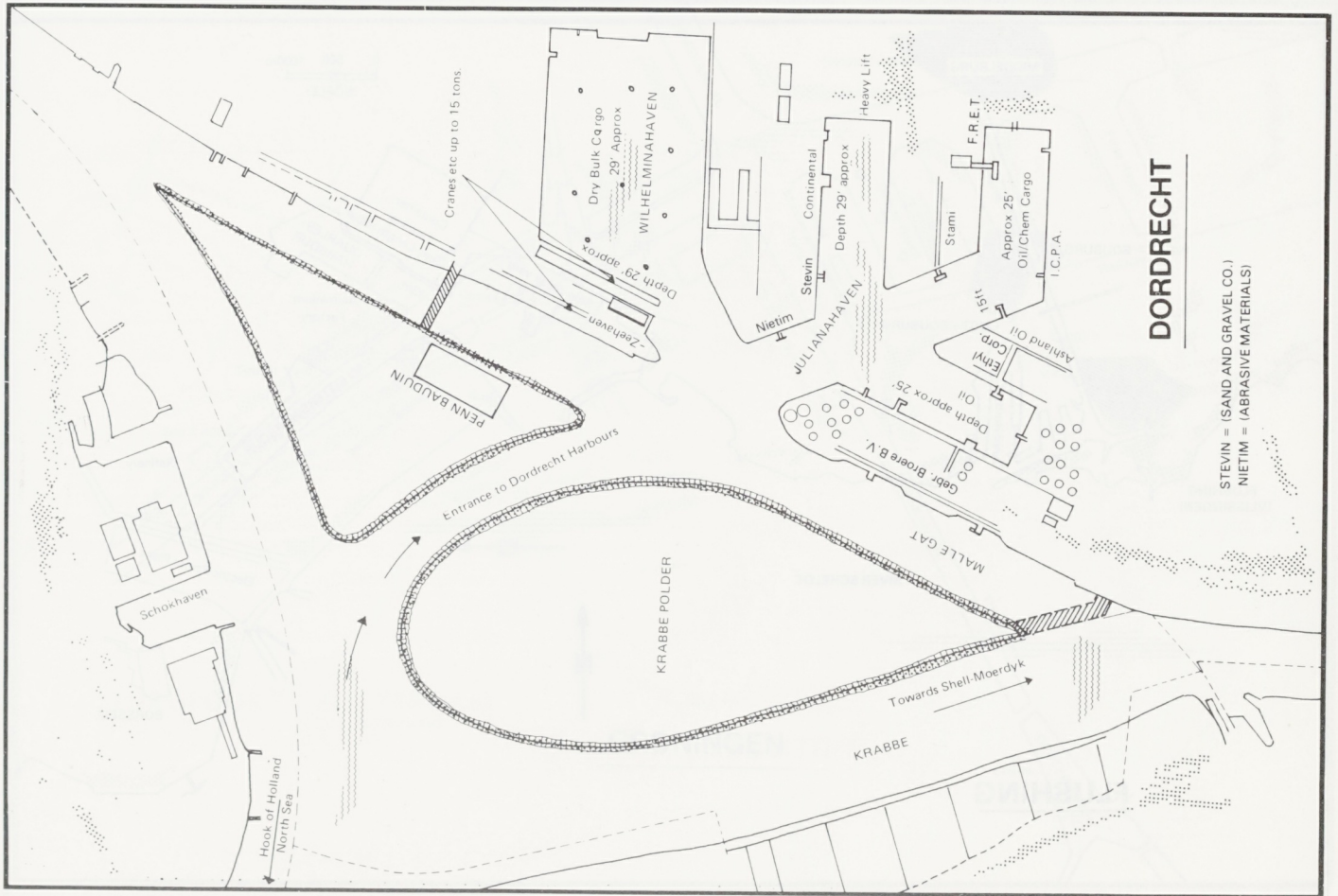
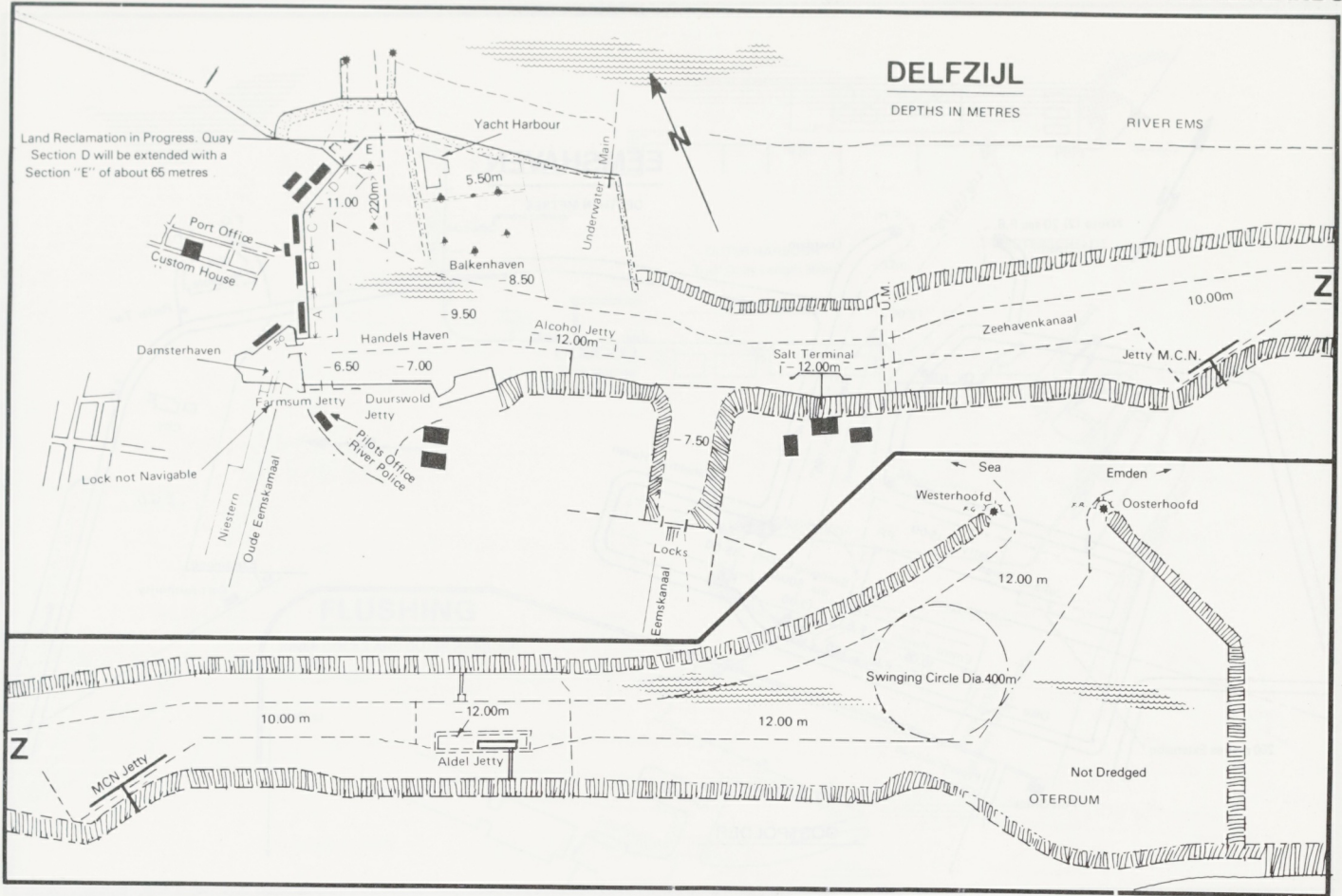


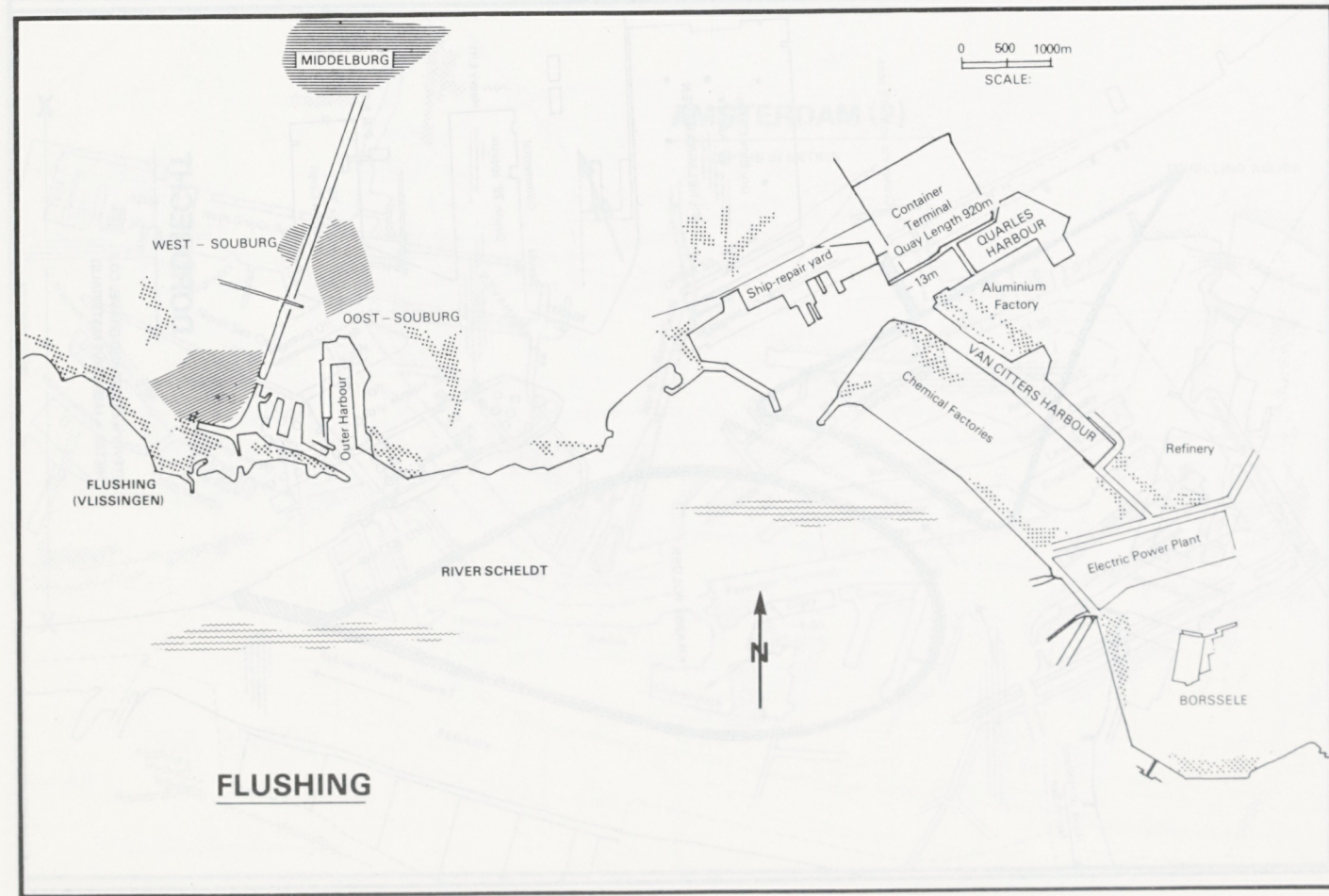
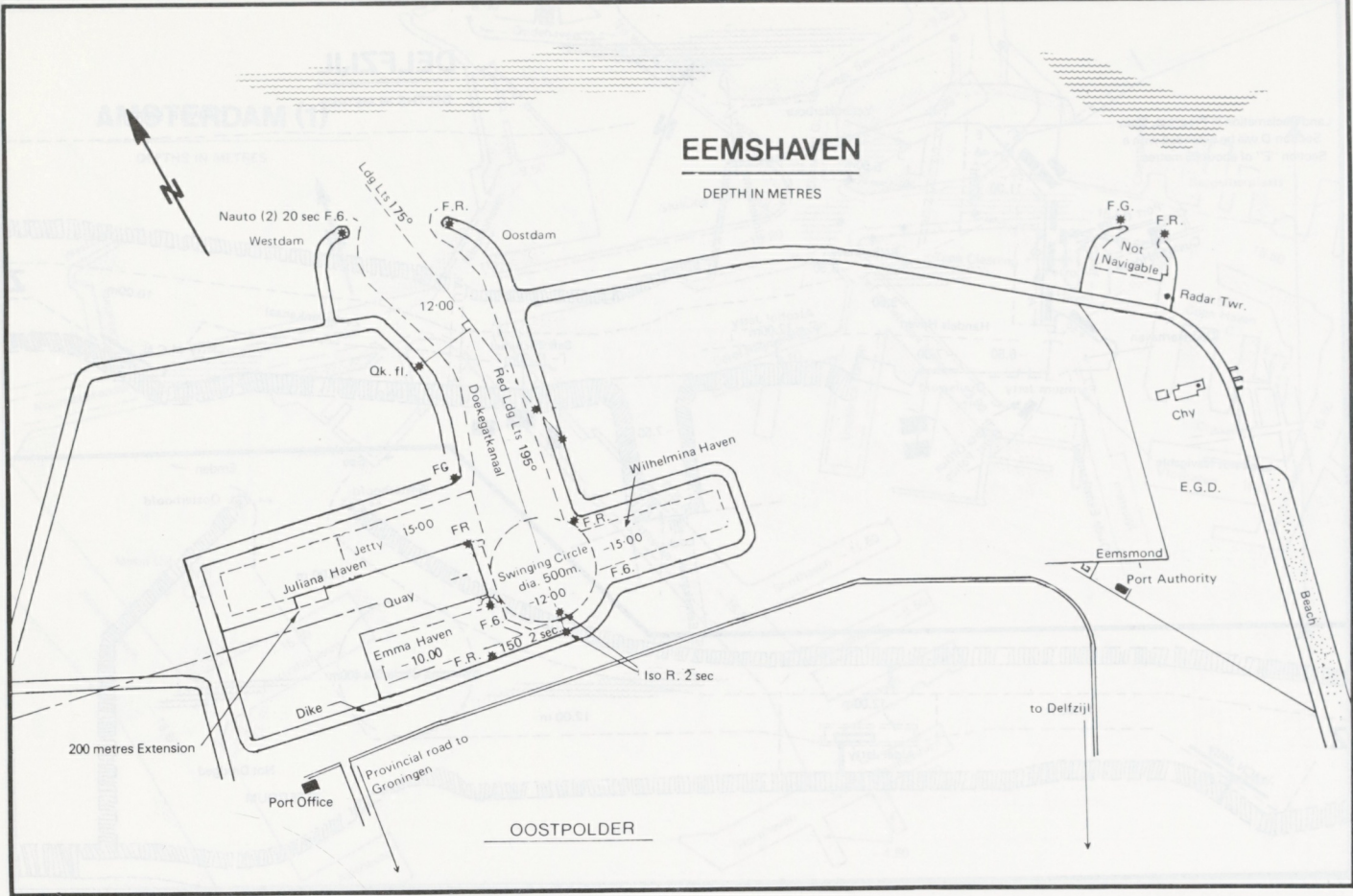


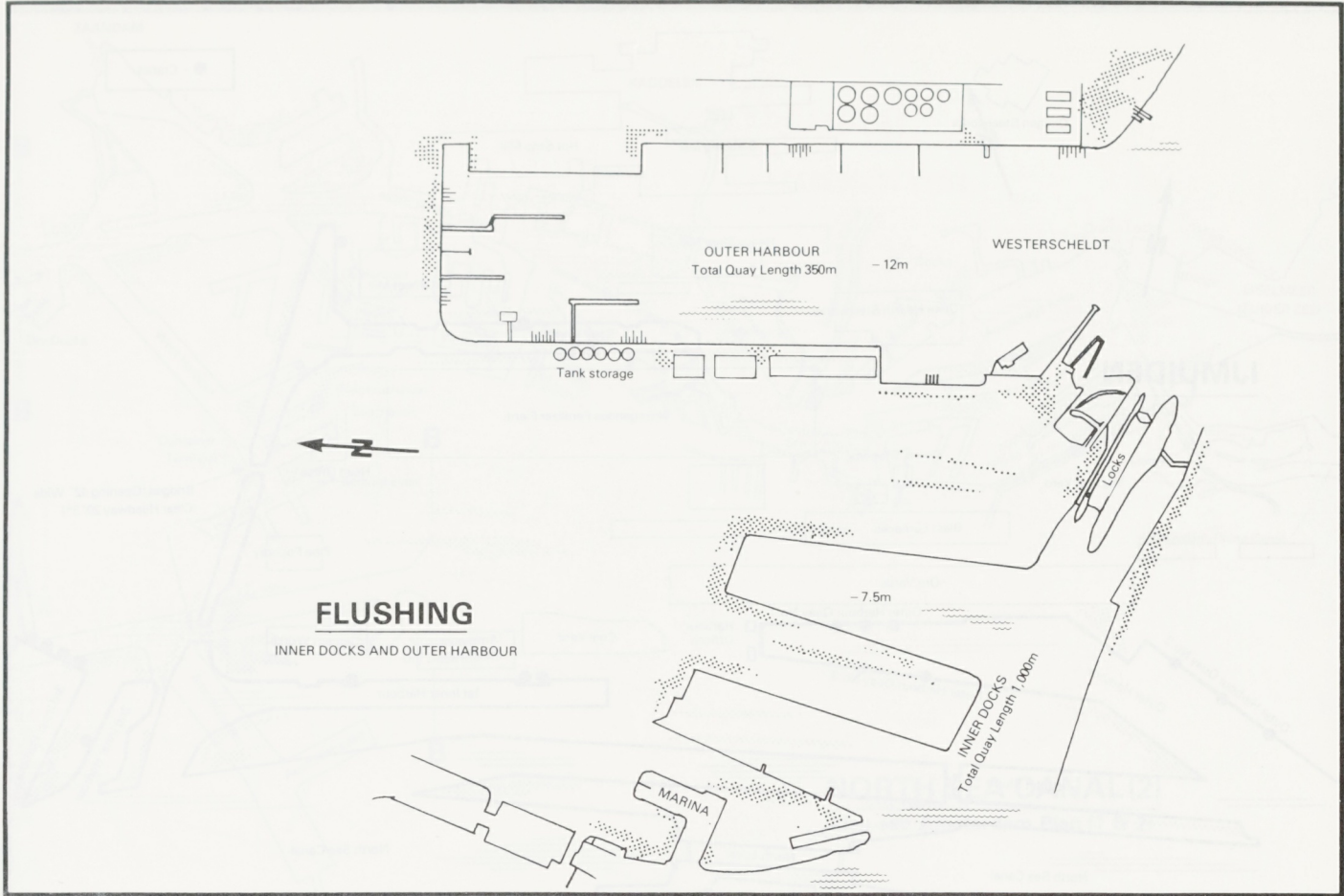
BEIRA

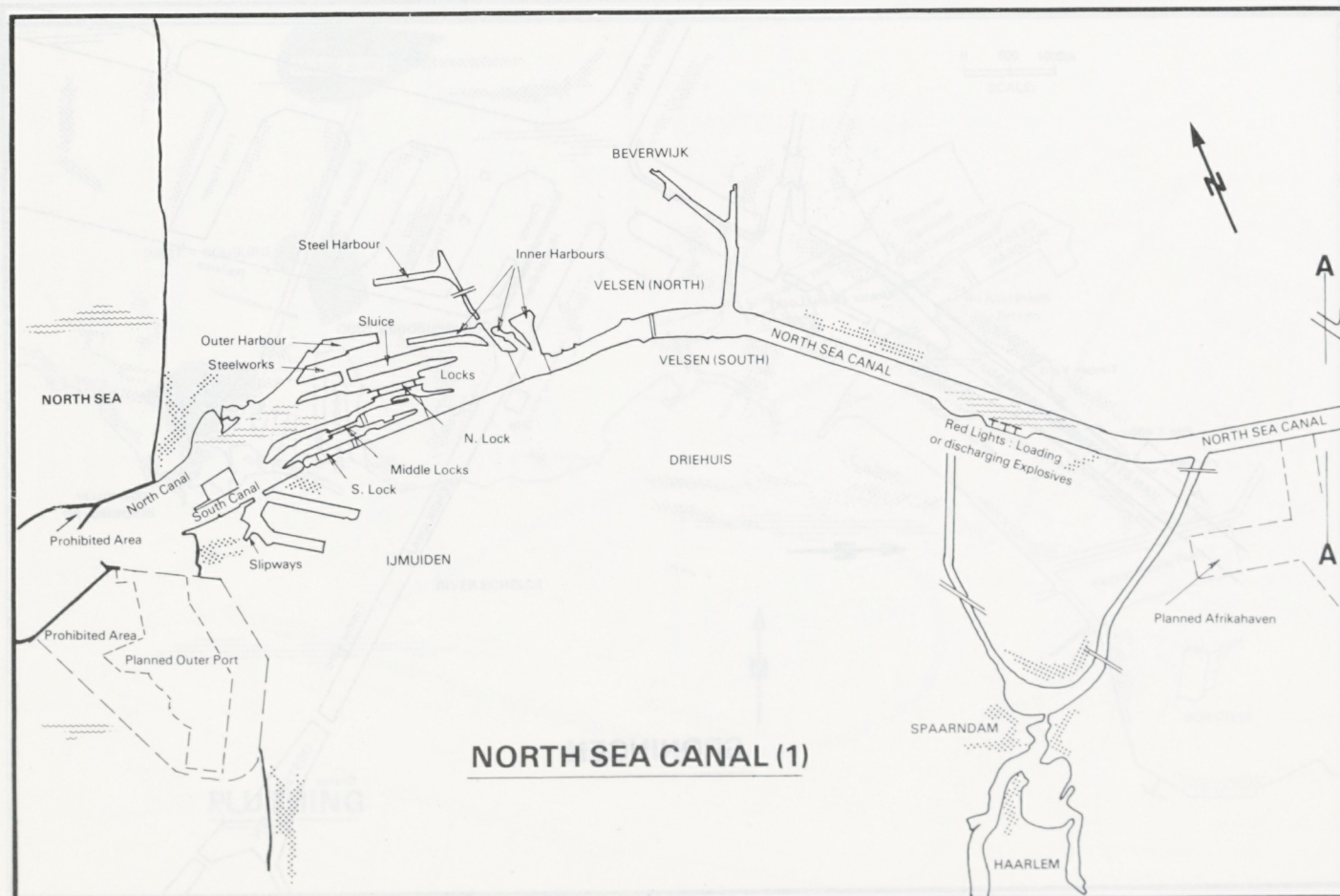
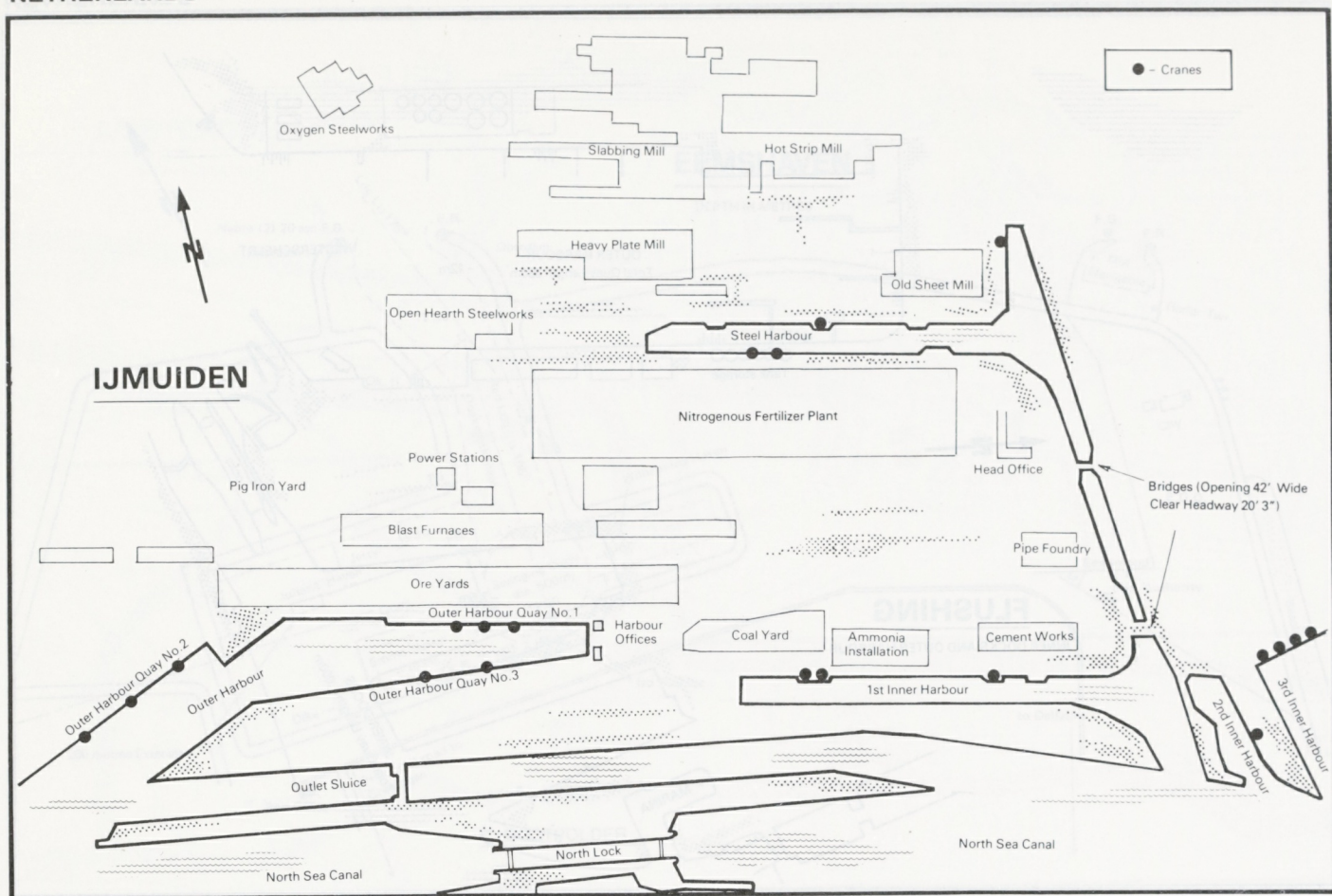


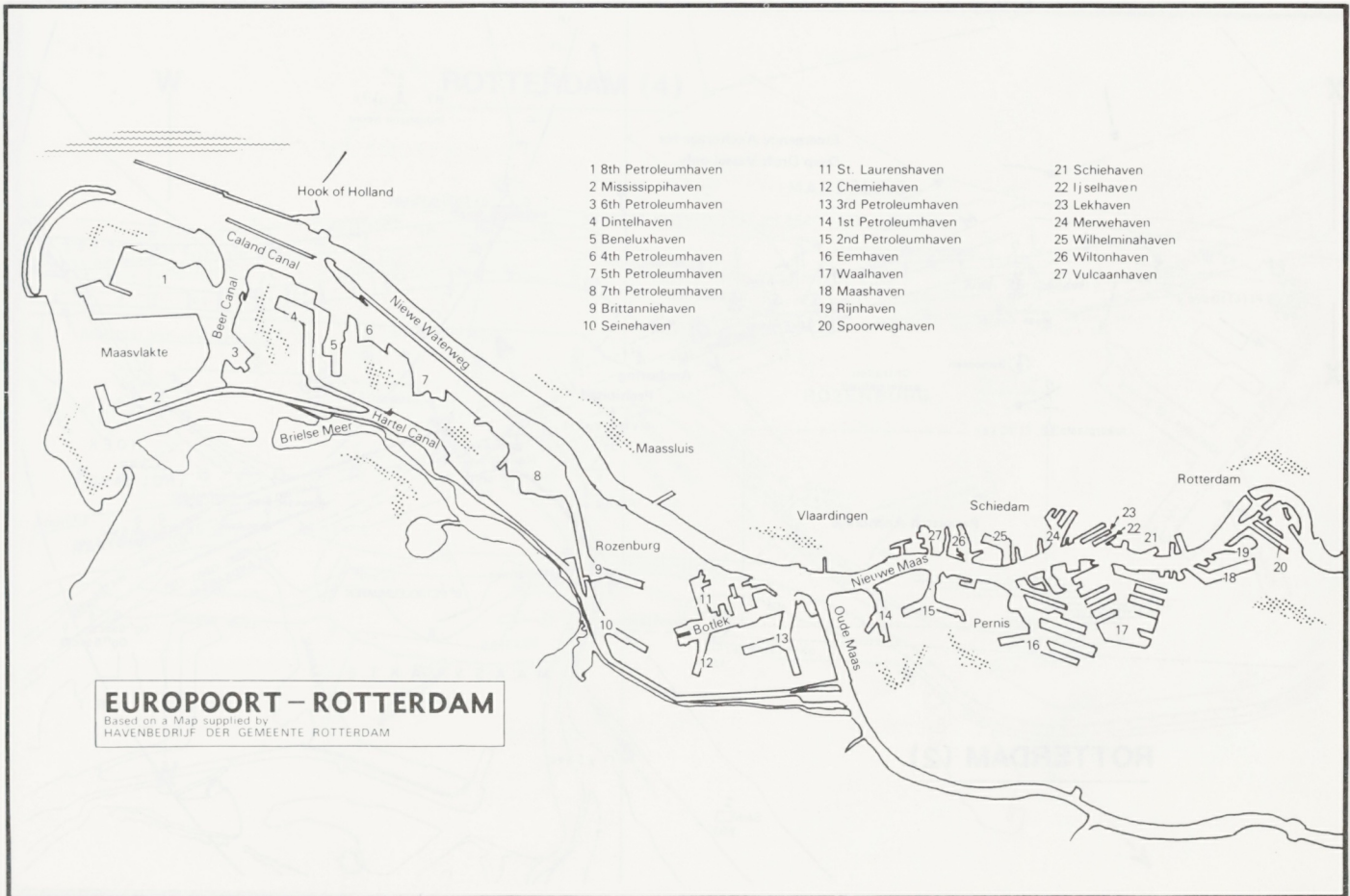
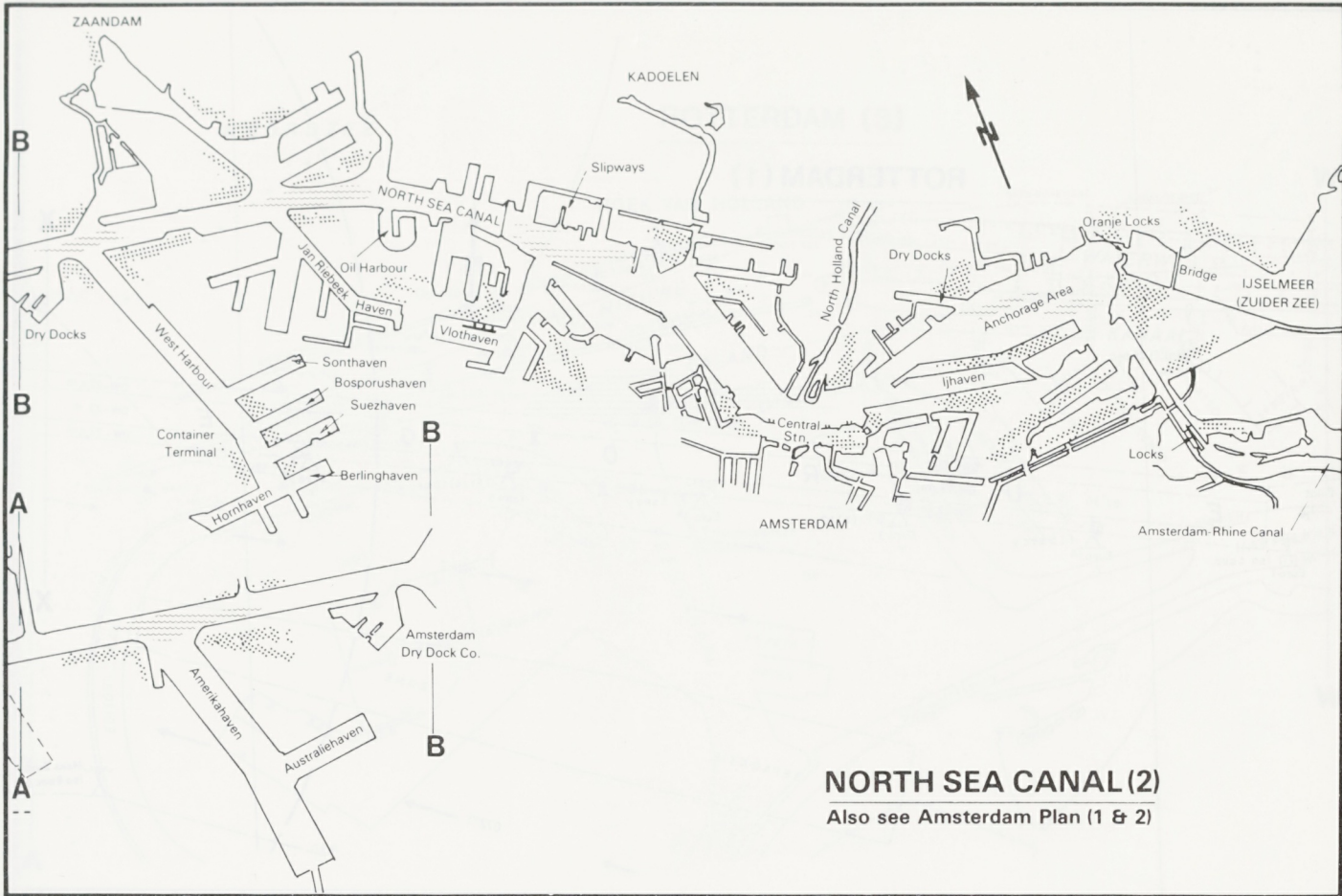




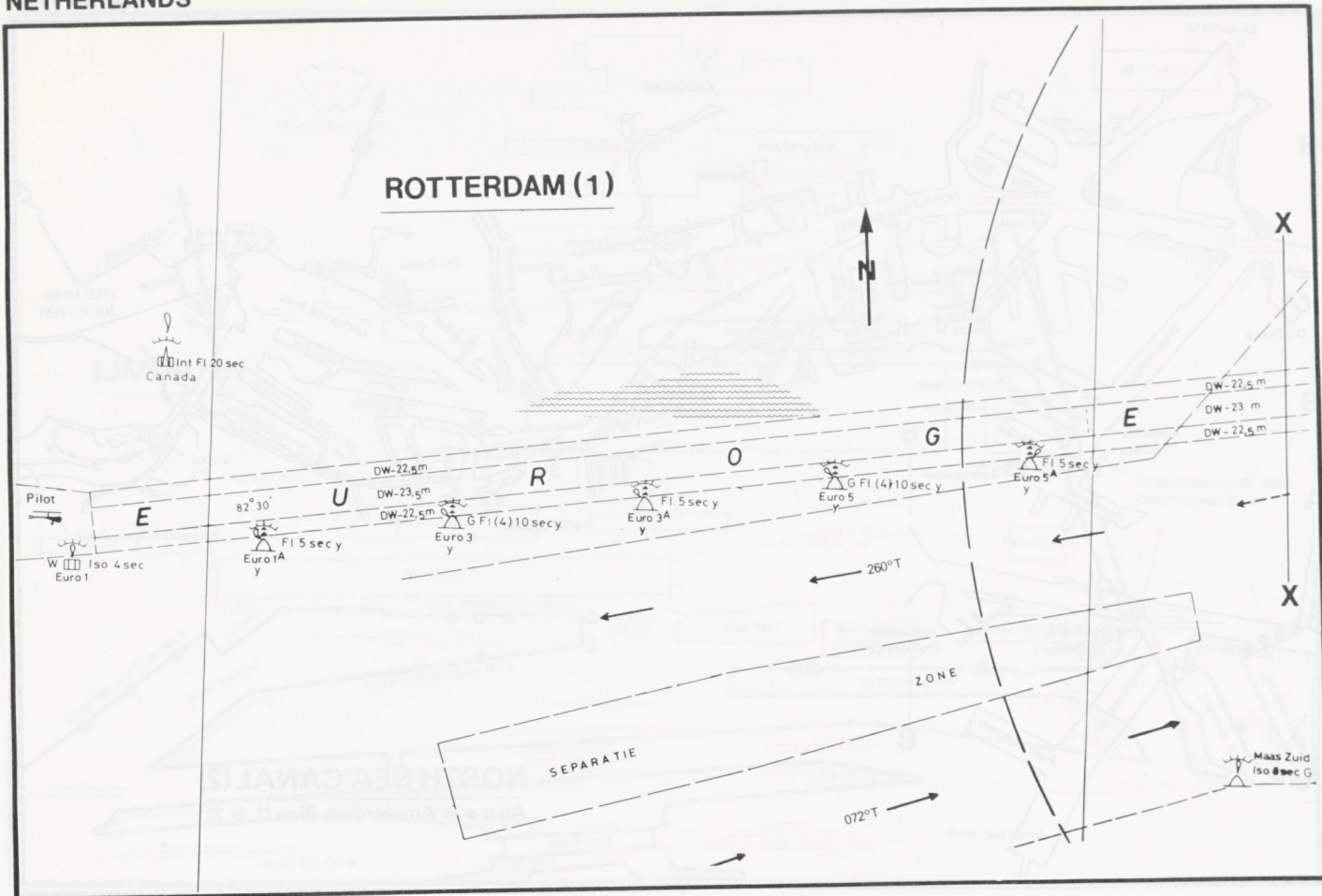




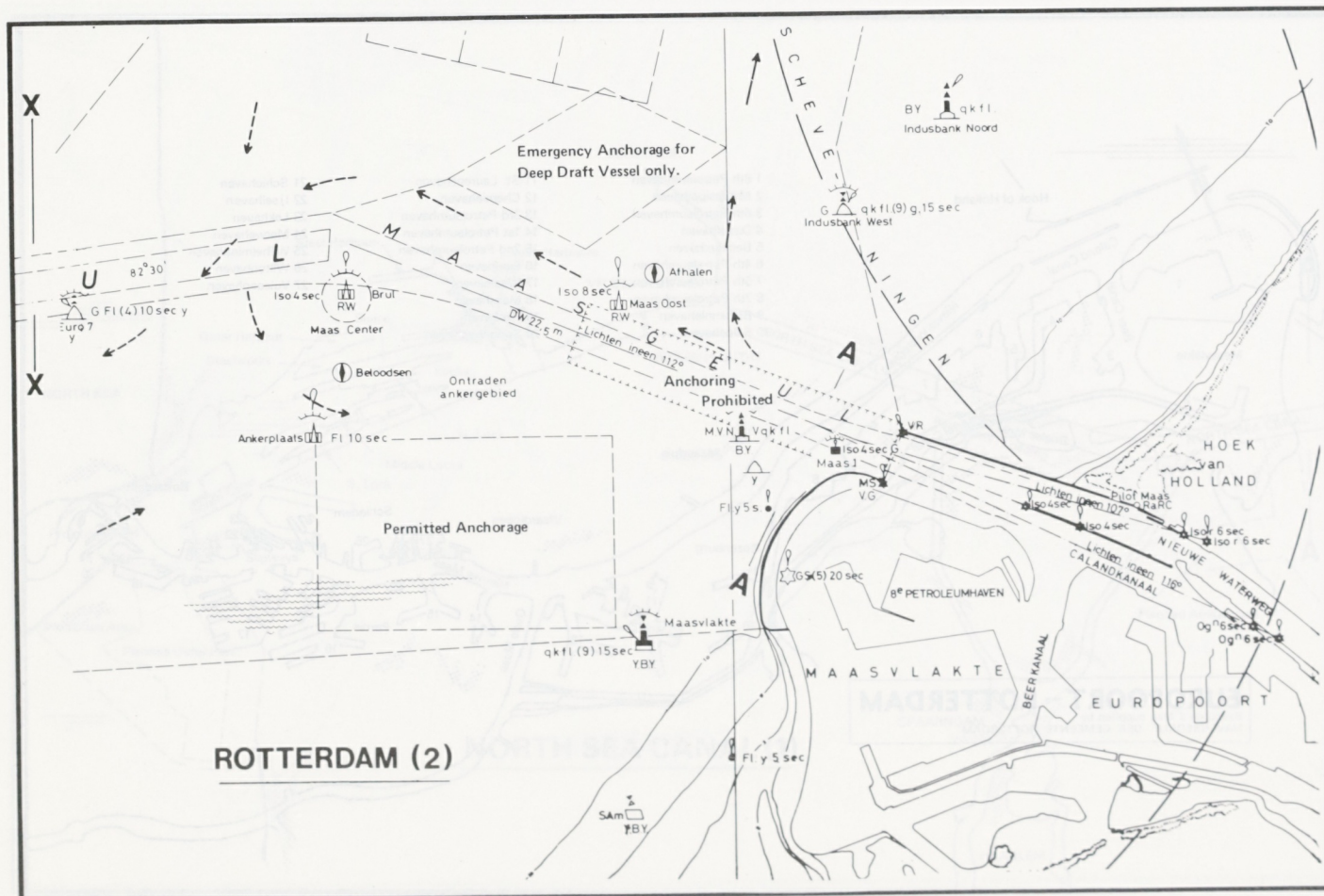




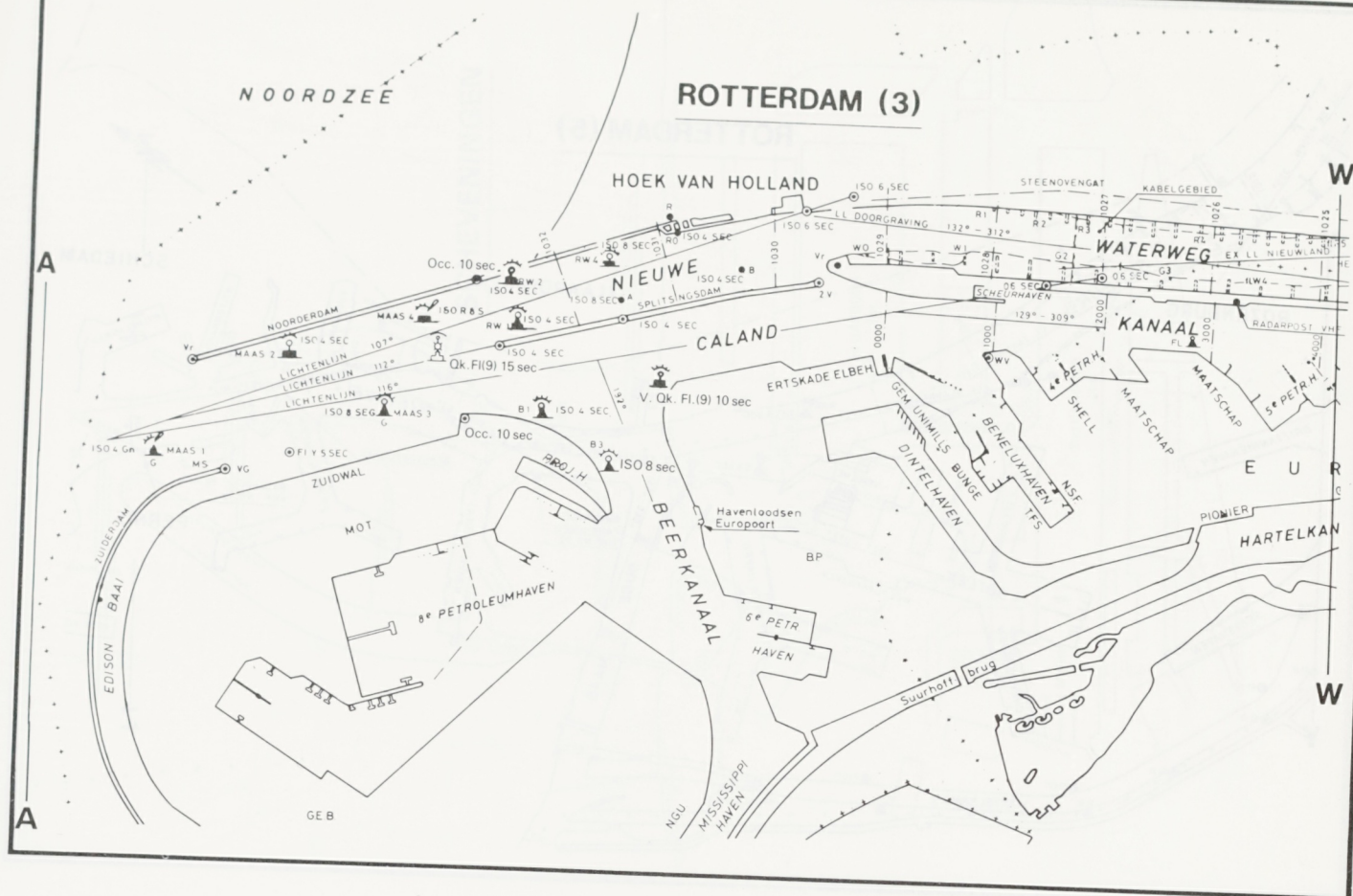
ROTTERDAM (1)



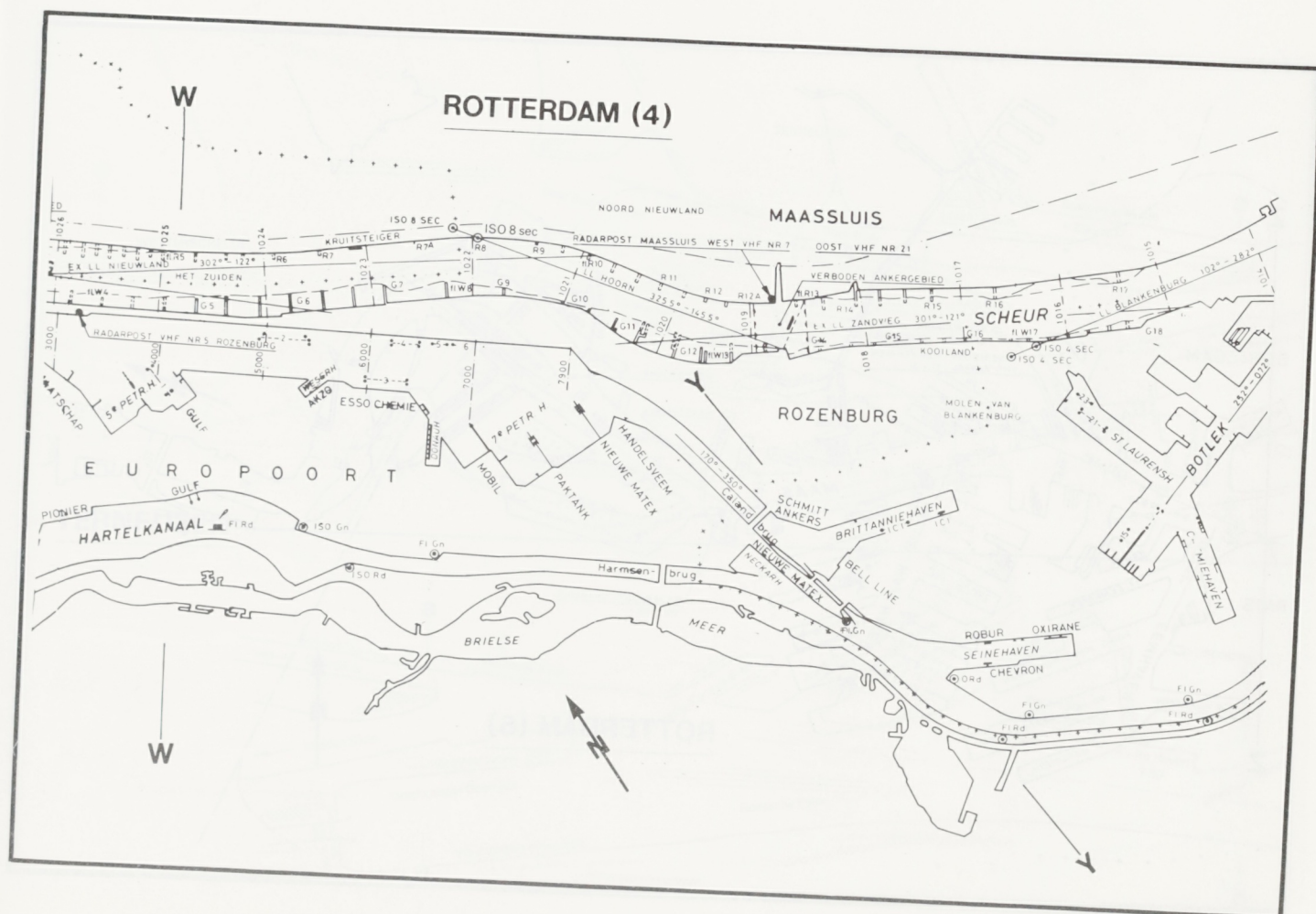
ROTTERDAM (2)



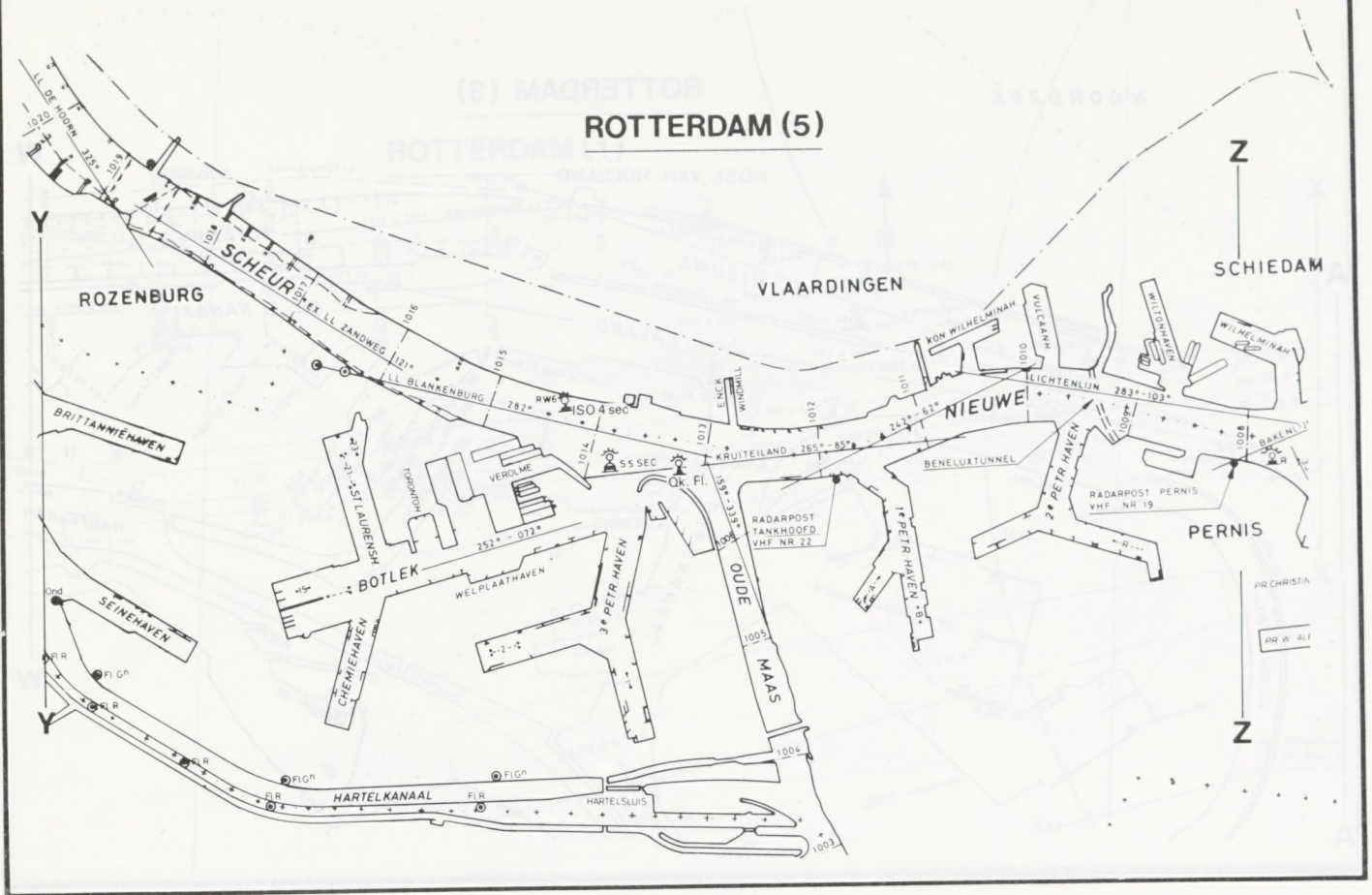
ROTTERDAM (3)



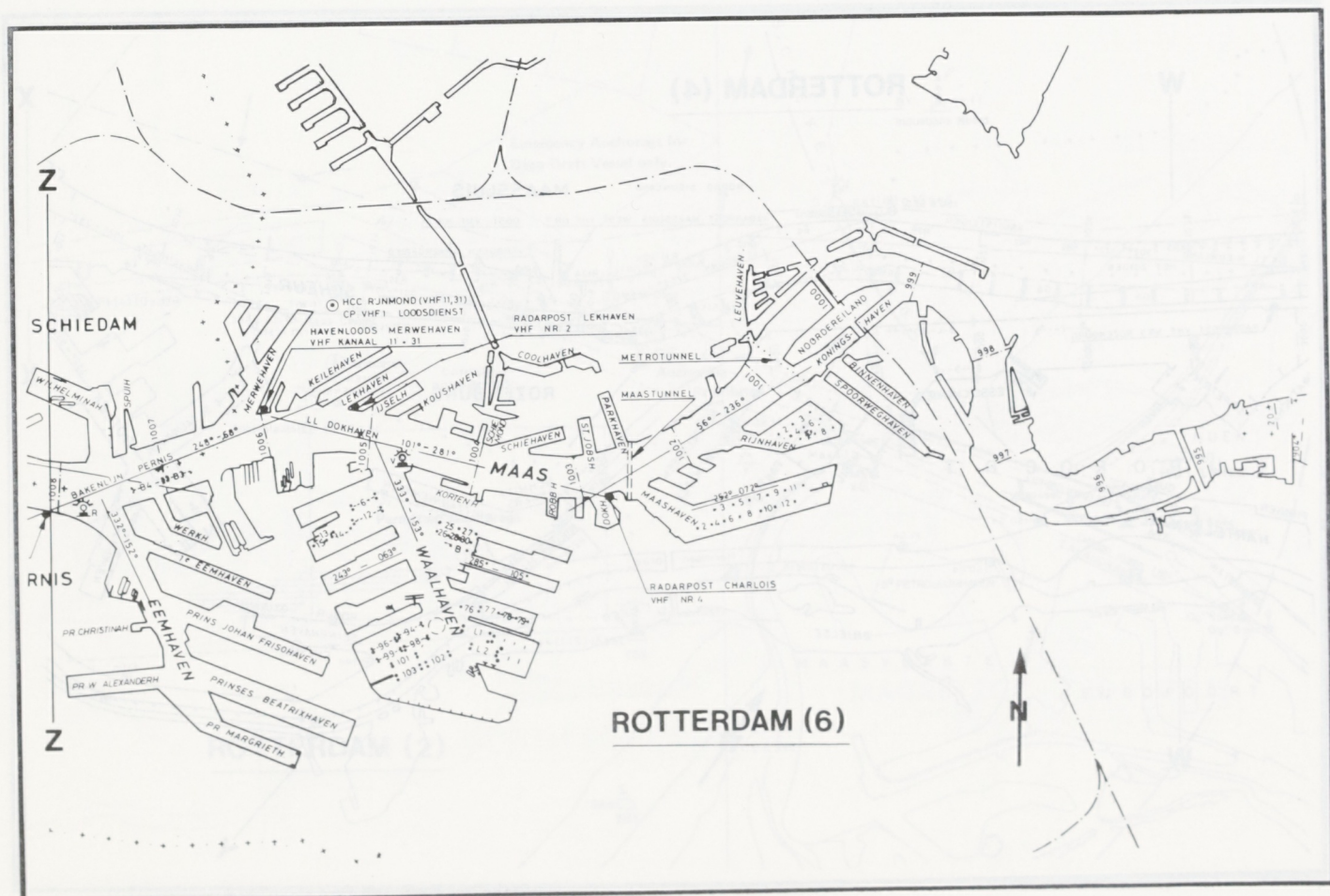
ROTTERDAM (4)

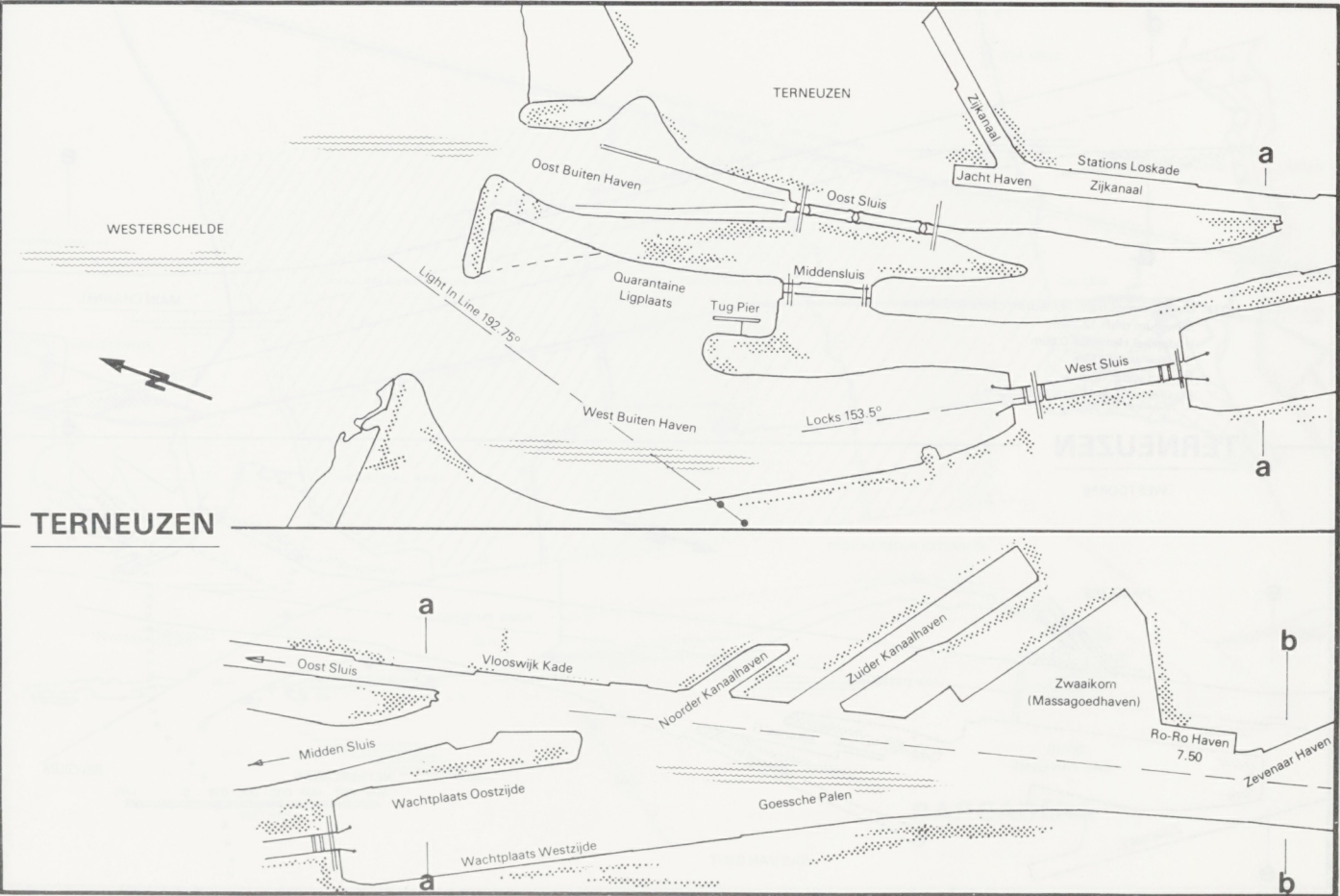
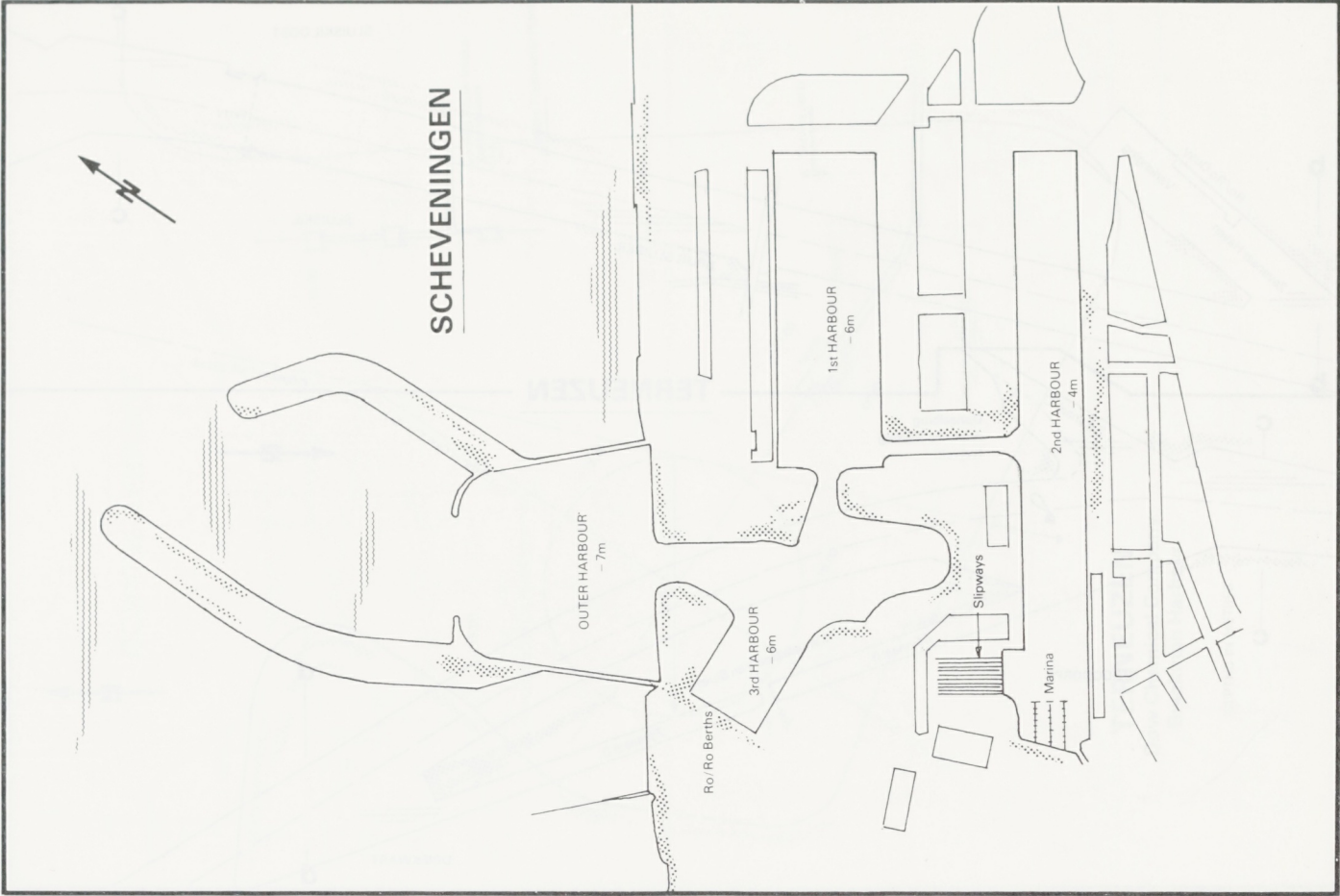


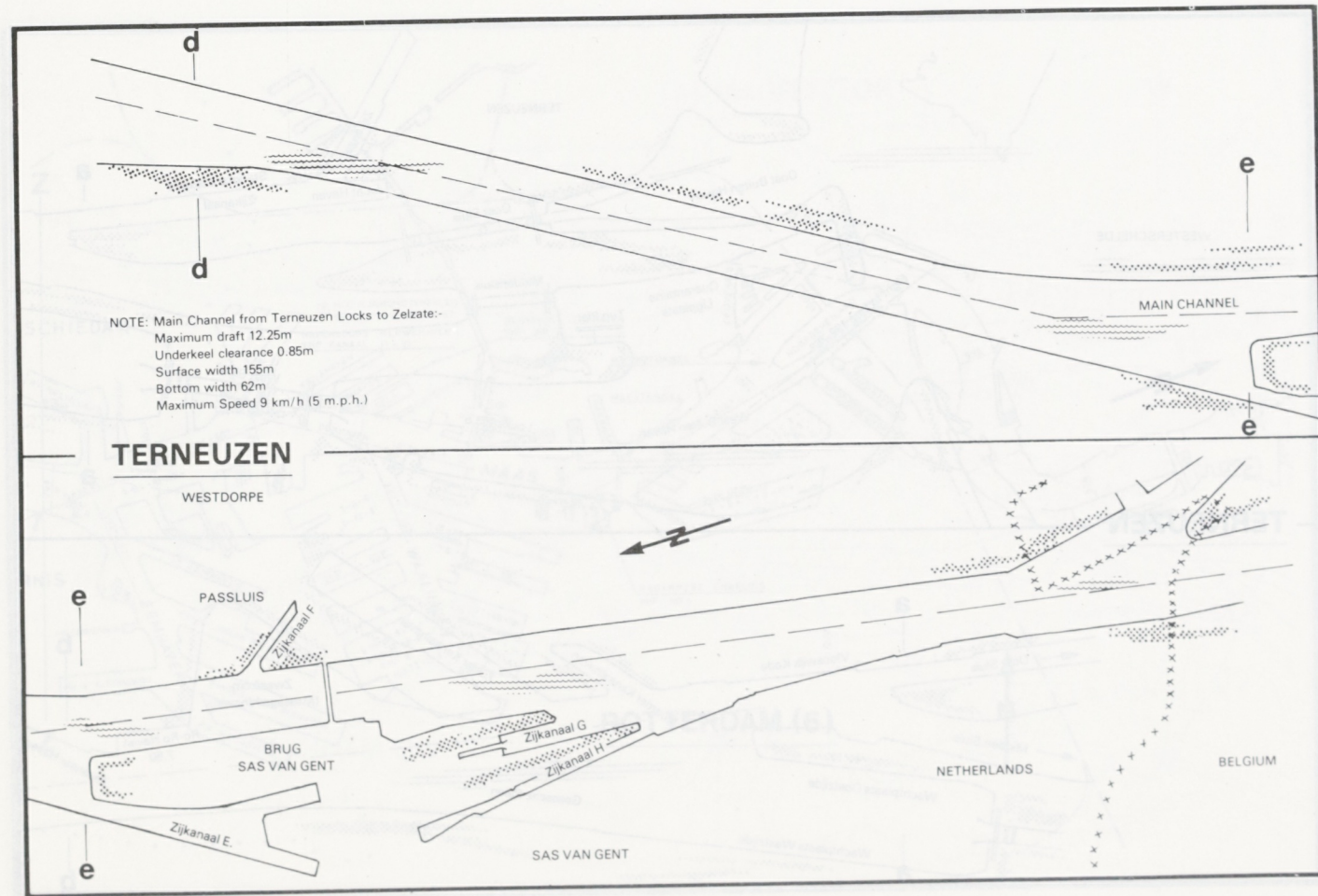
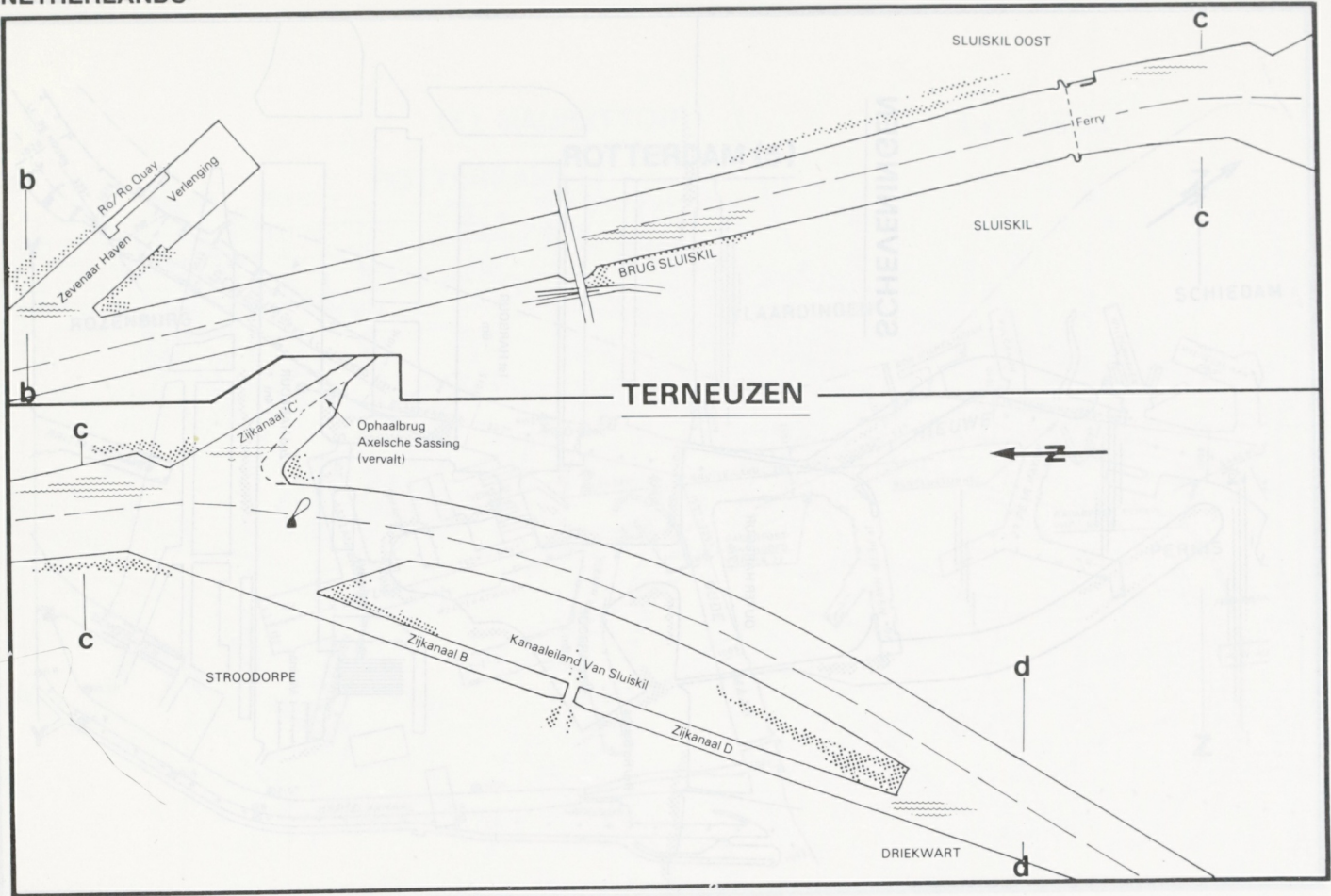
ROTTERDAM (5)

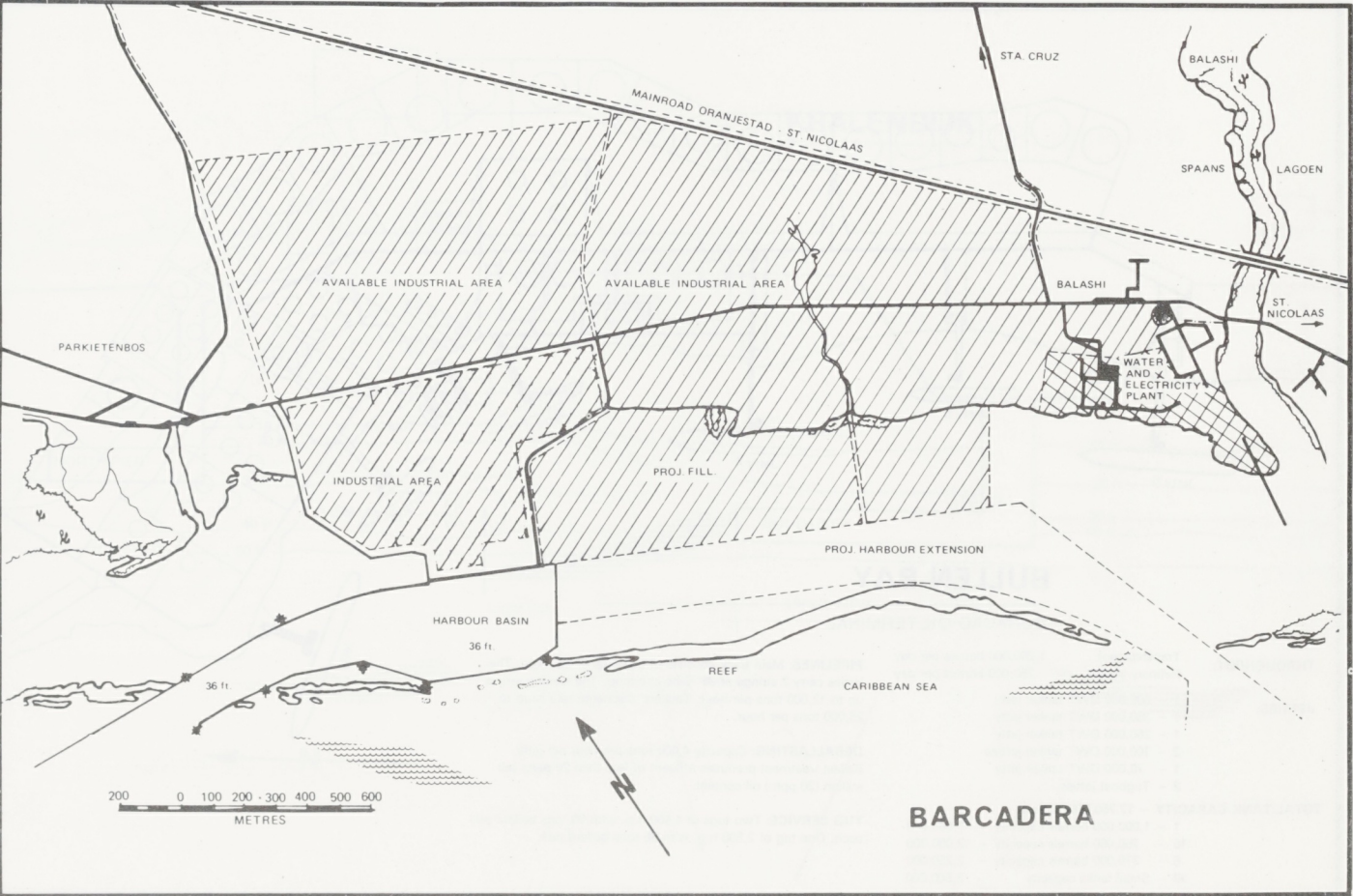
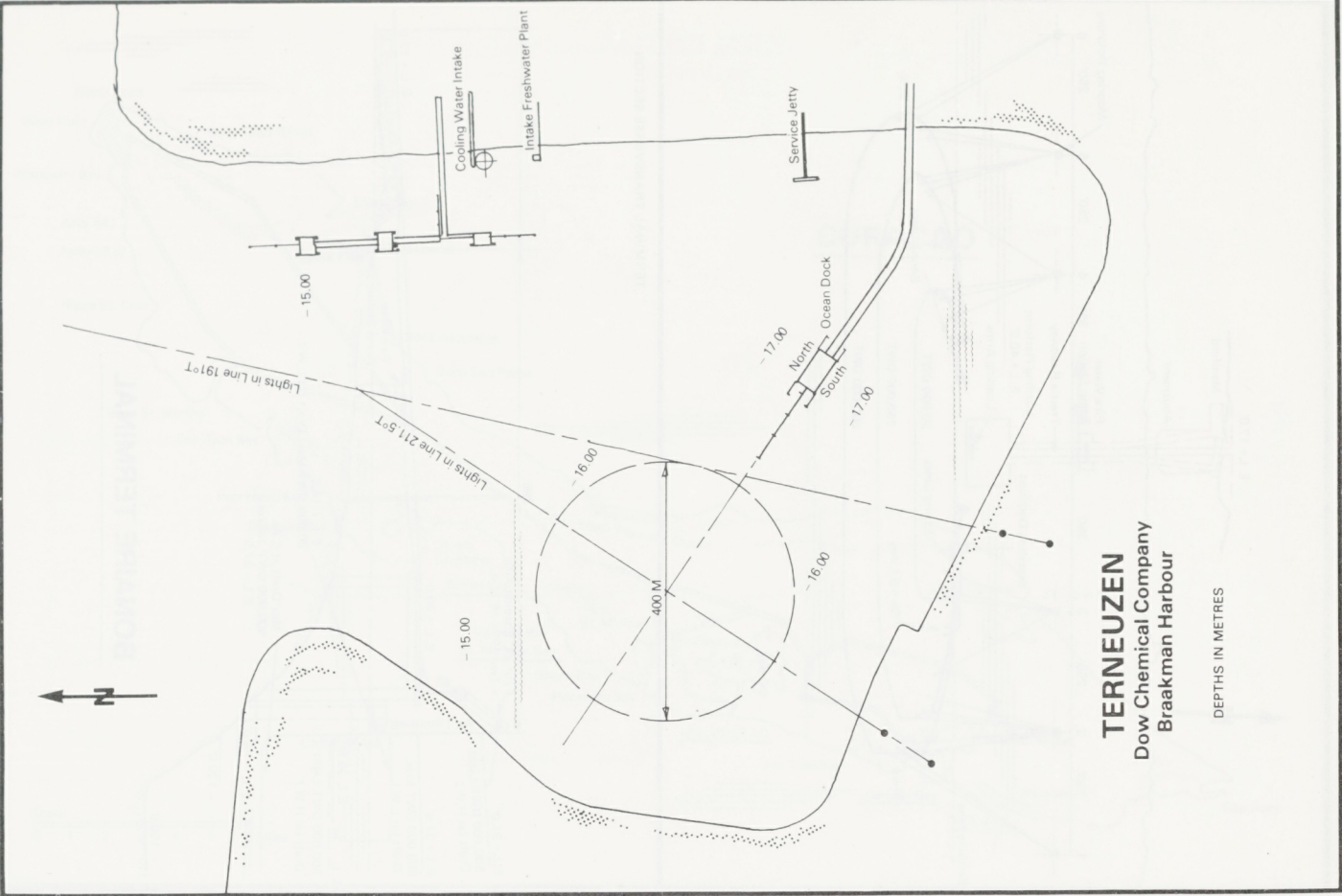


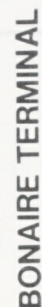
ROTTERDAM (6)











CURACAO OIL TERMINAL

THROUGHPUT:

Transshipment	1,200,000 barrels per day
Refinery import	250,000 barrels per day

JETTIES:

- 1 - 500,000 DWT tanker jetty
- 1 - 350,000 DWT tanker jetty
- 1 - 250,000 DWT tanker jetty
- 2 - 100,000 DWT tanker jetties
- 1 - 70,000 DWT tanker jetty
- 2 - Tugboat jetties

TOTAL TANK CAPACITY - 17,750,000 barrels

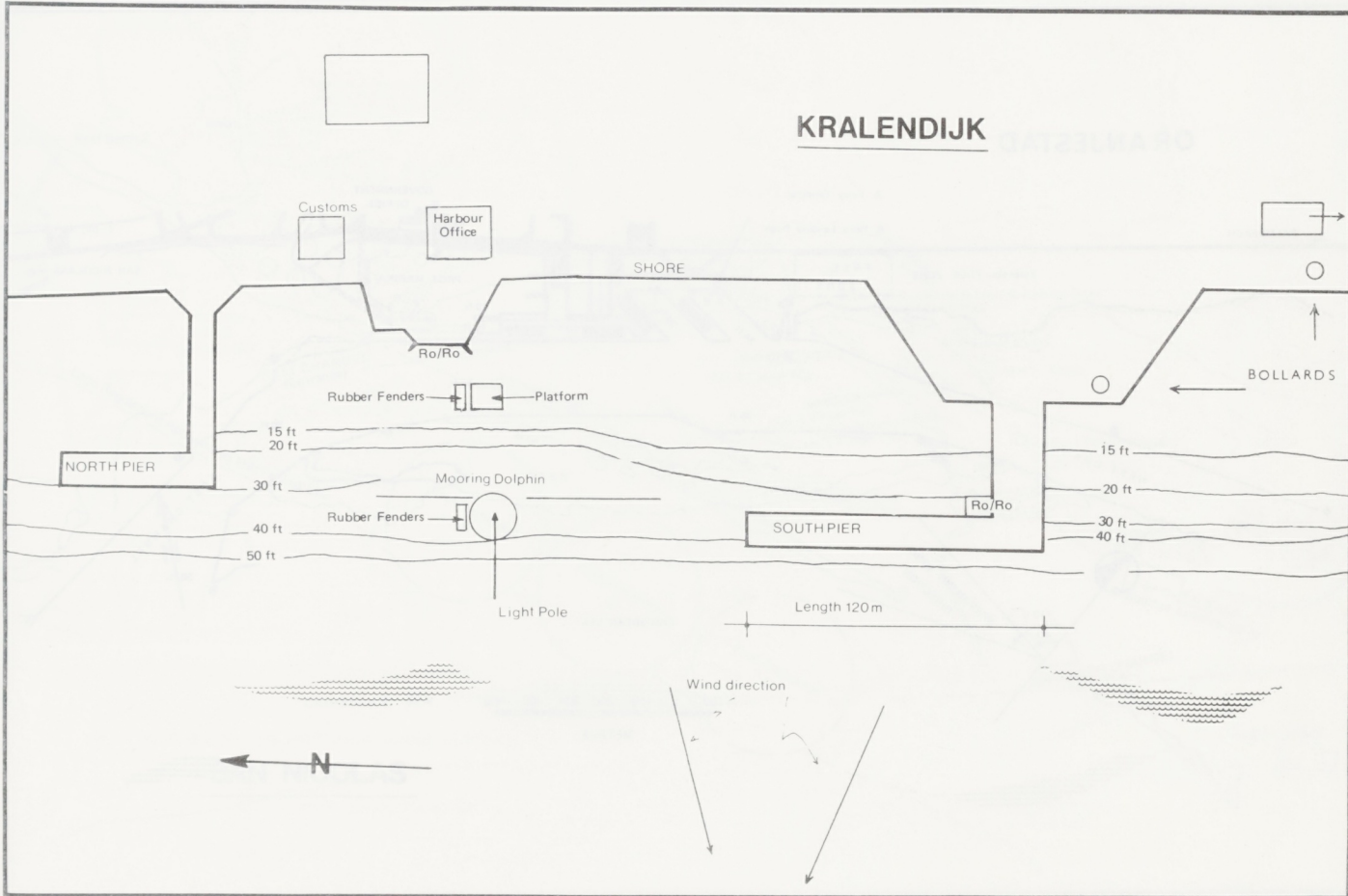
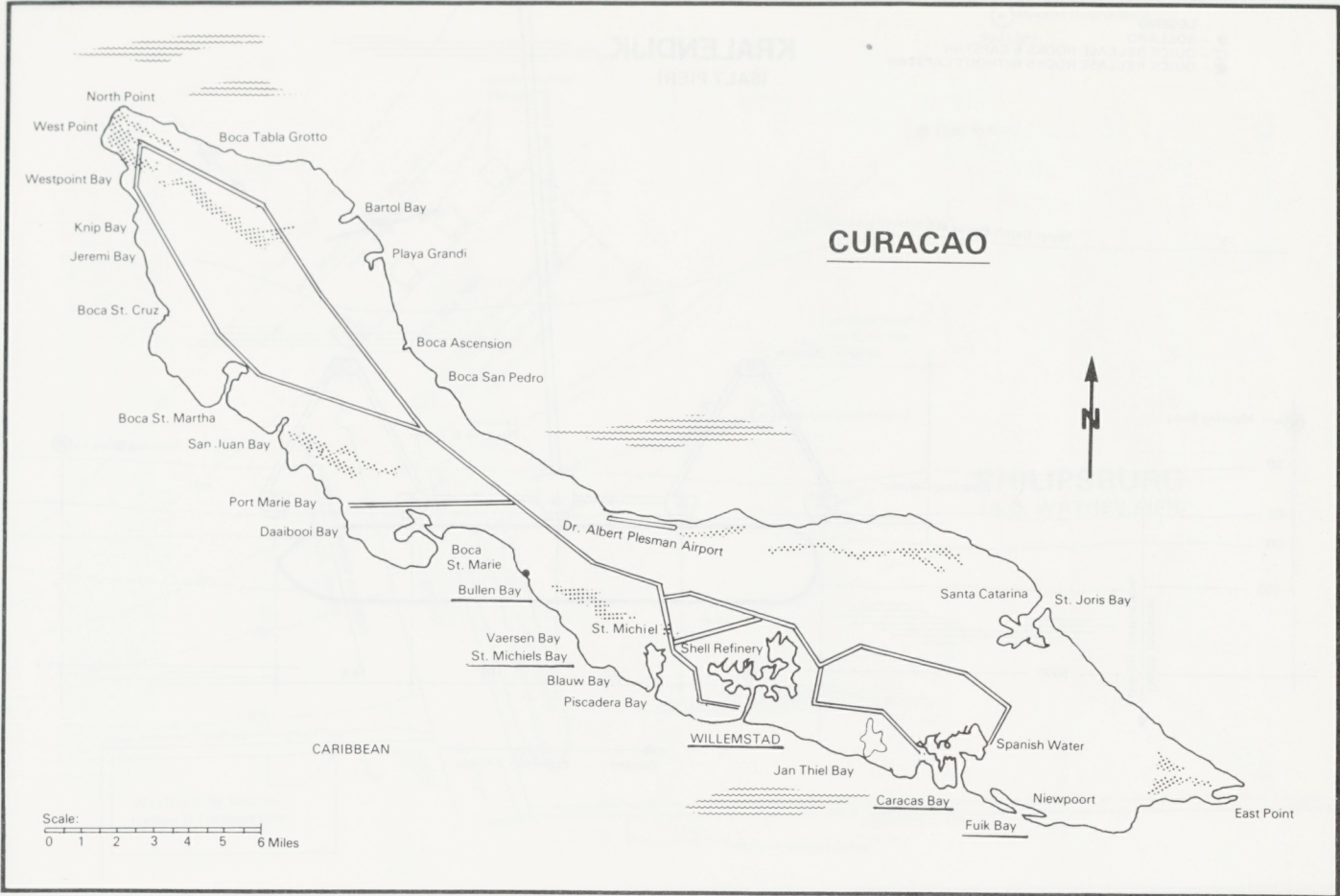
- | | | |
|----|------------------------------|--------------|
| 1 | - 1,000,000 barrels capacity | - 1,000,000 |
| 16 | - 750,000 barrels capacity | - 12,000,000 |
| 6 | - 375,000 barrels capacity | - 2,250,000 |
| 38 | - Small tanks capacity | - 2,500,000 |

PIPELINES: Main track consists of 5 strings of 36" pipe. The jetties carry 2 strings of 36" pipe in a loop. The loading rate is up to 12,000 tons per hour. Tankers' discharge rate is up to 25,000 tons per hour.

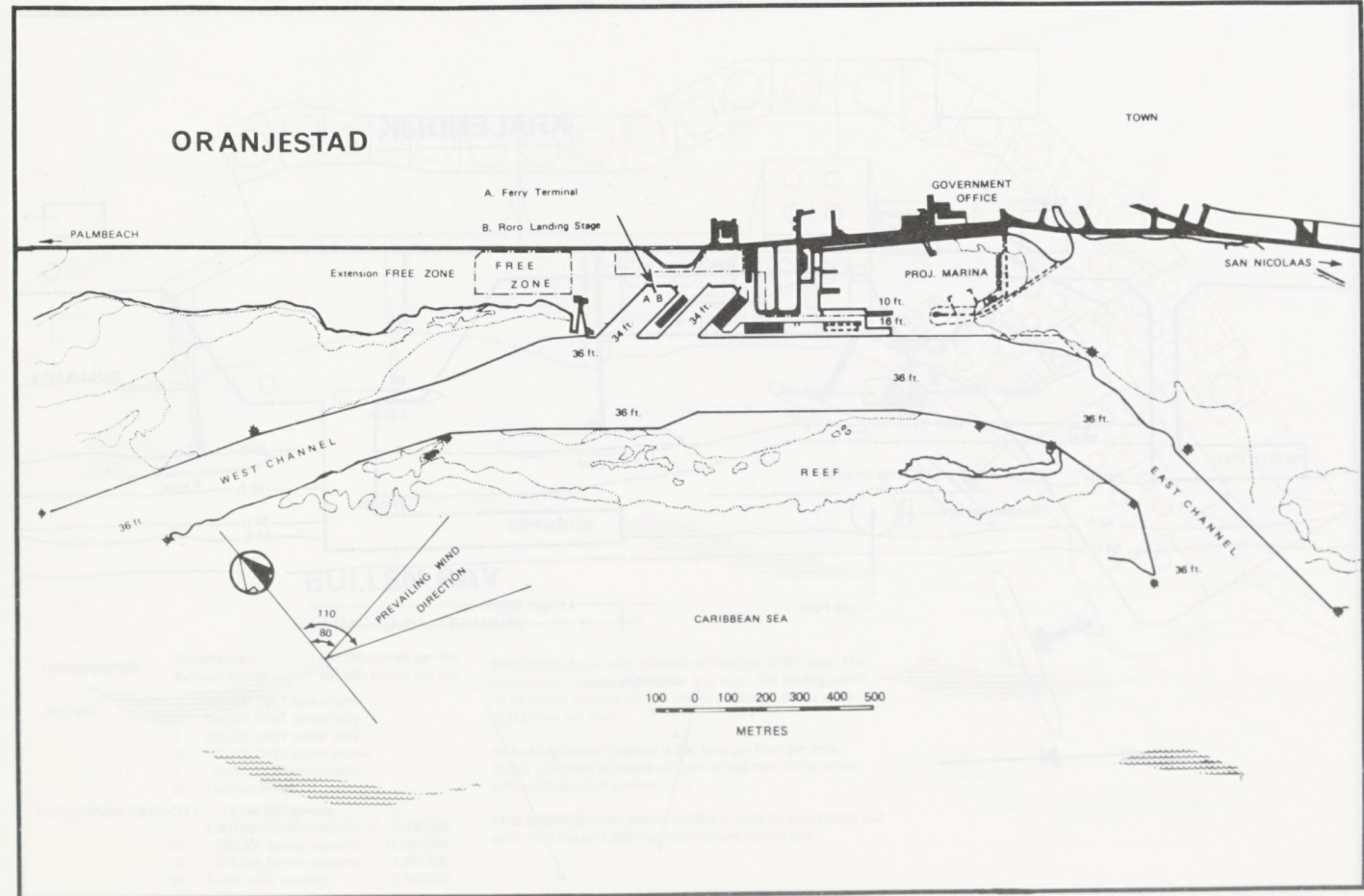
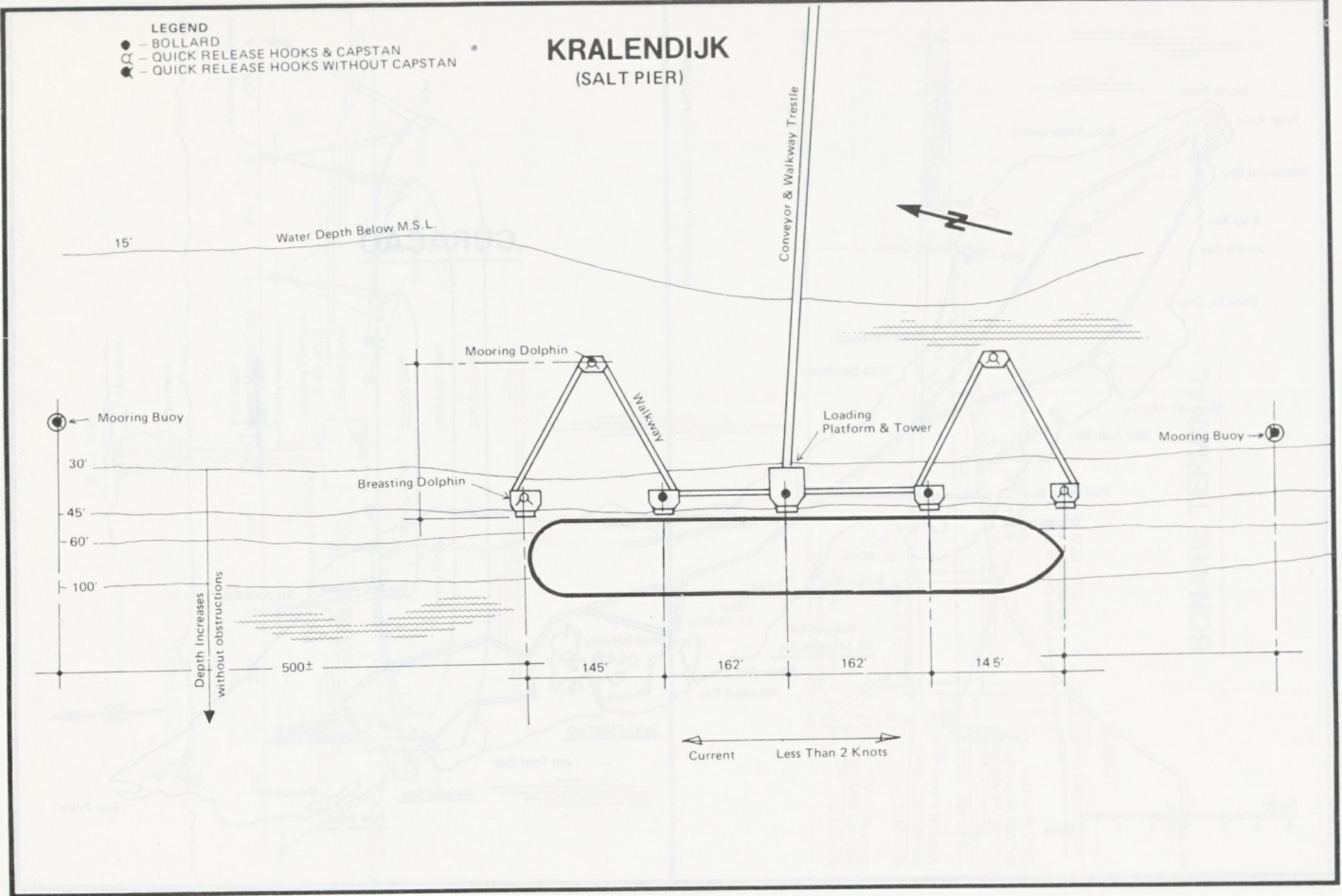
DEBALLASTING: Capacity 4,000 tons per hour per jetty. Ballast treatment produces affluent of less than 20 parts per million (20 ppm) oil content.

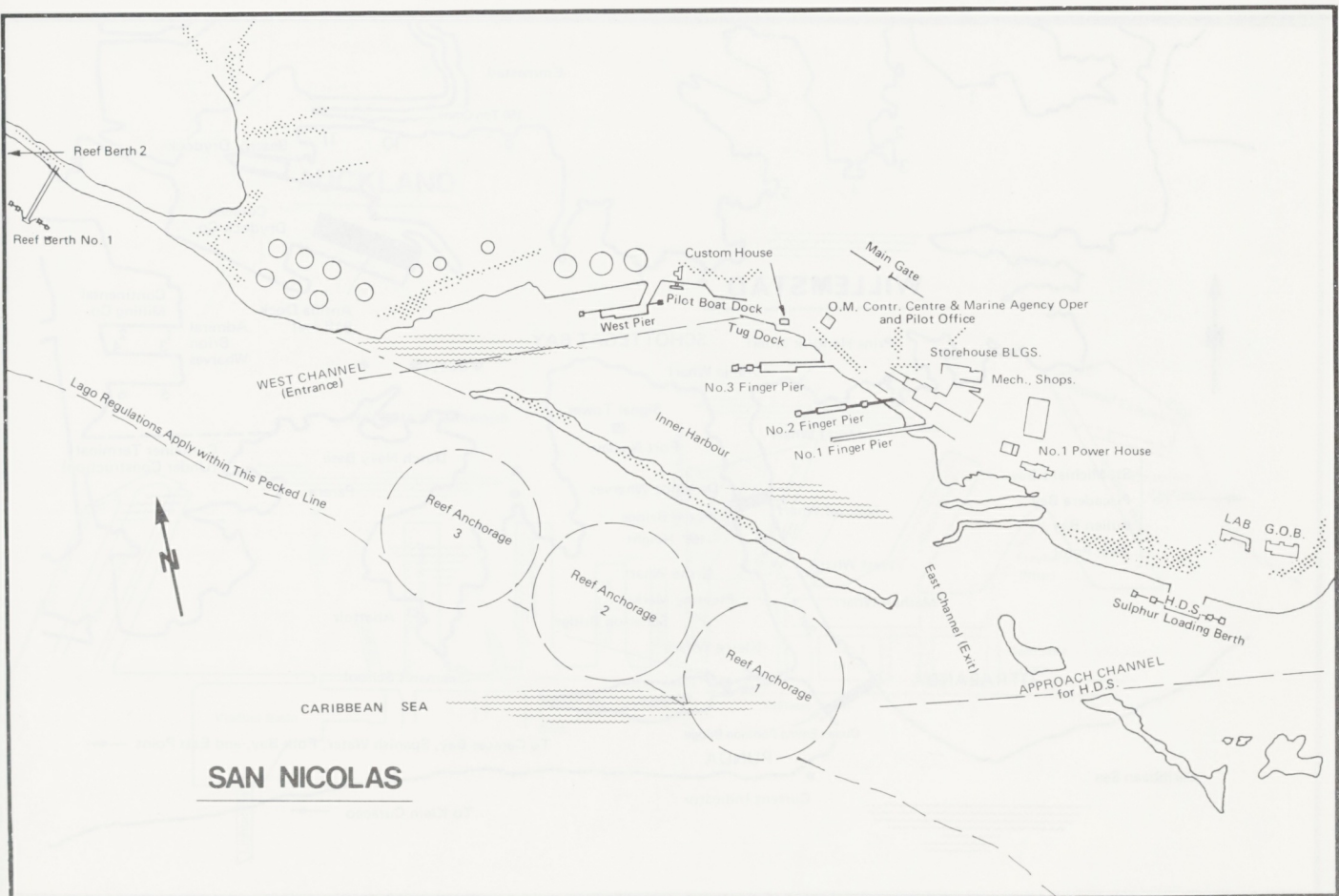
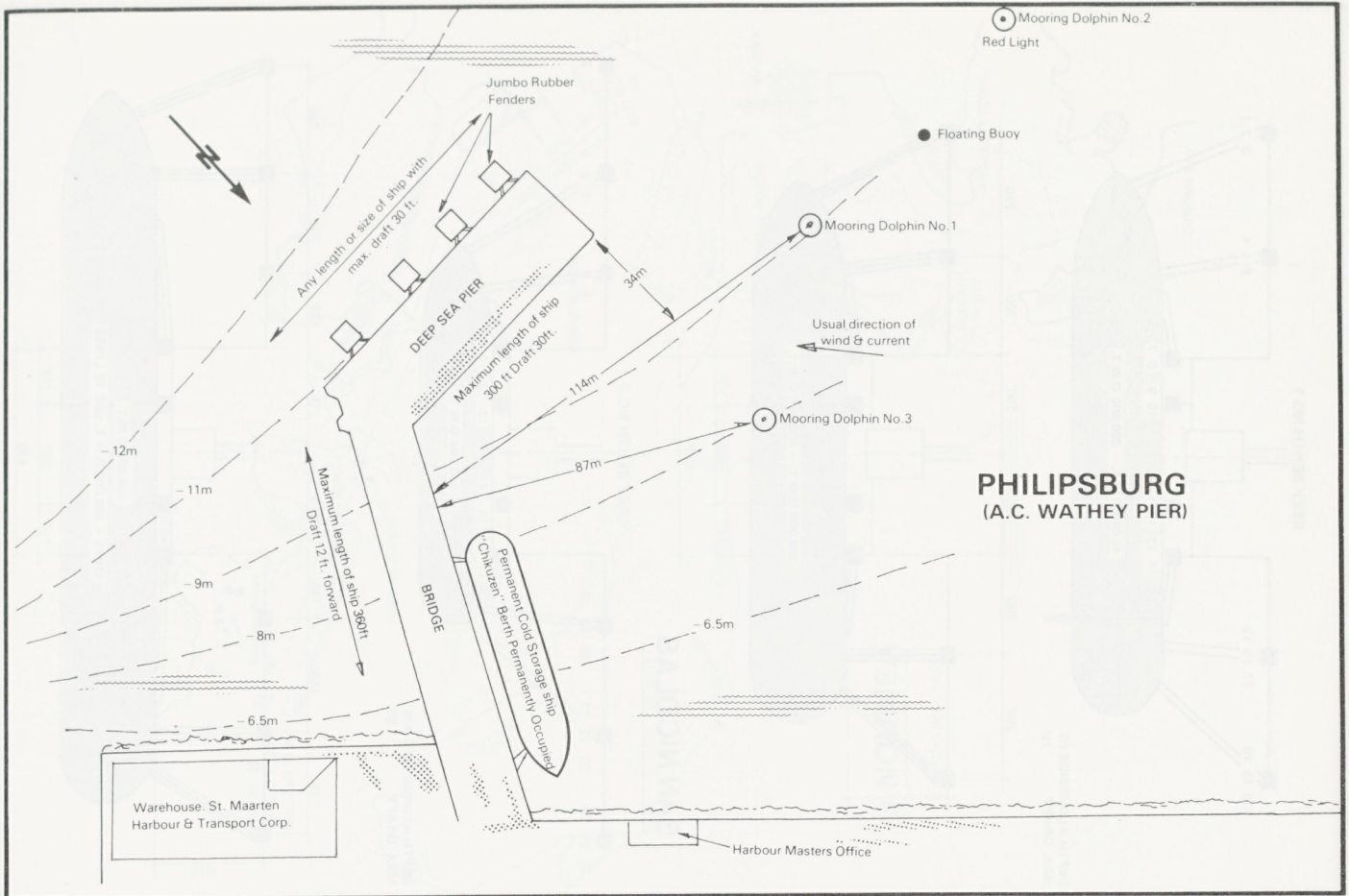
DEBALLASTING: Capacity 4,000 tons per hour per jetty. Ballast treatment produces affluent of less than 20 parts per million (20 ppm) oil content.

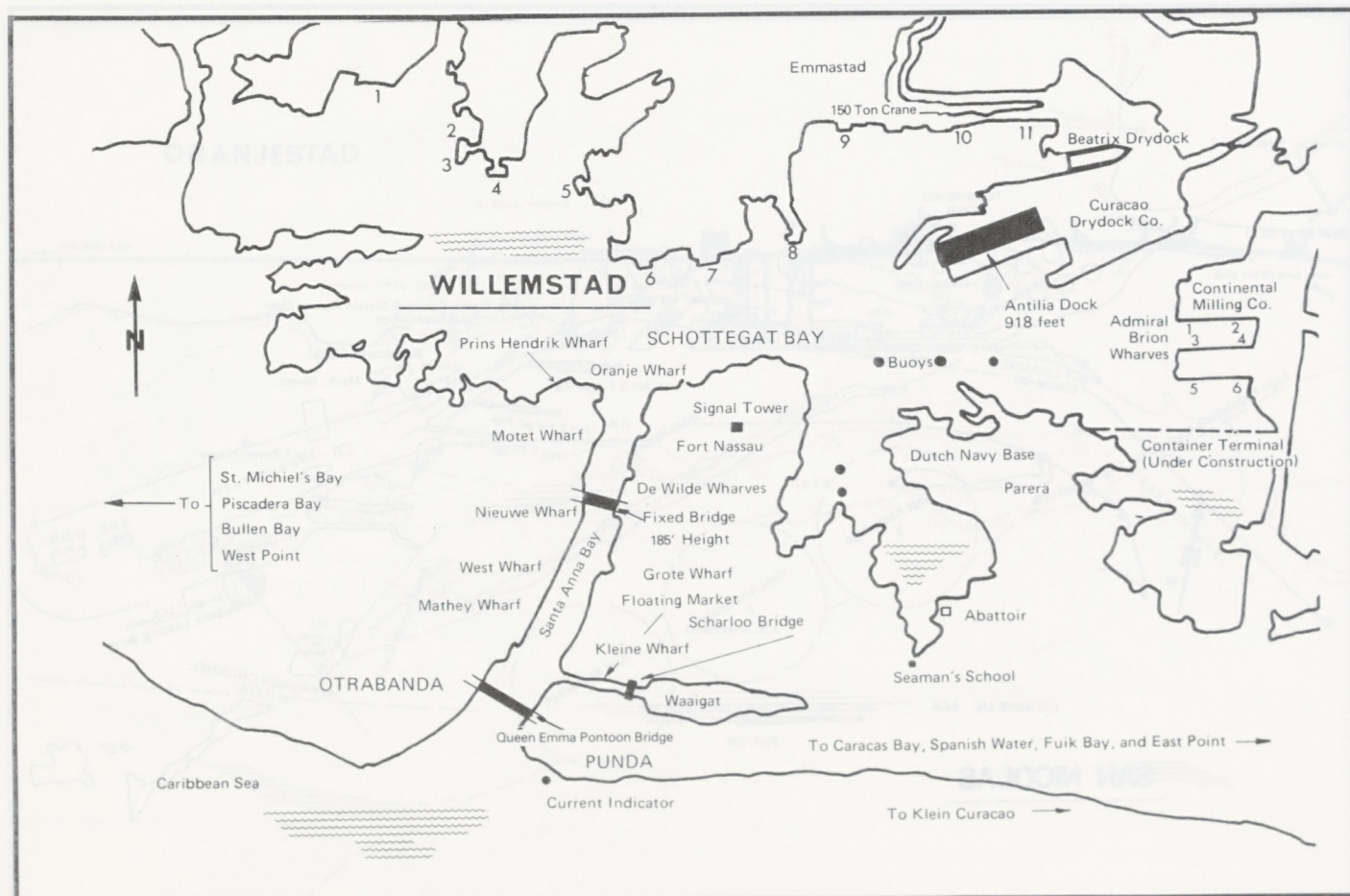
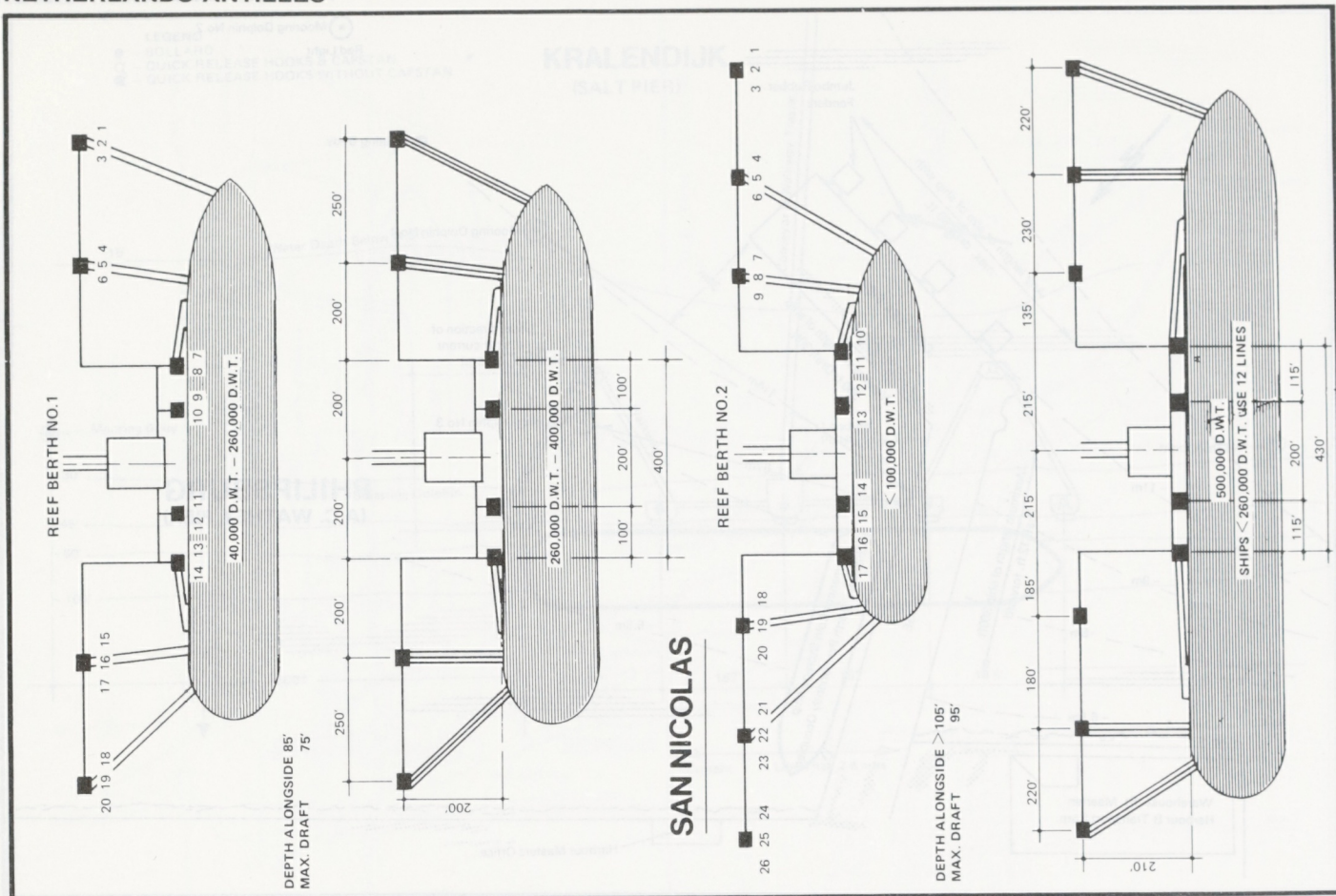
TUG SERVICE: Two tugs of 4,500 h.p. with 50 tons bollard pull each. One tug of 2,500 h.p. with 35 tons bollard pull.

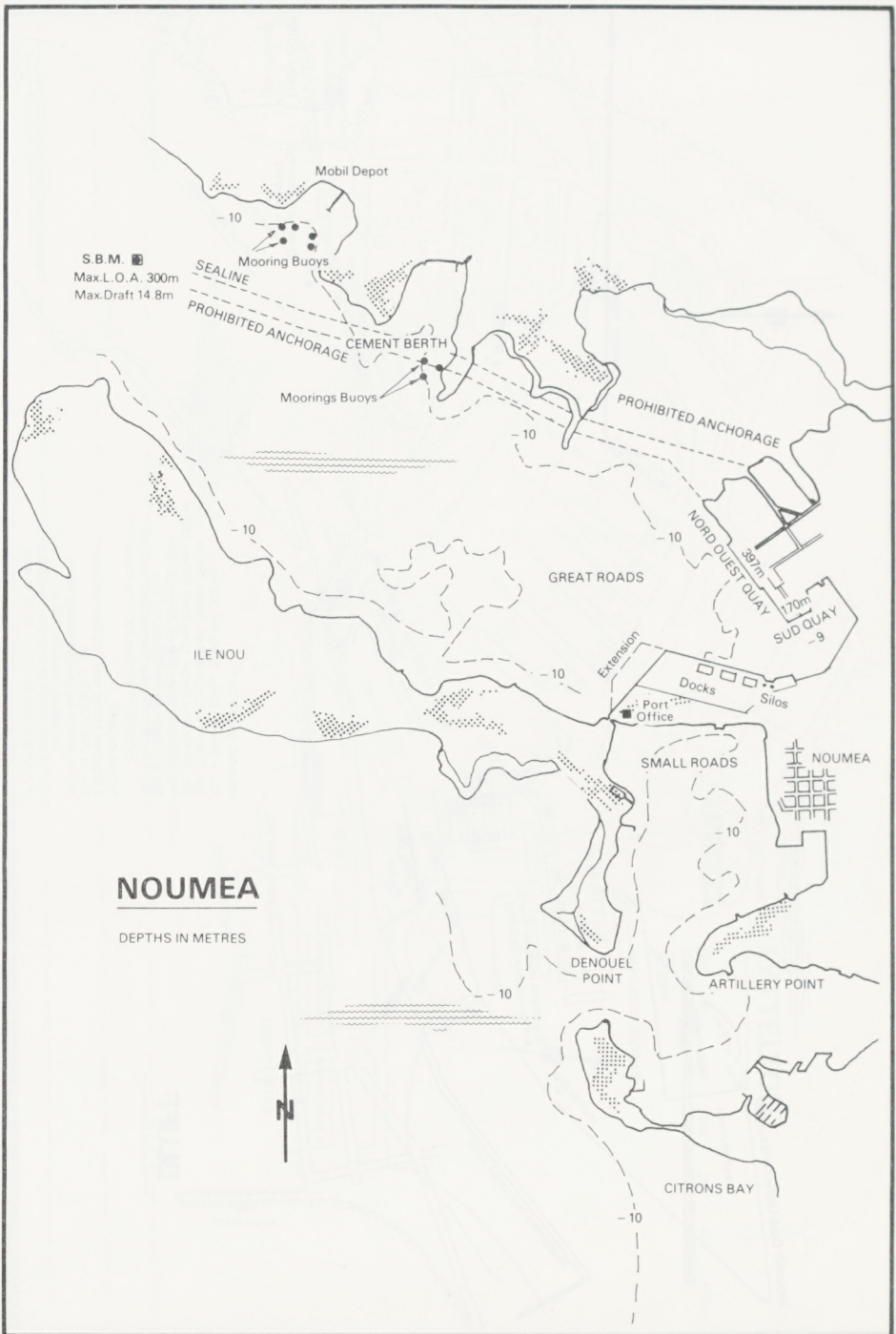


NETHERLANDS ANTILLES

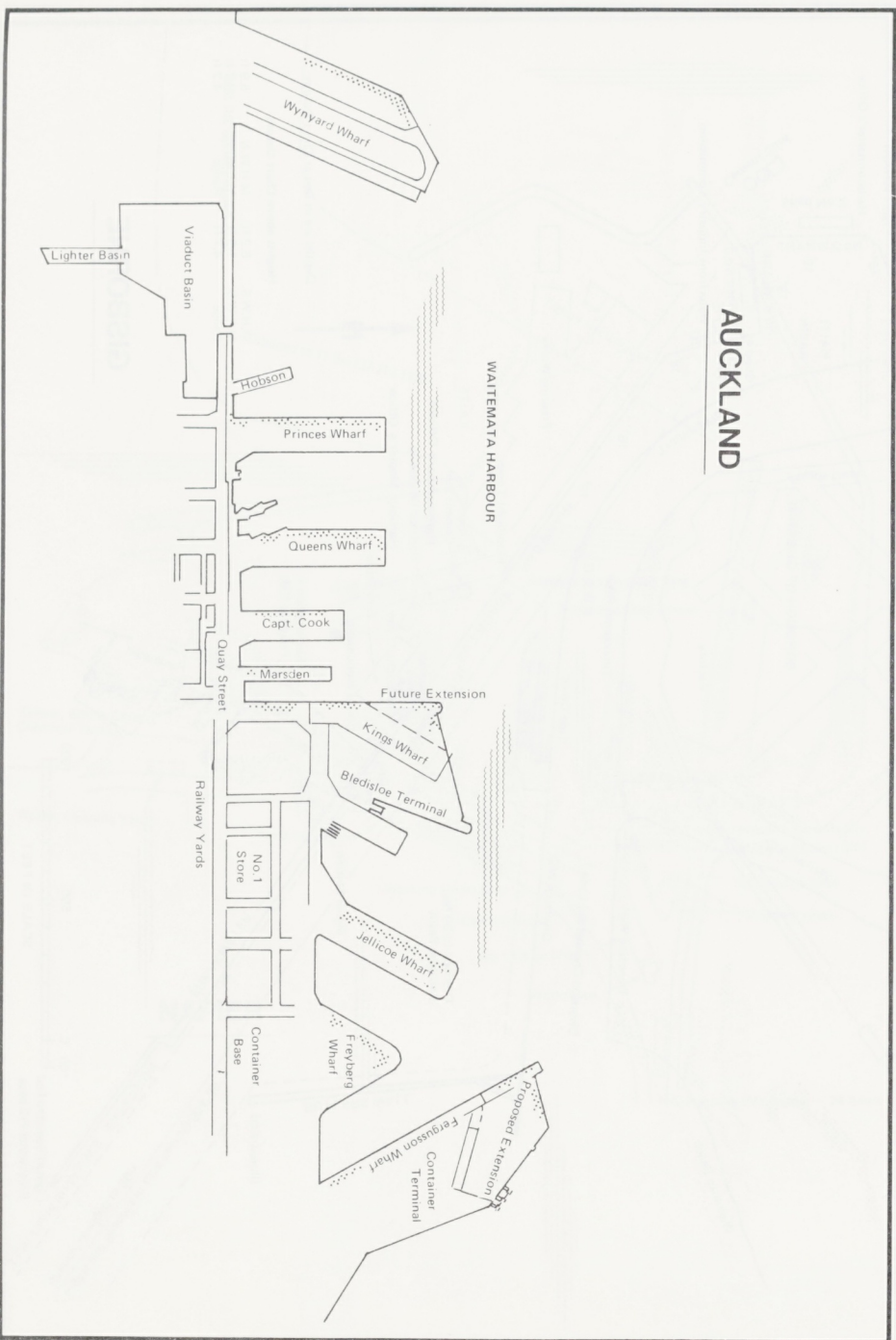


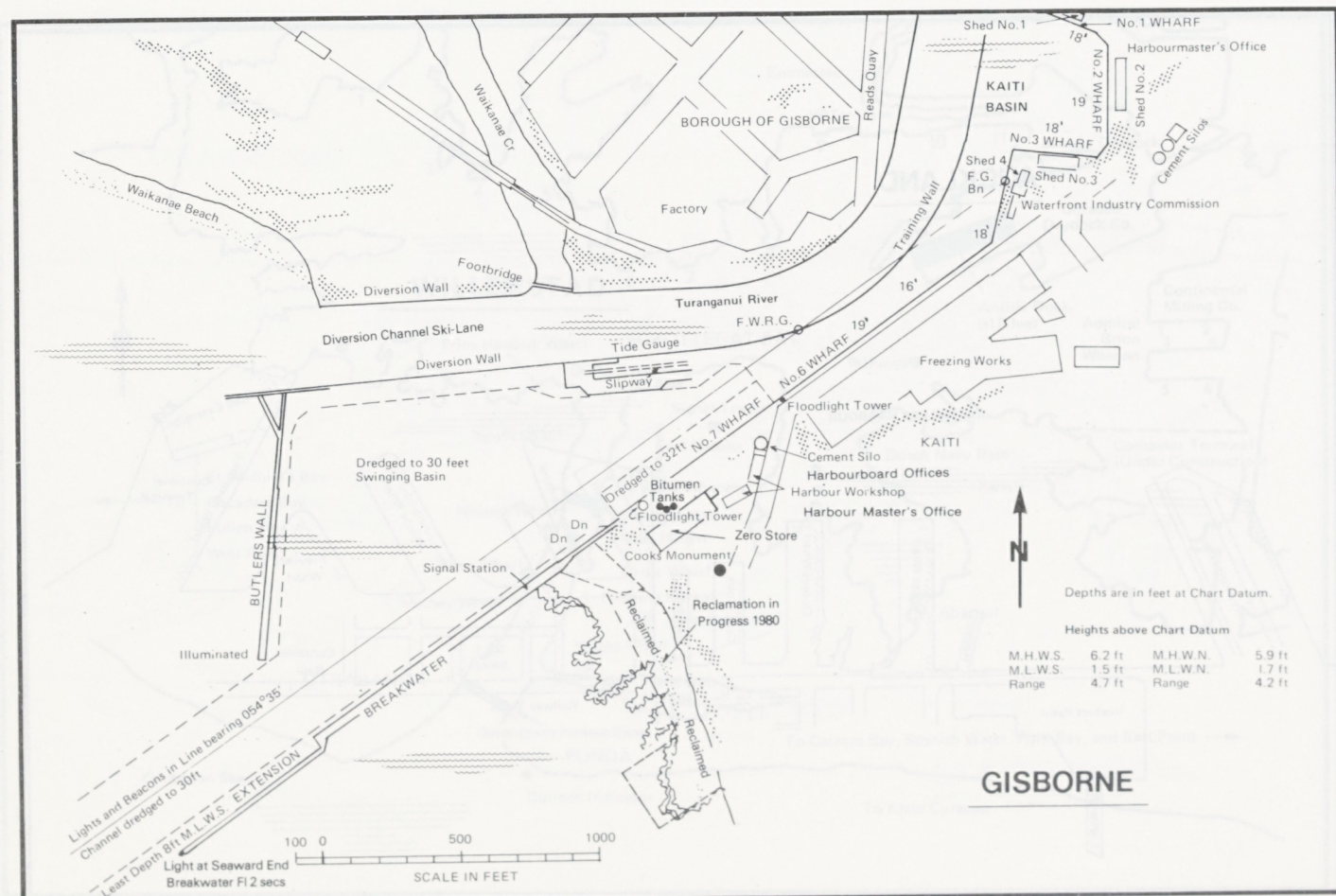
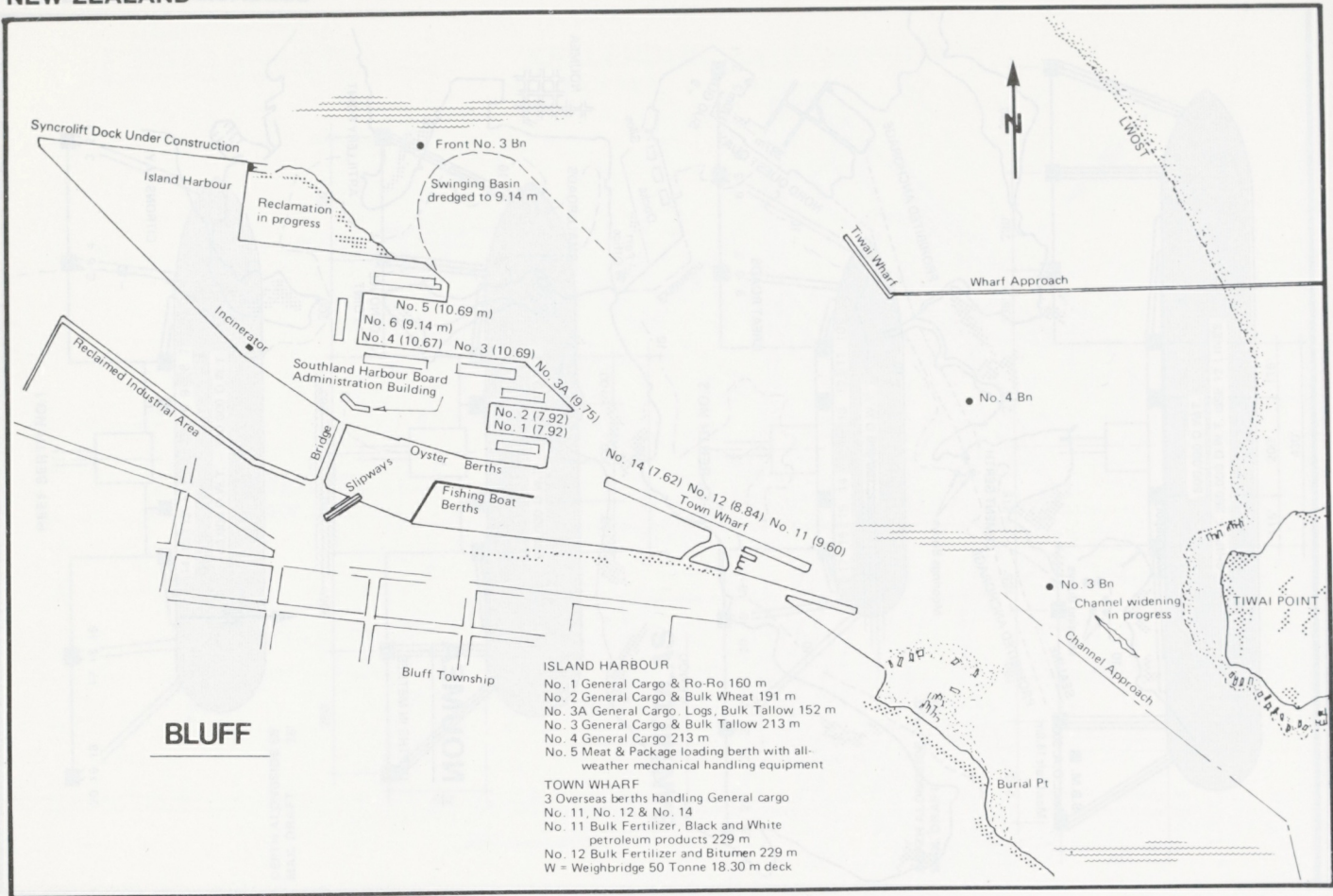


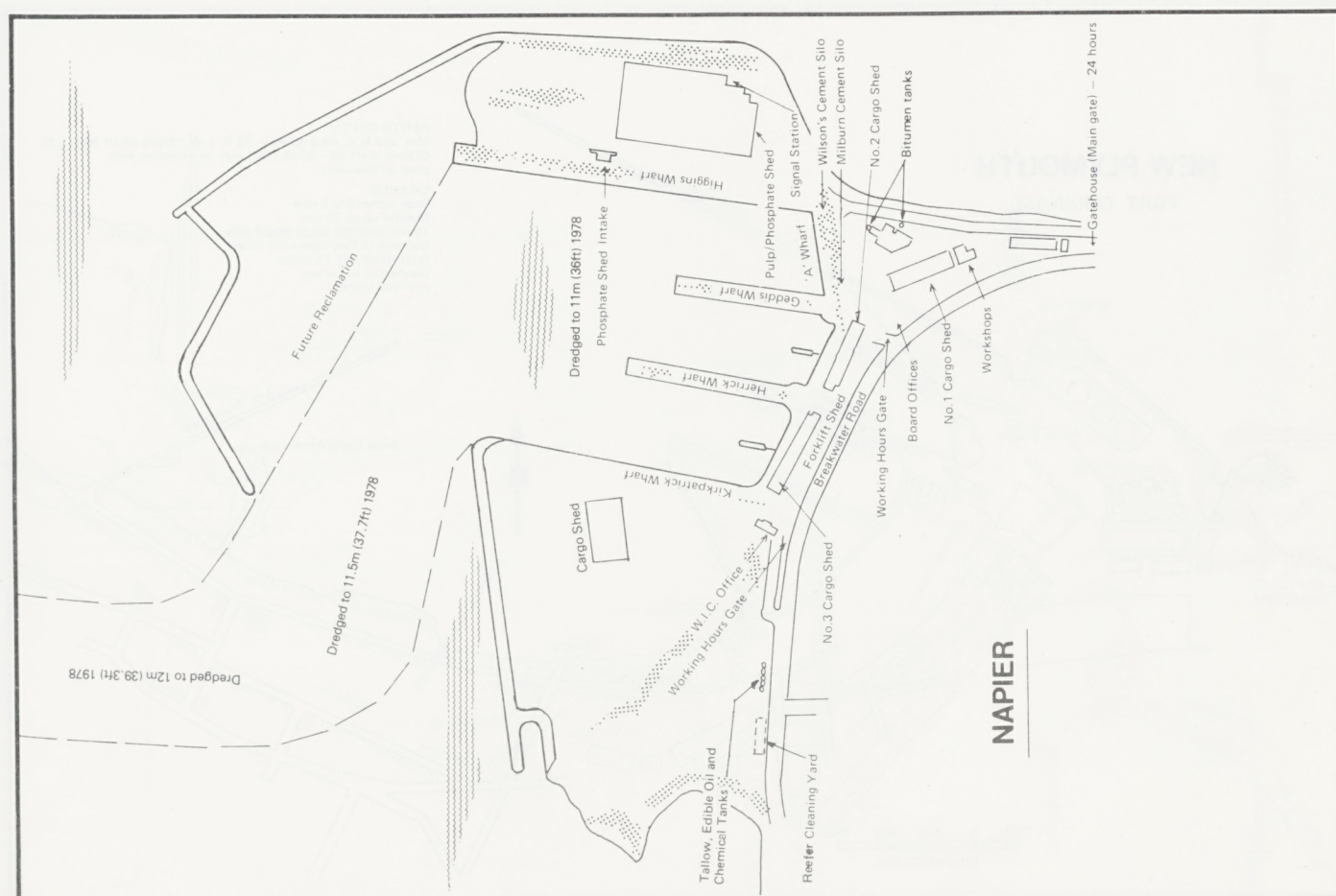


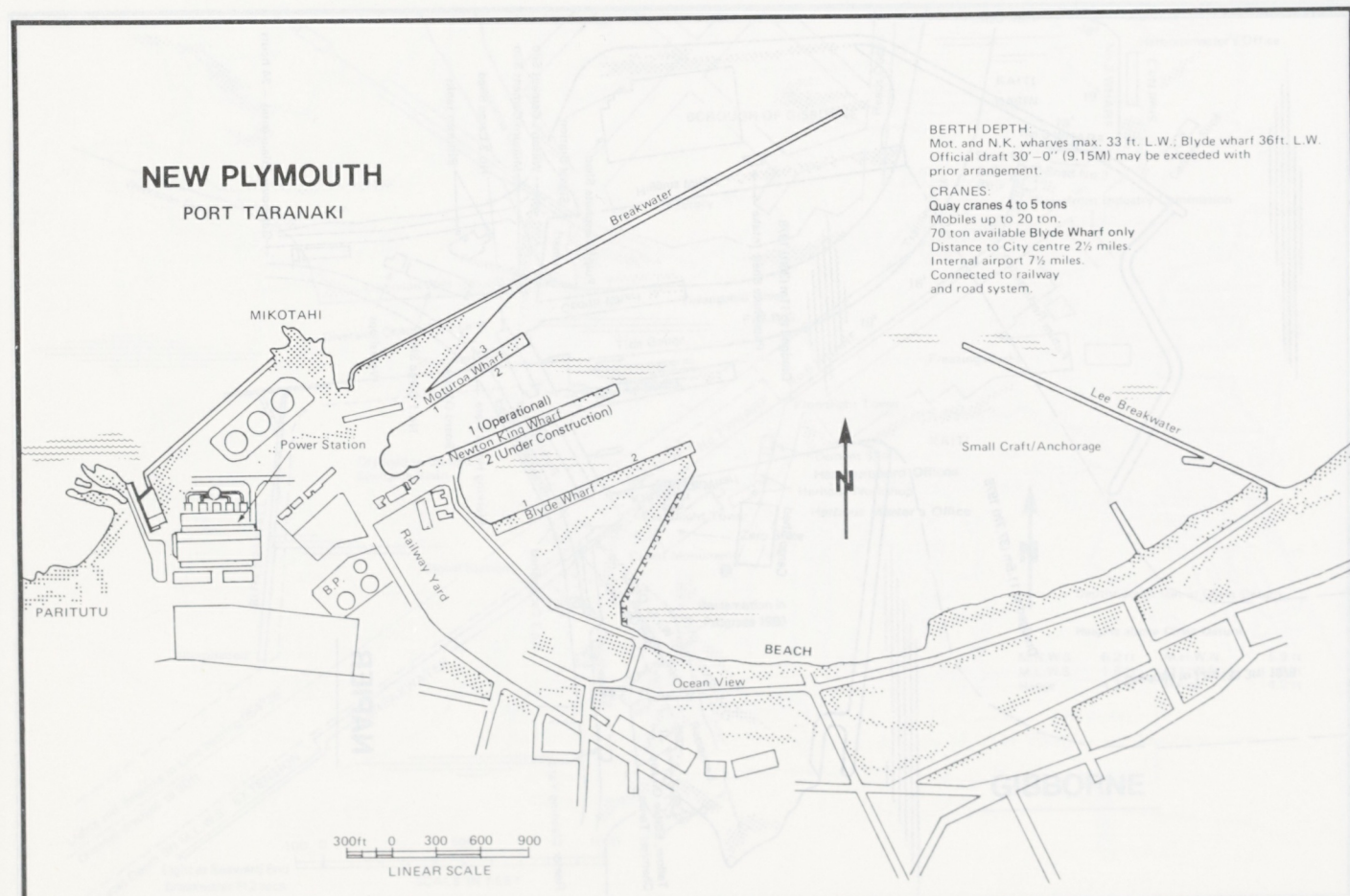
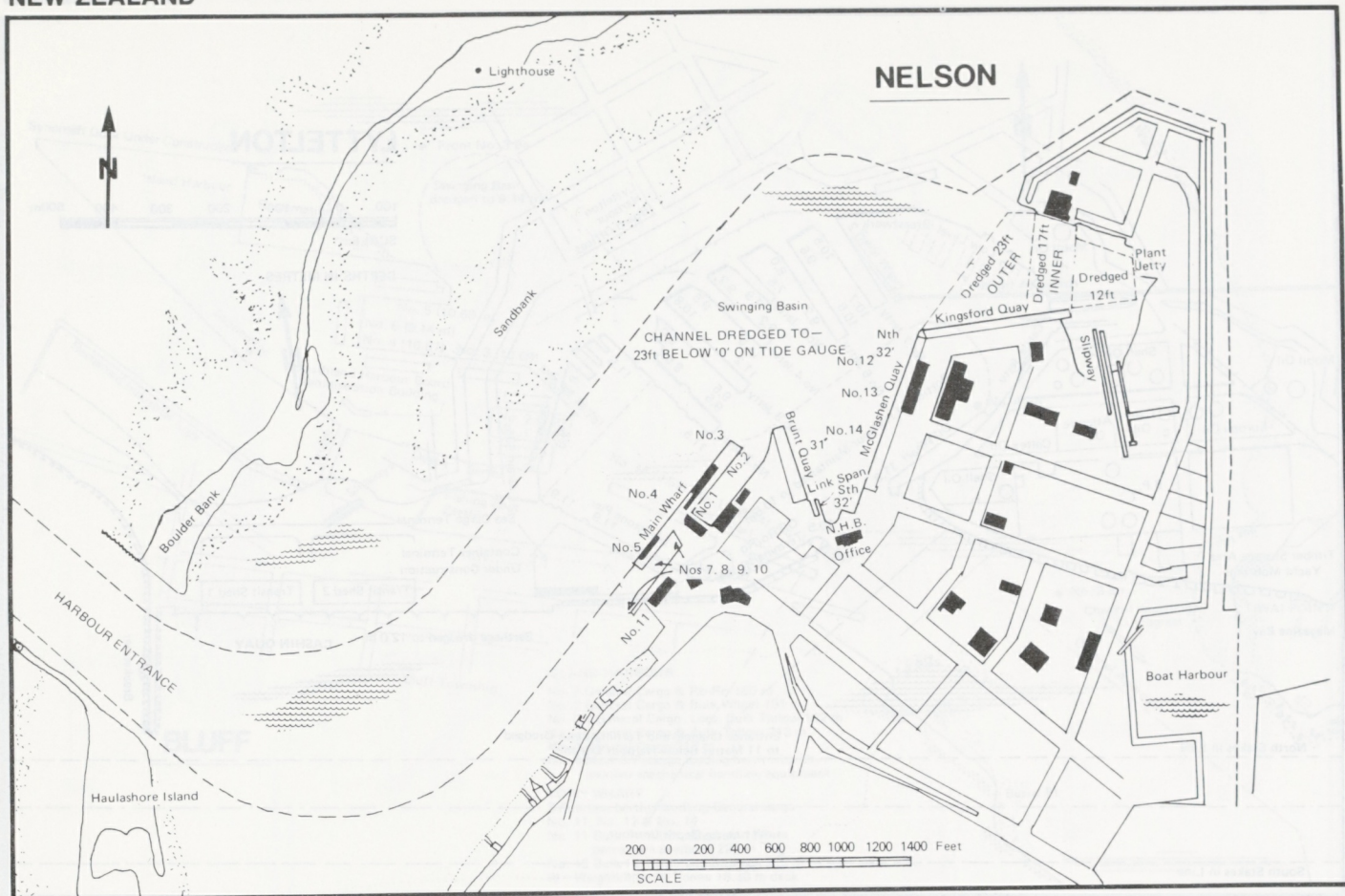


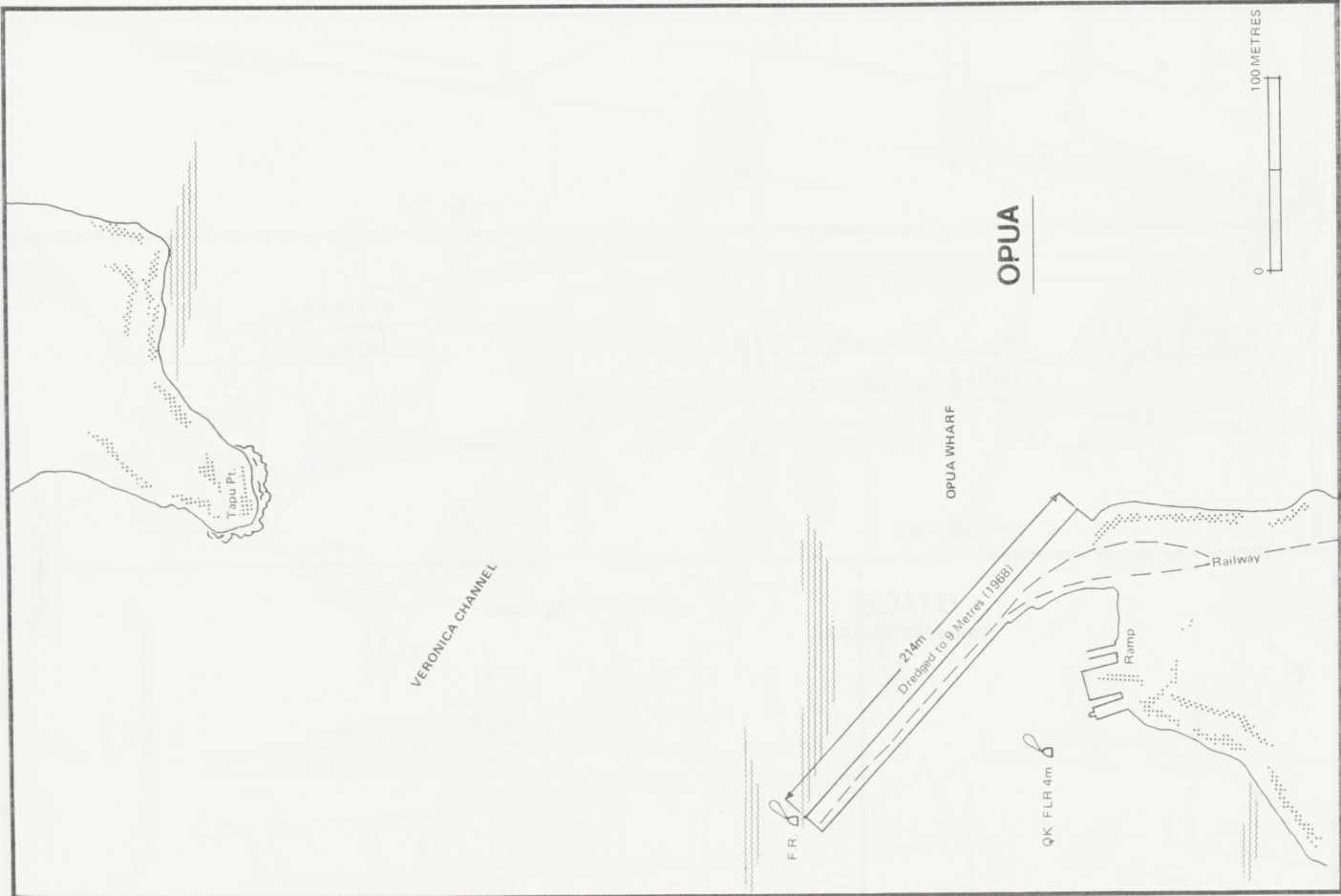
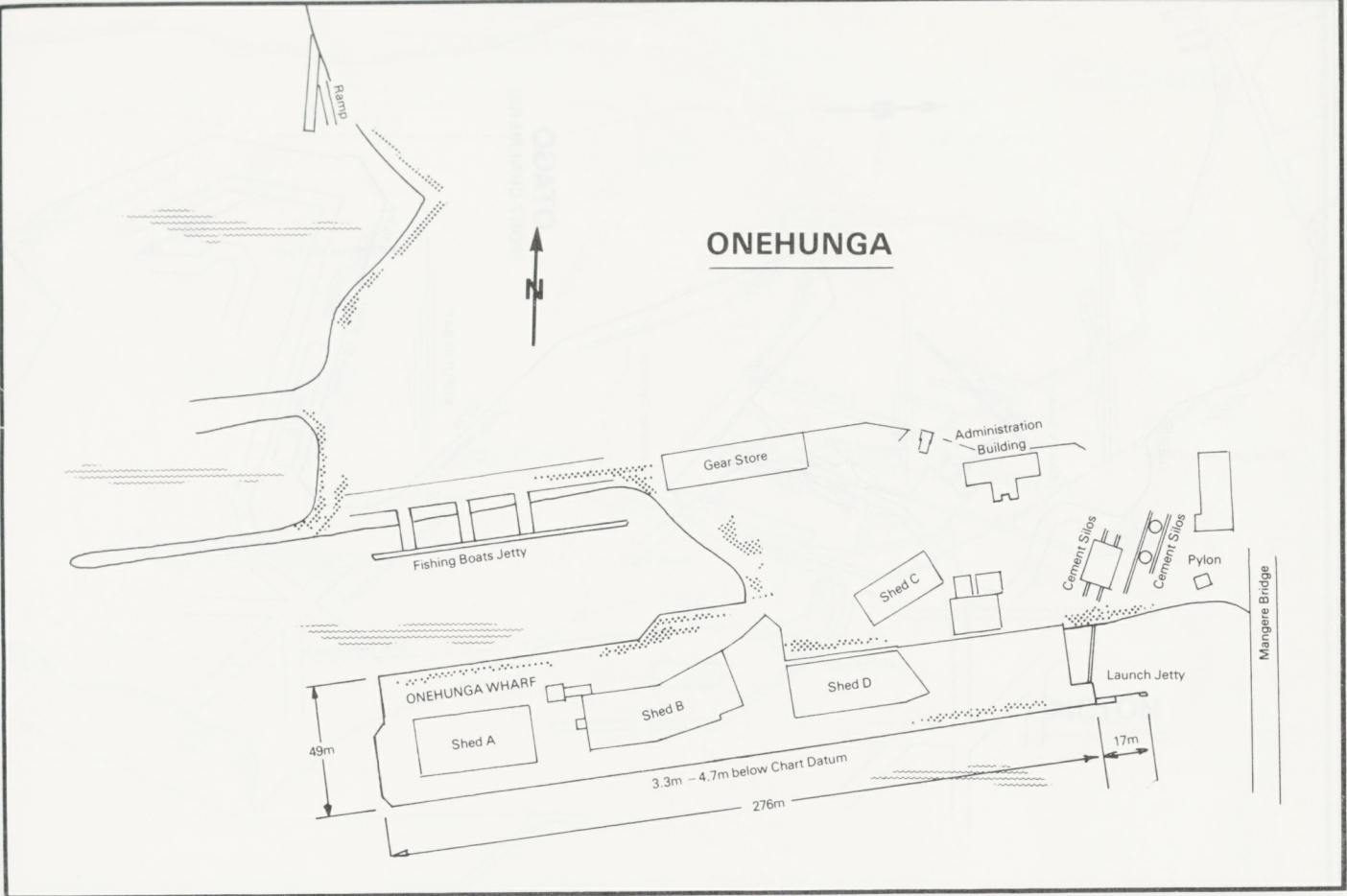
AUCKLAND

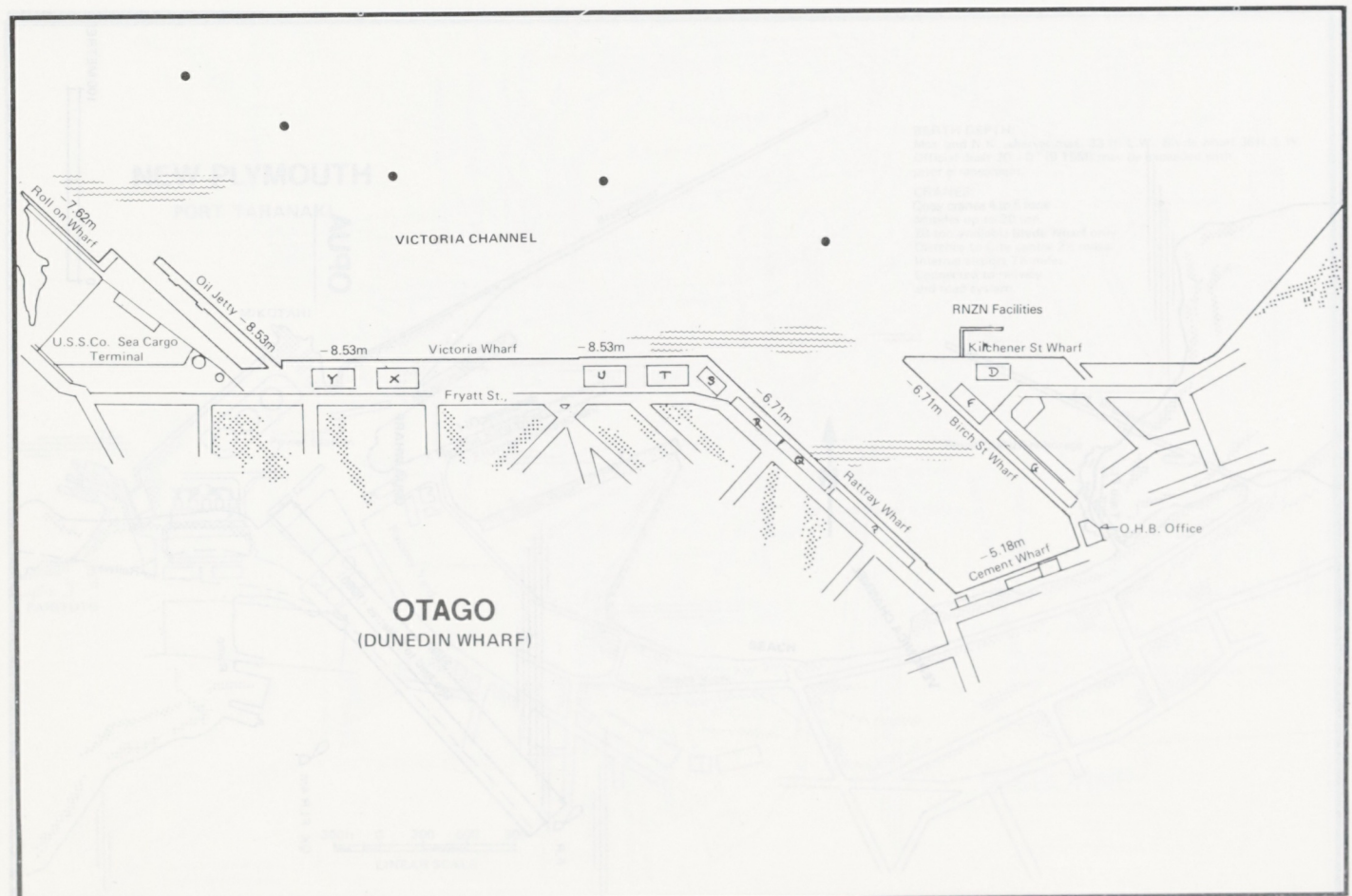
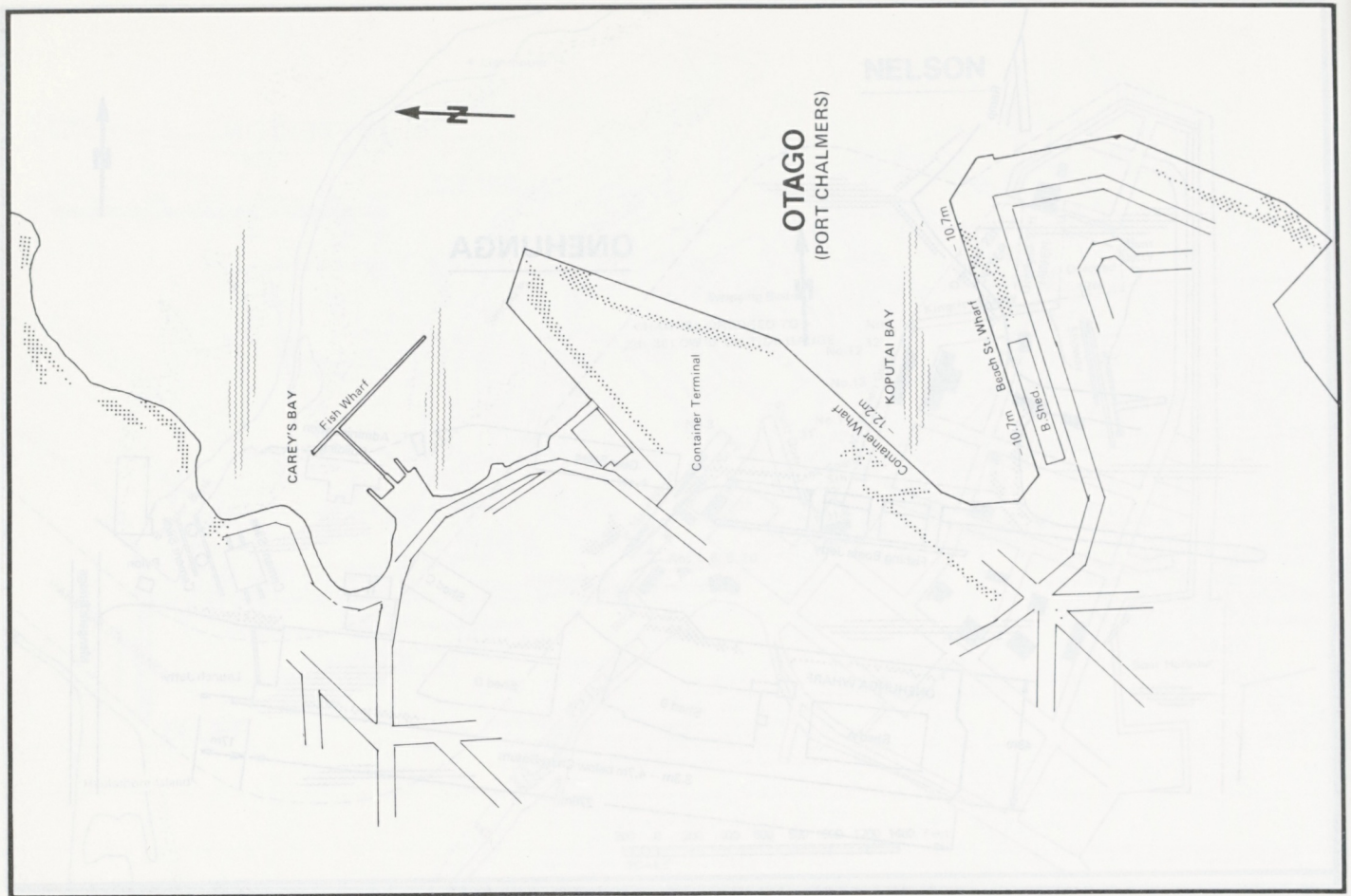










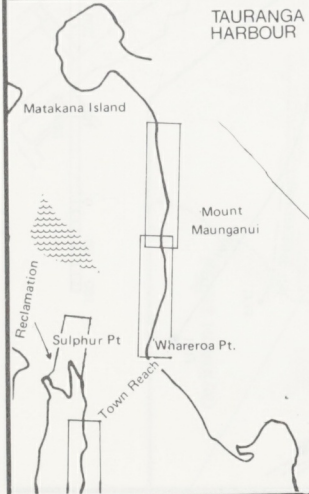


TAURANGA

SCALE
100 0 500 1000



TAURANGA HARBOUR

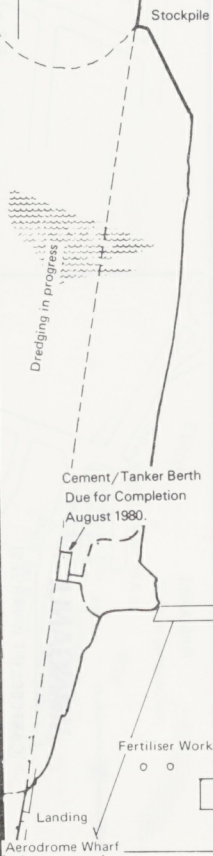


MOUNT MAUNGANUI WHARF

Roll-on/Roll-off Berths



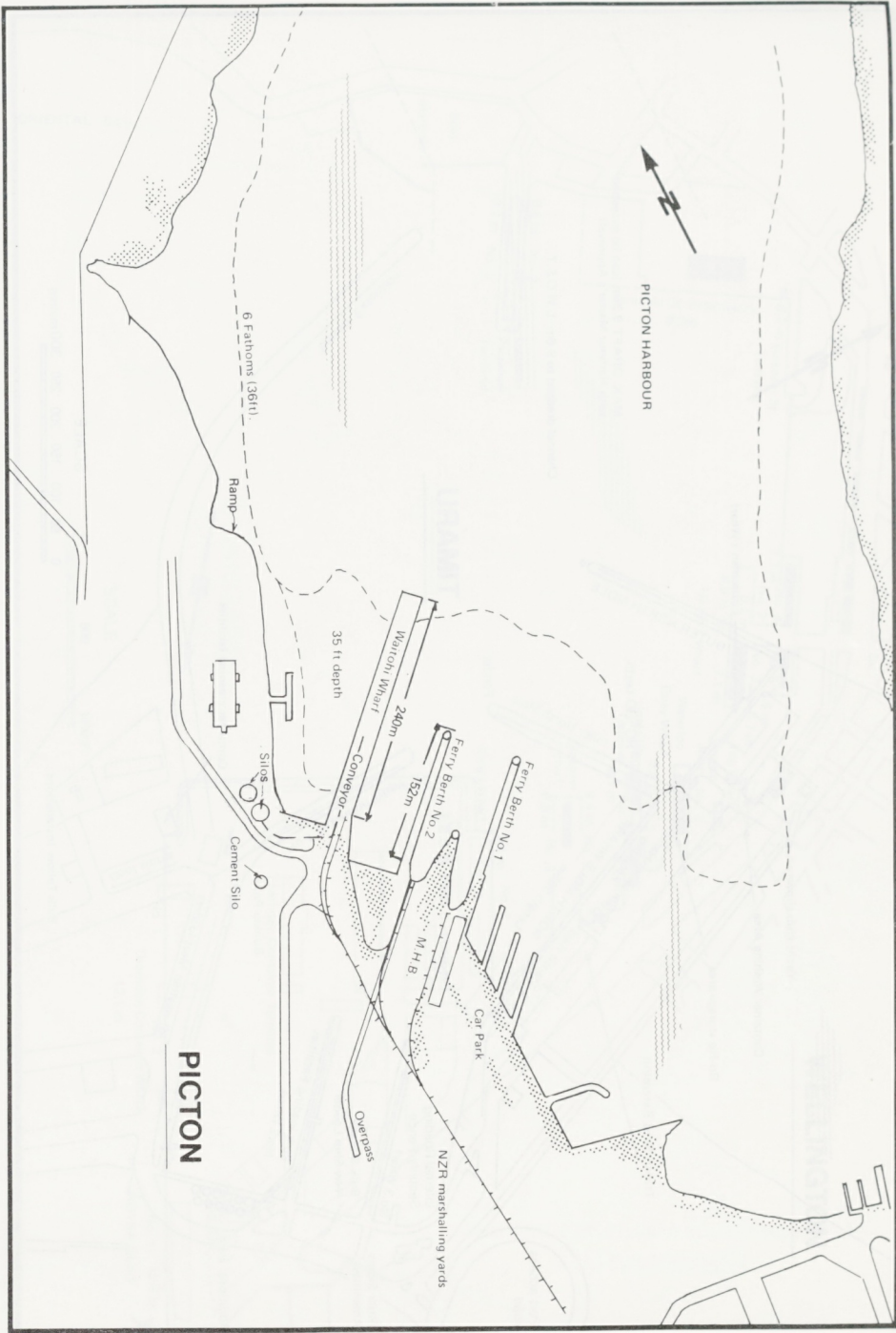
Scale of Feet
100 0 500 1000



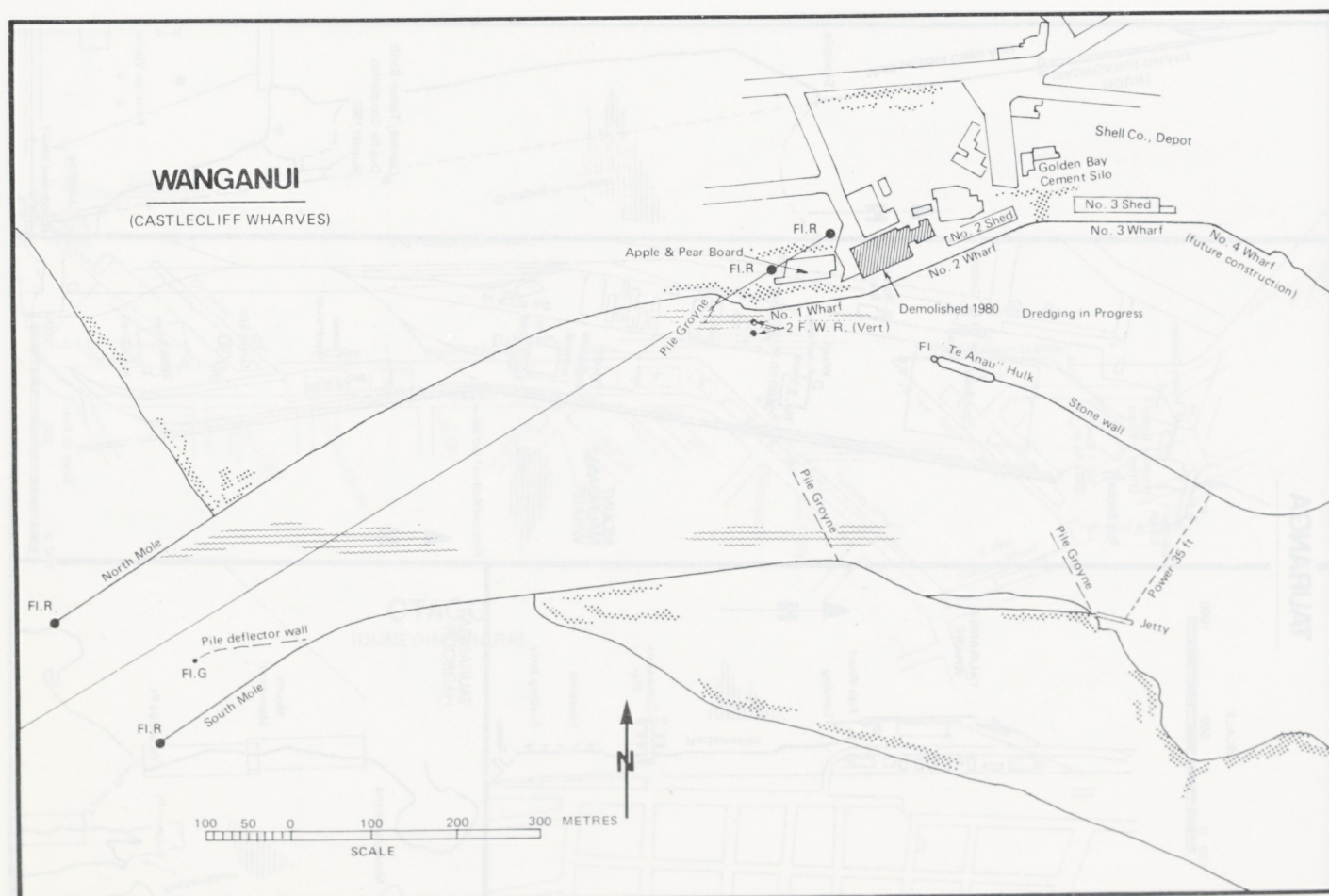
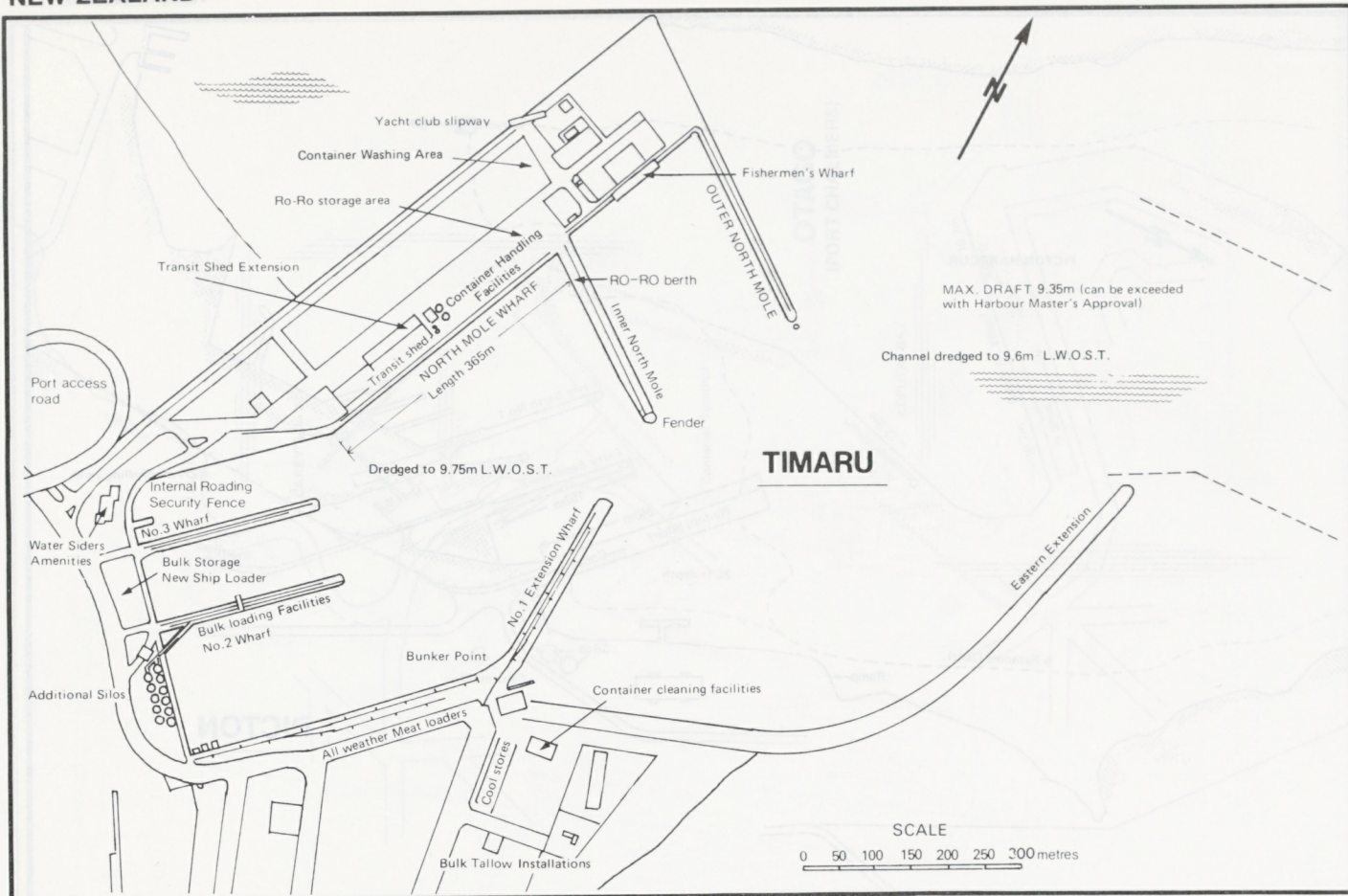
MOUNT MAUNGANUI WHARF
Multi-purpose Crane Area

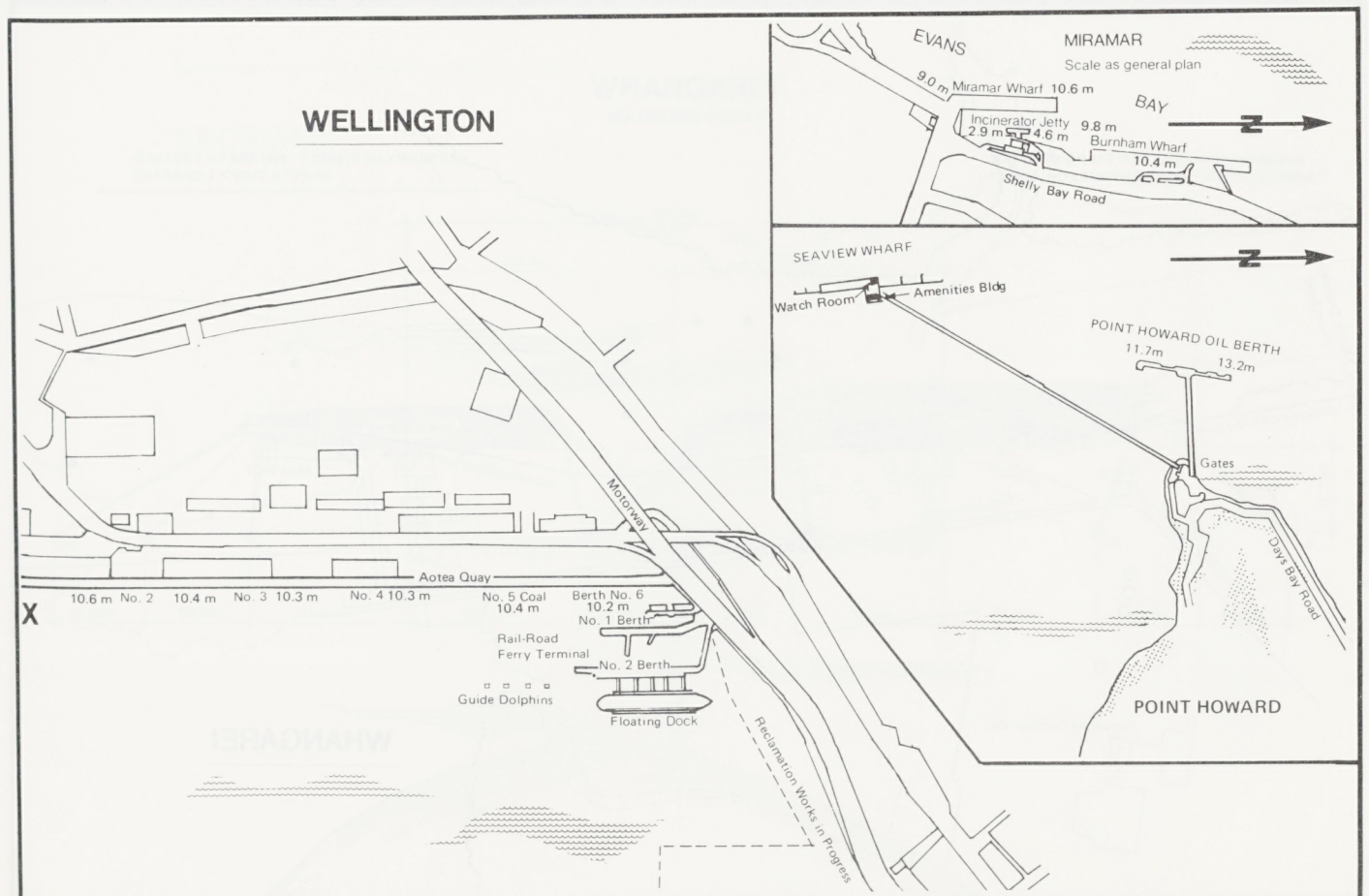
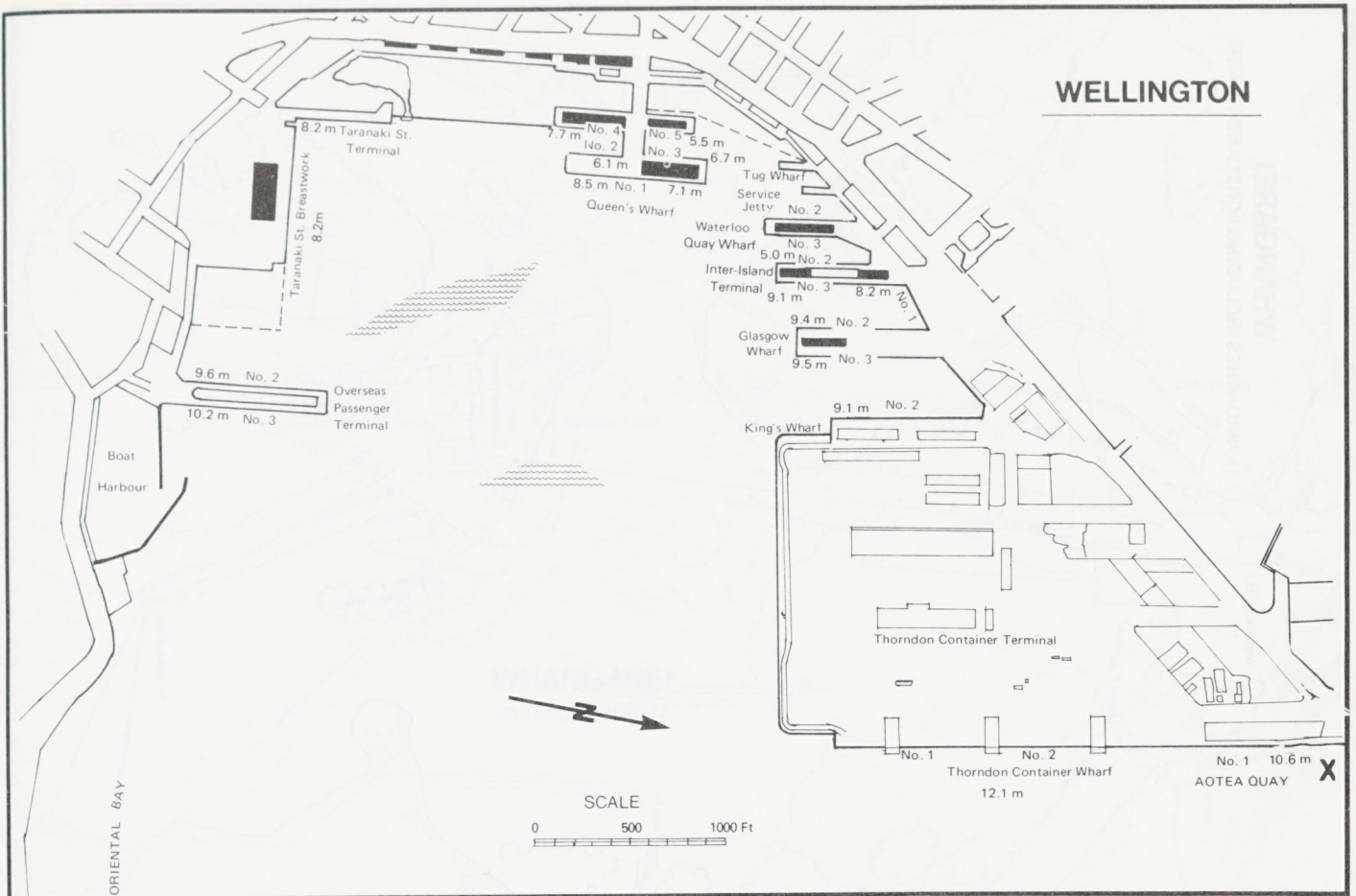
Stockpile

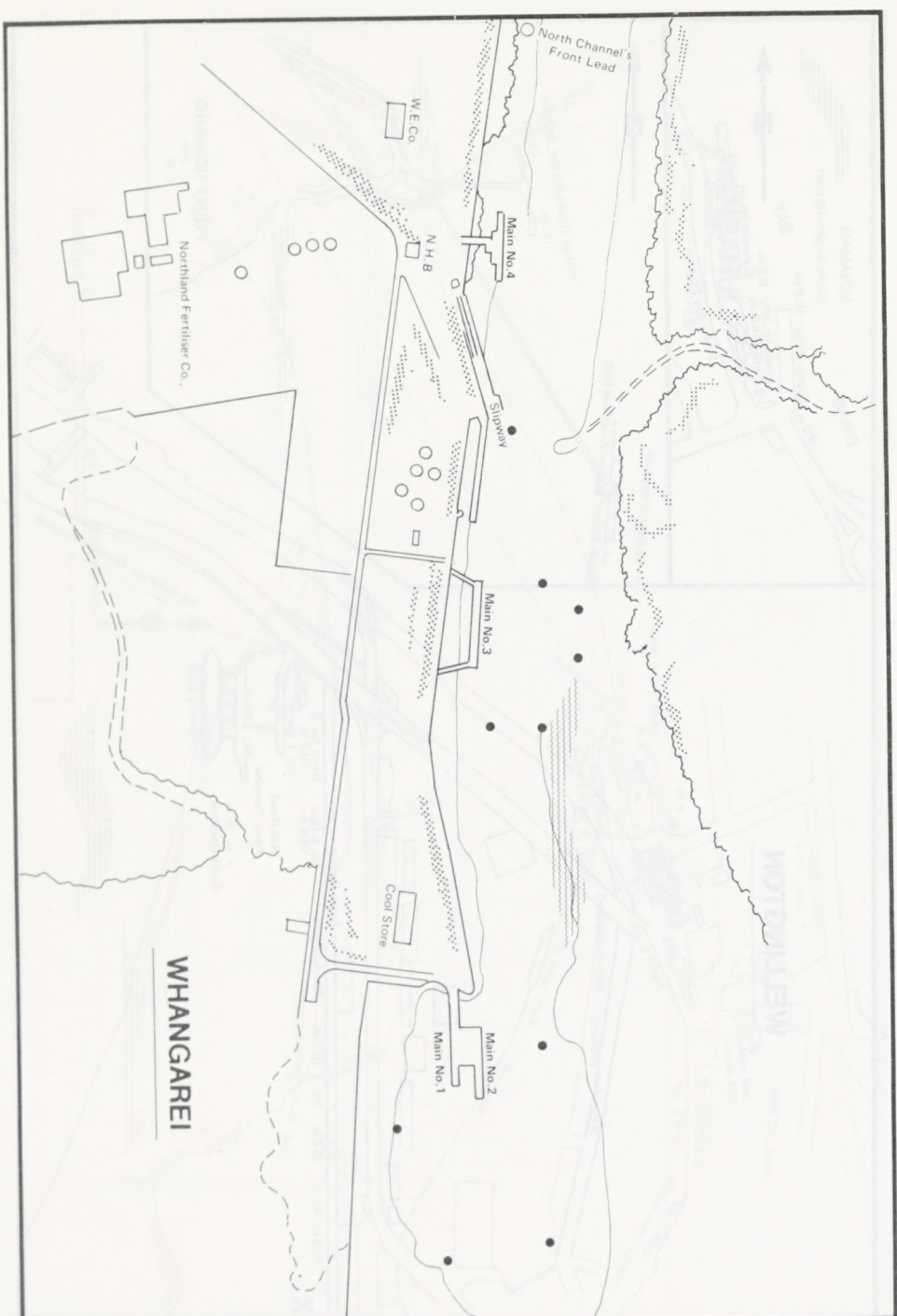
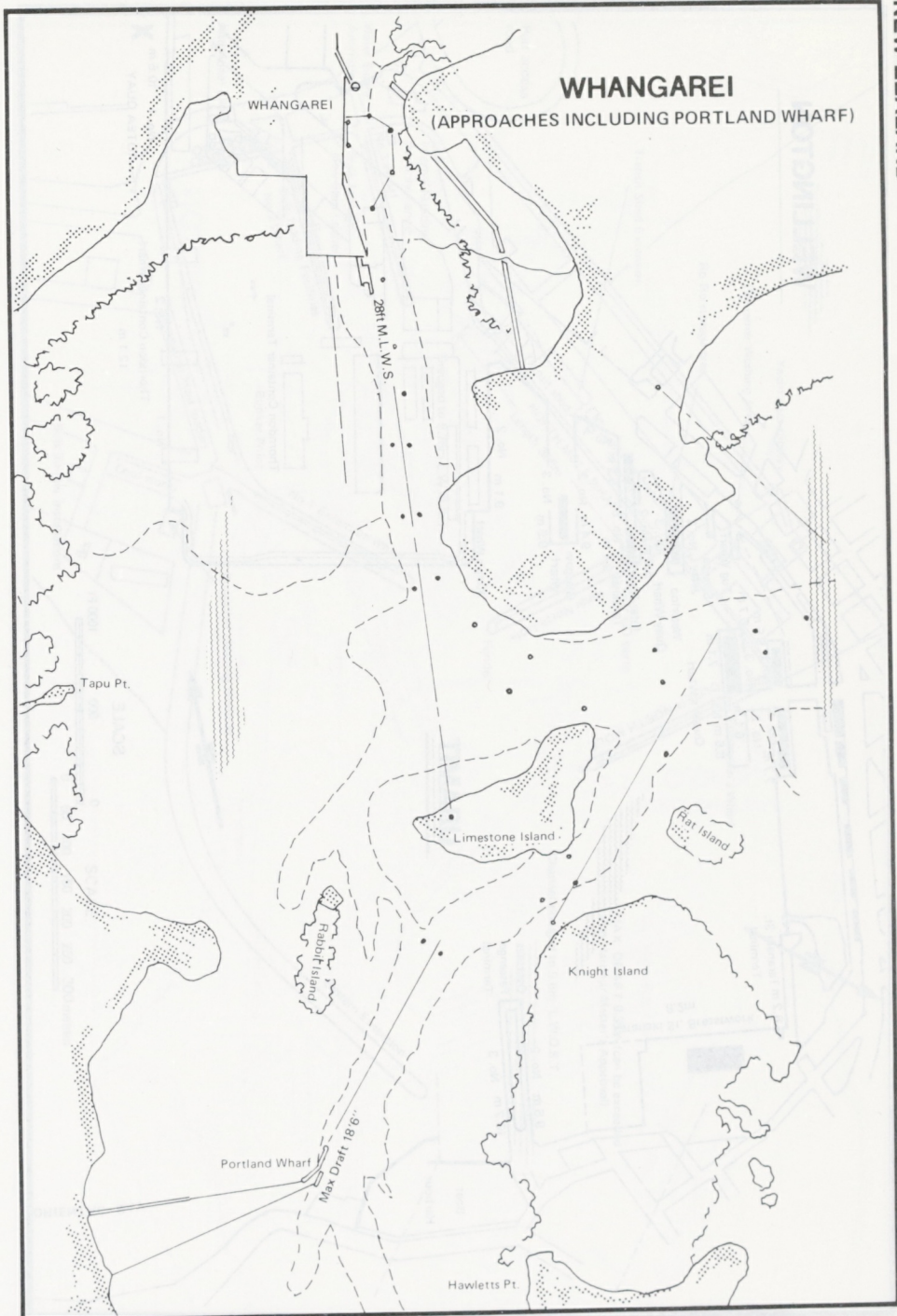
PICTON

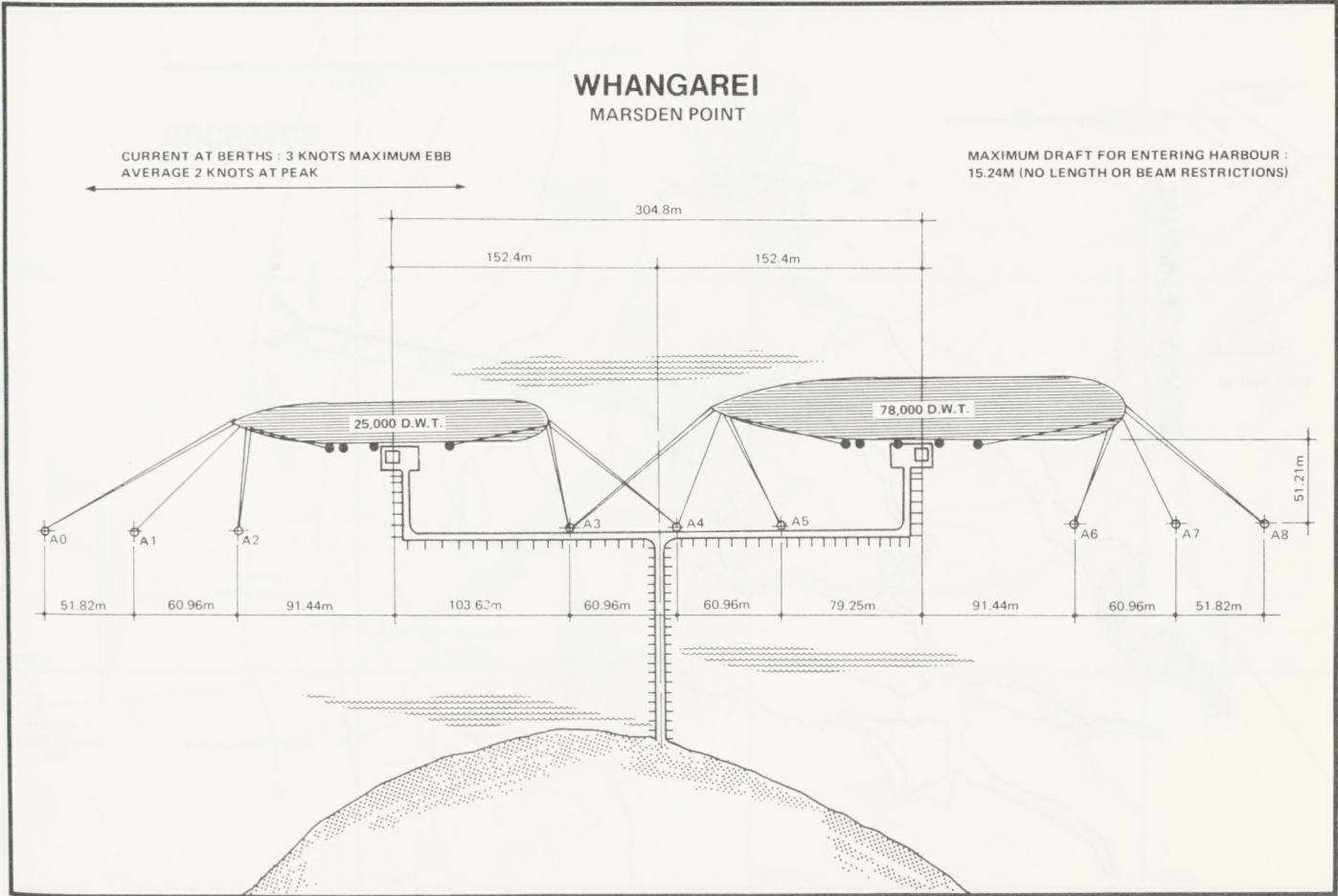
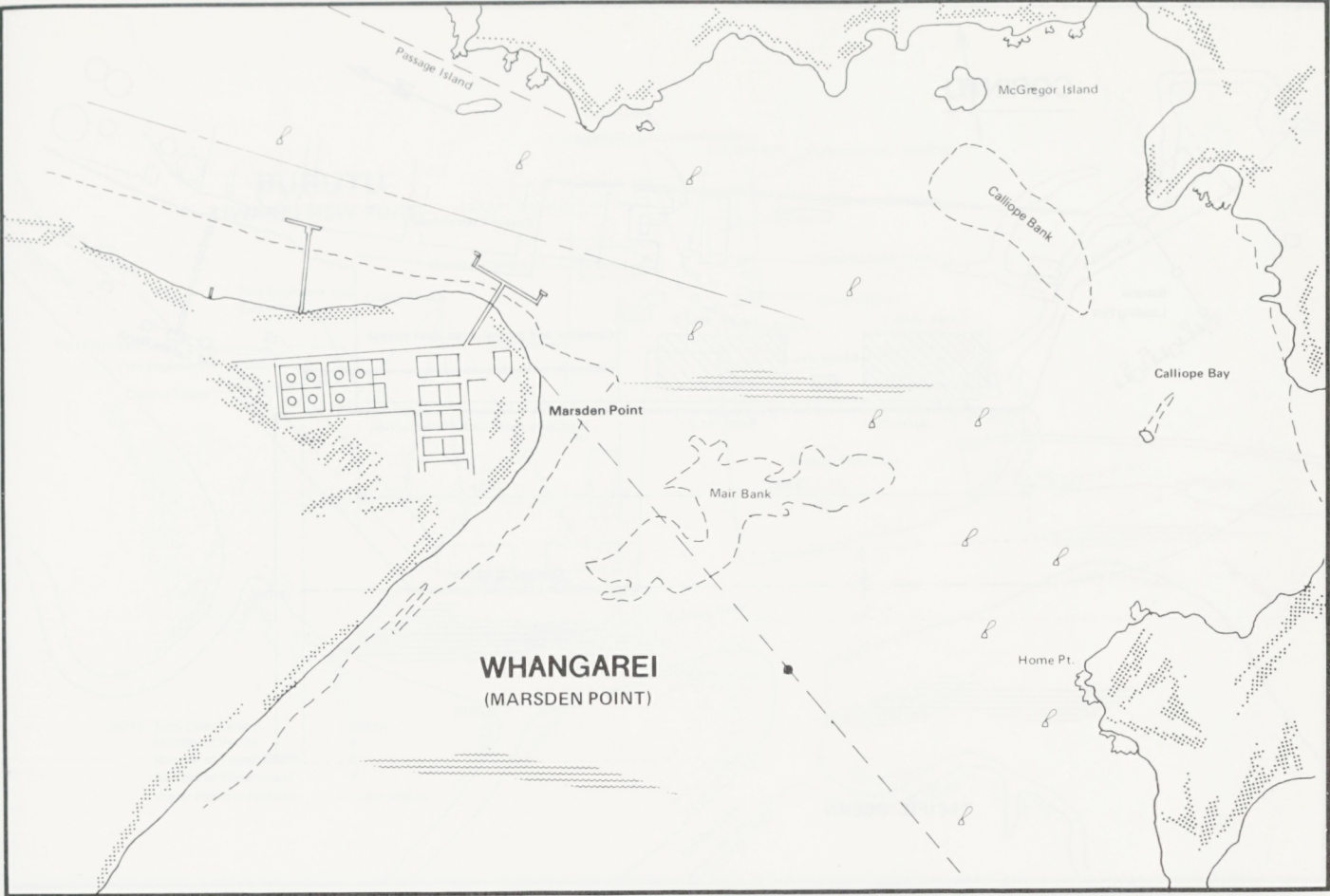


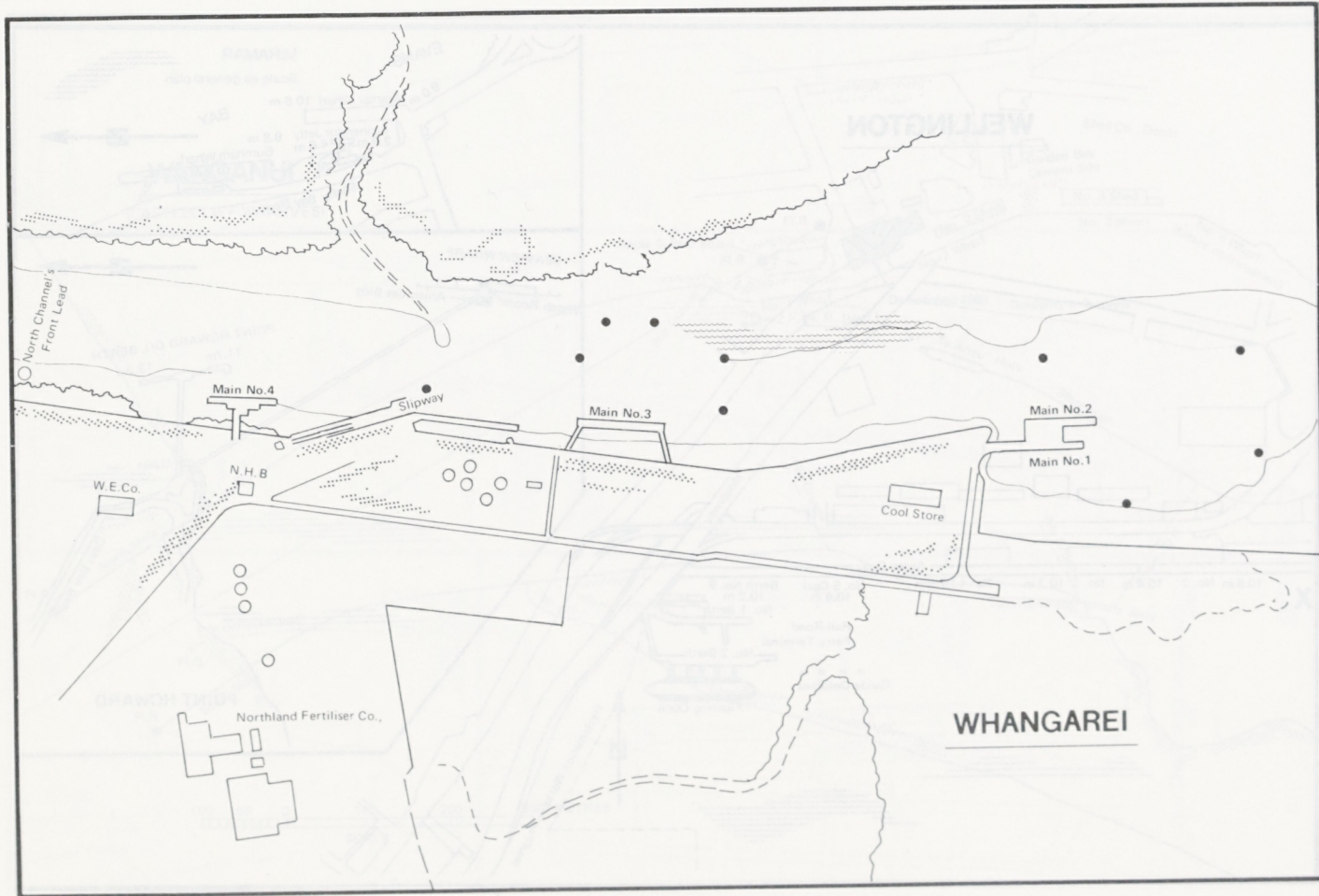
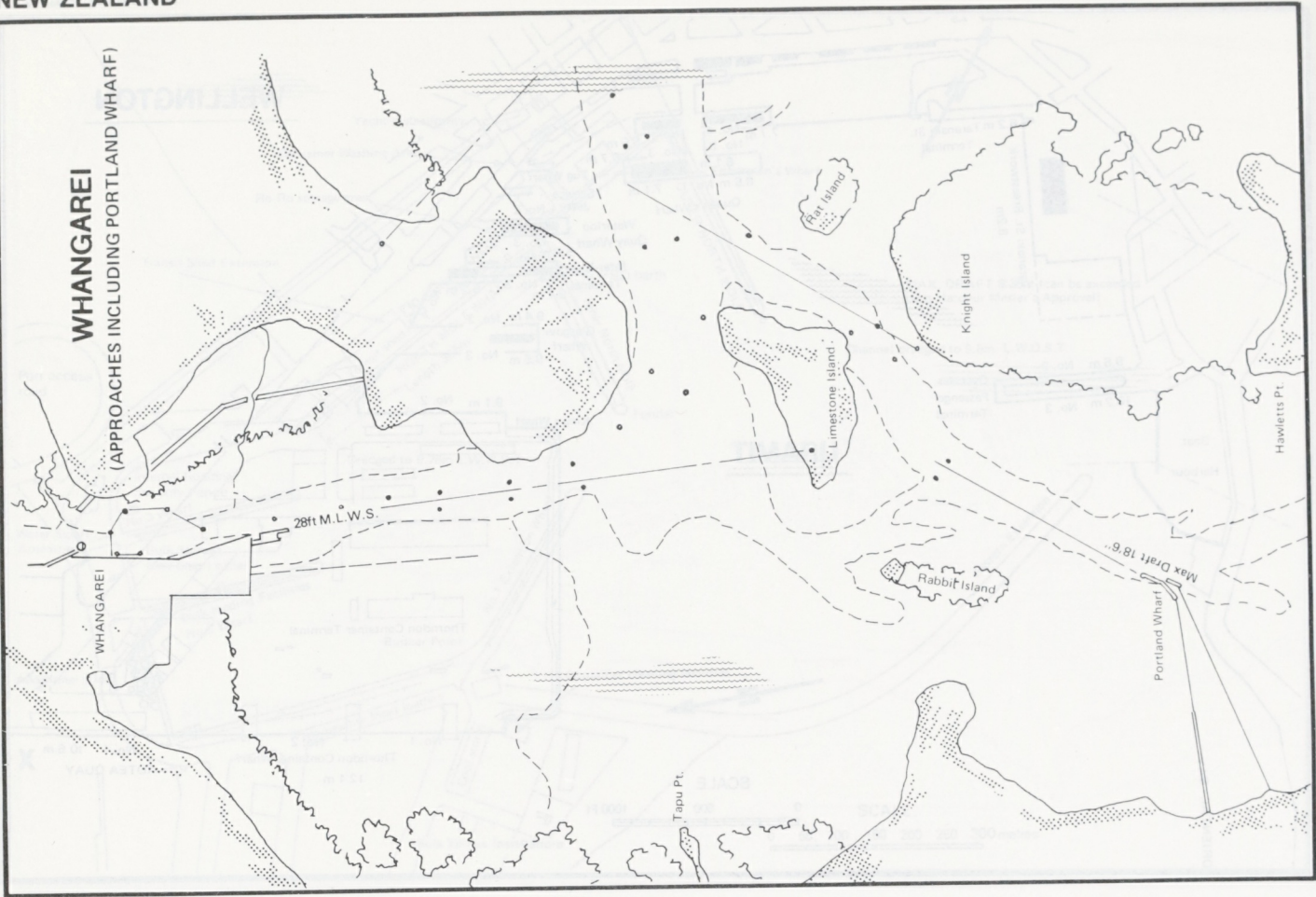
PICTON HARBOUR

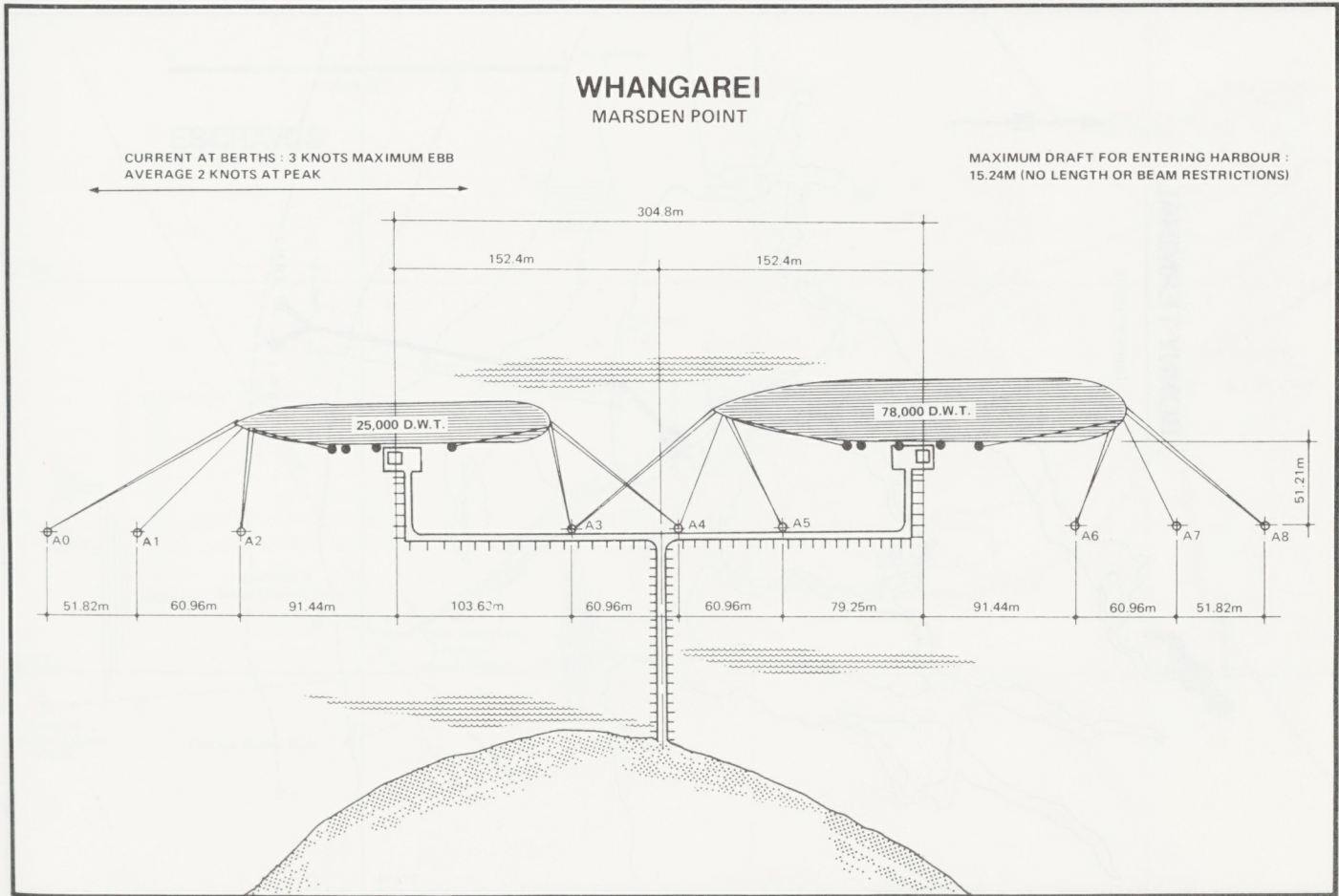
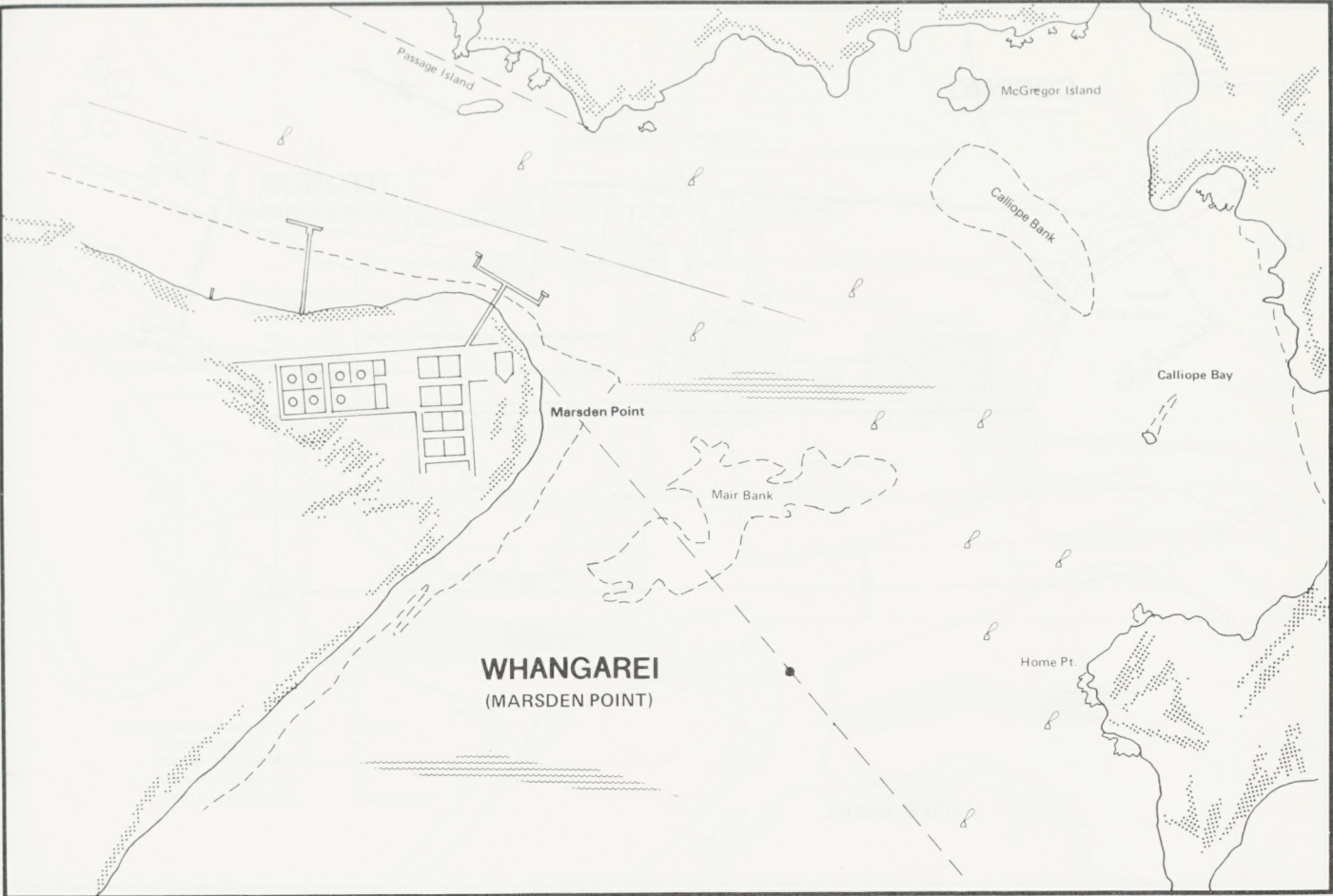


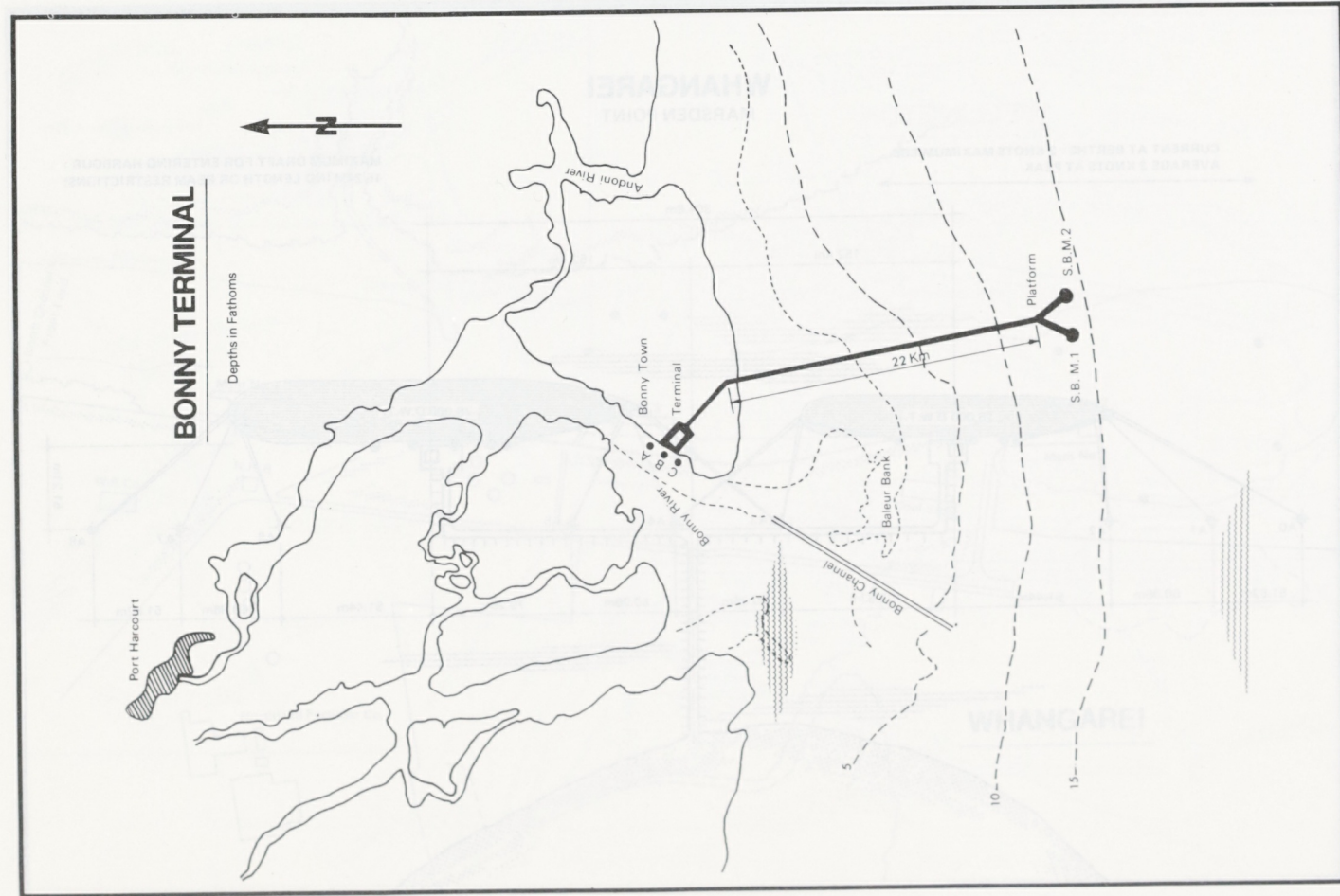
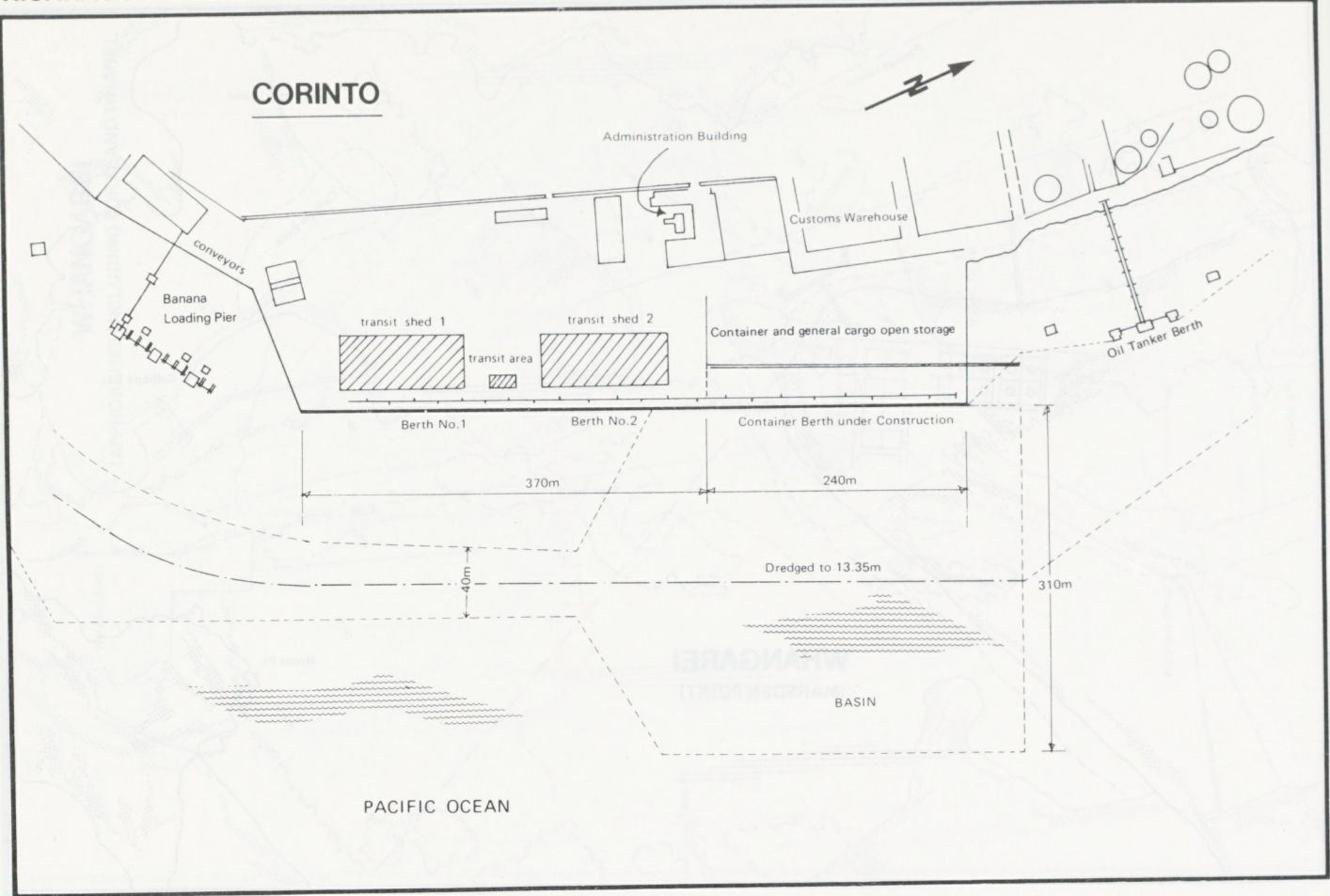


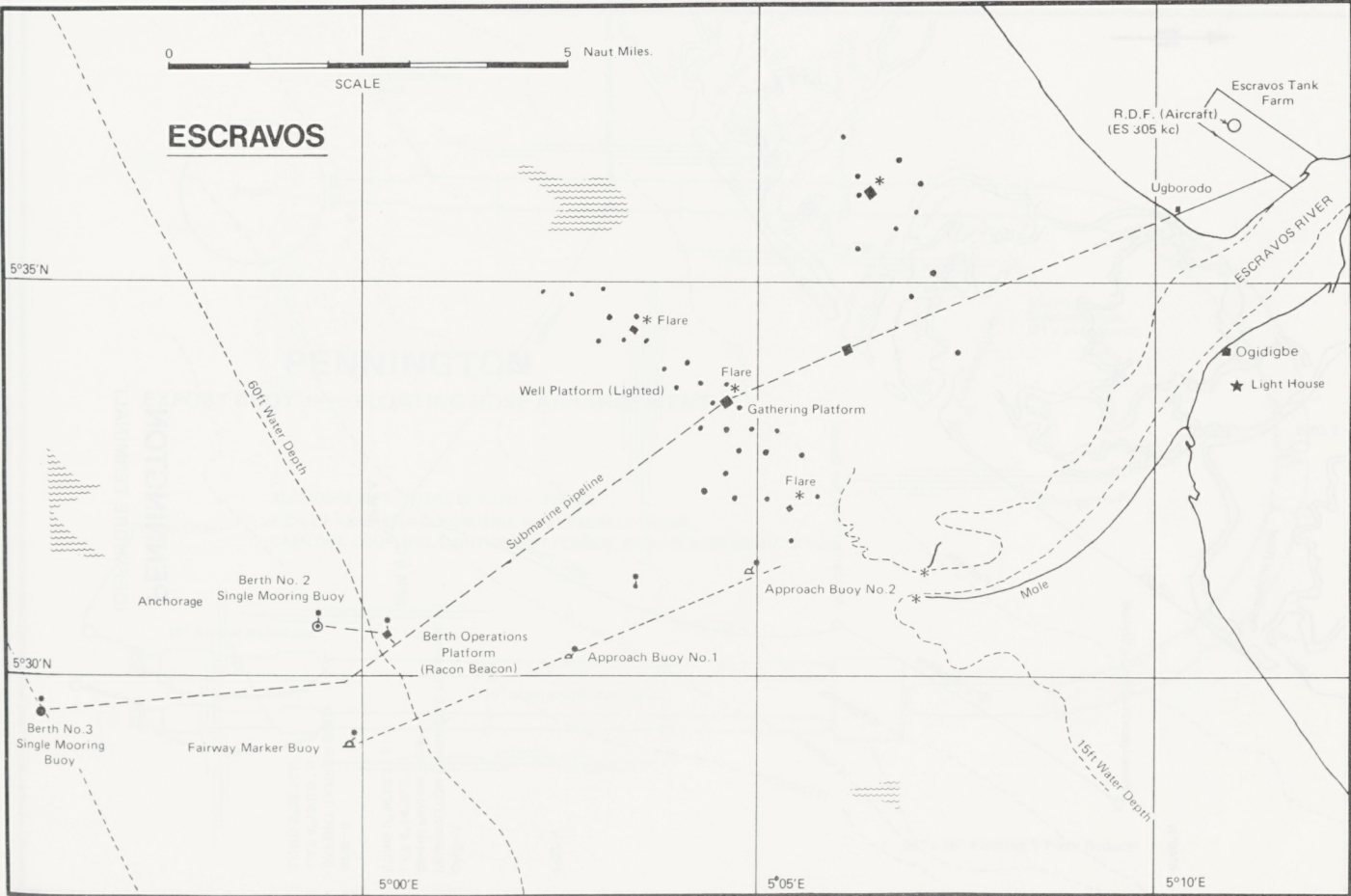
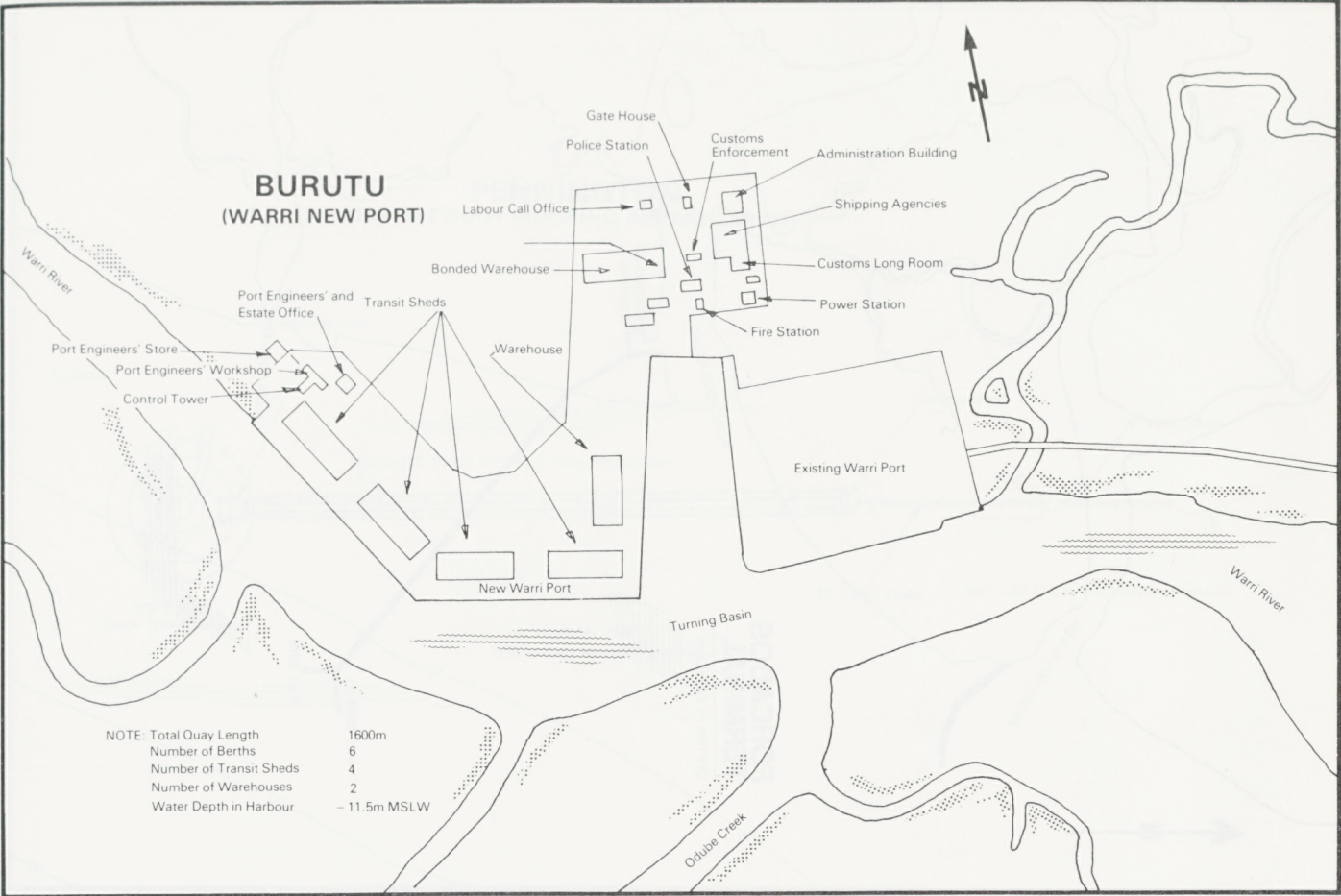


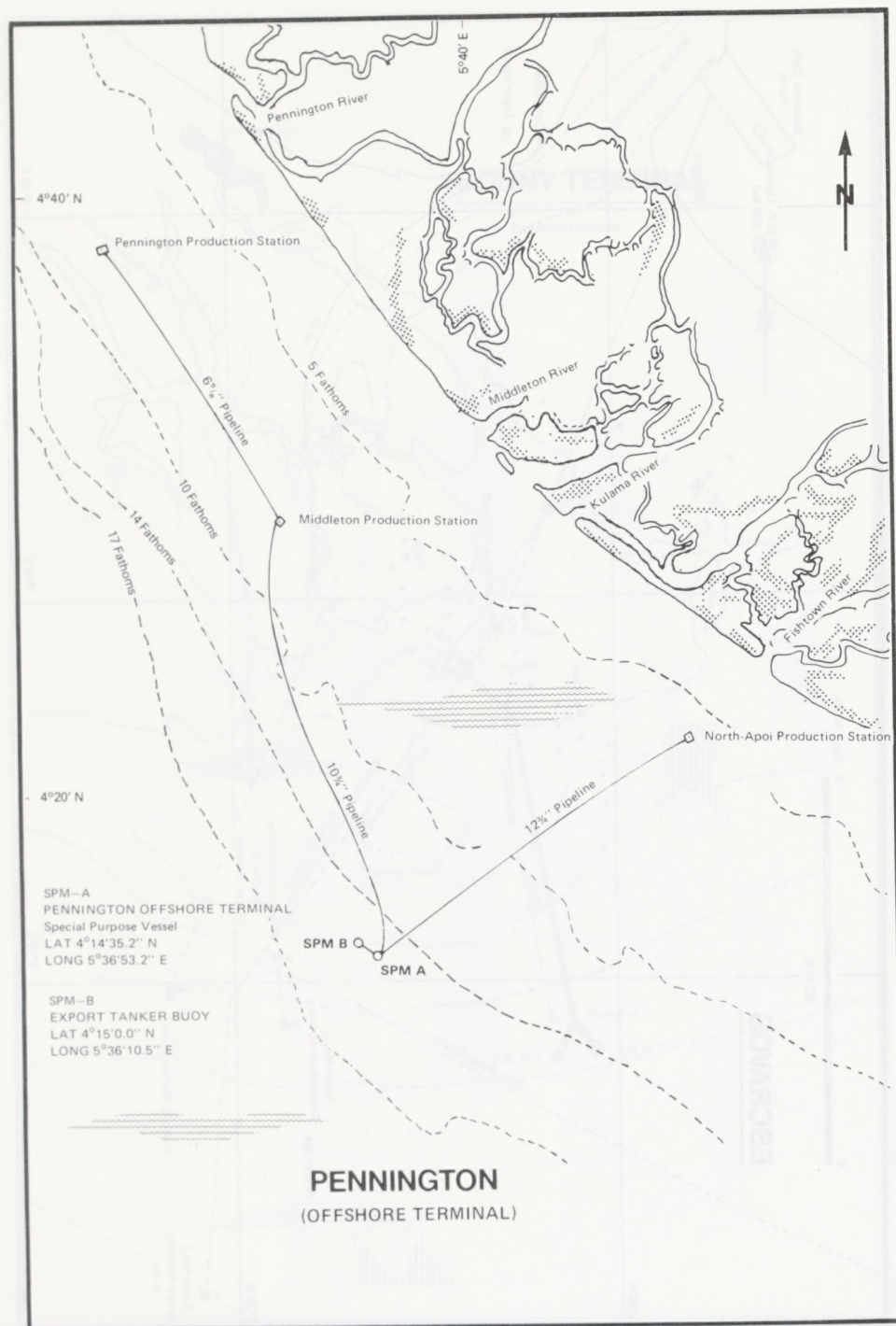
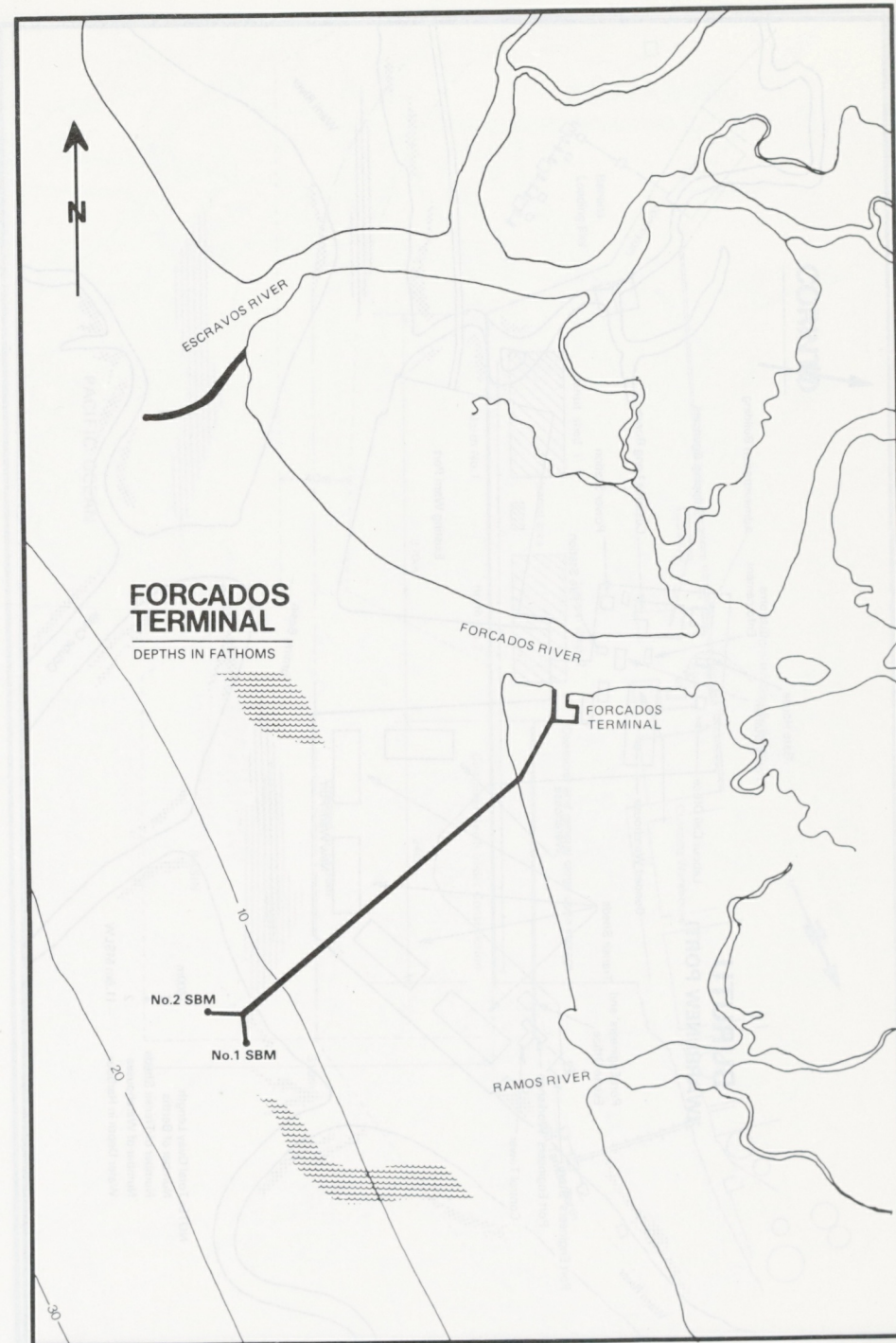




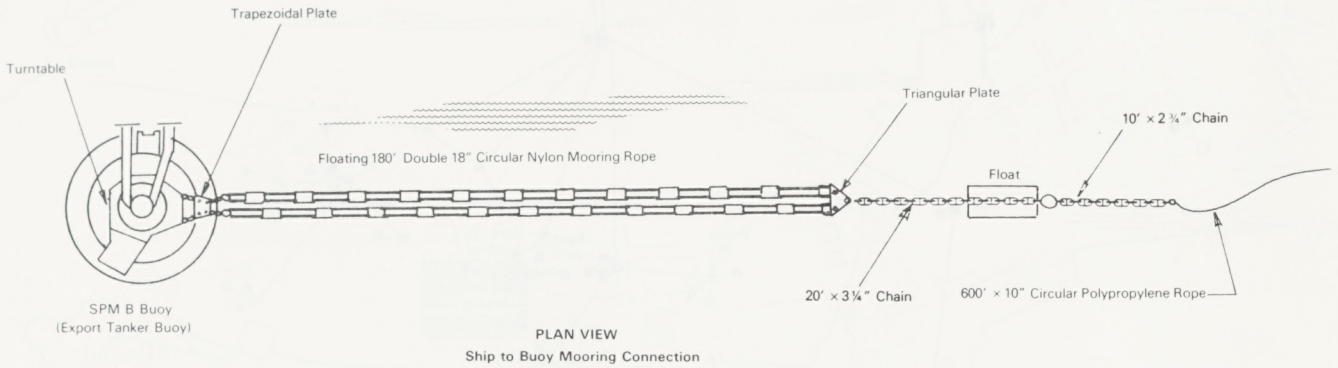




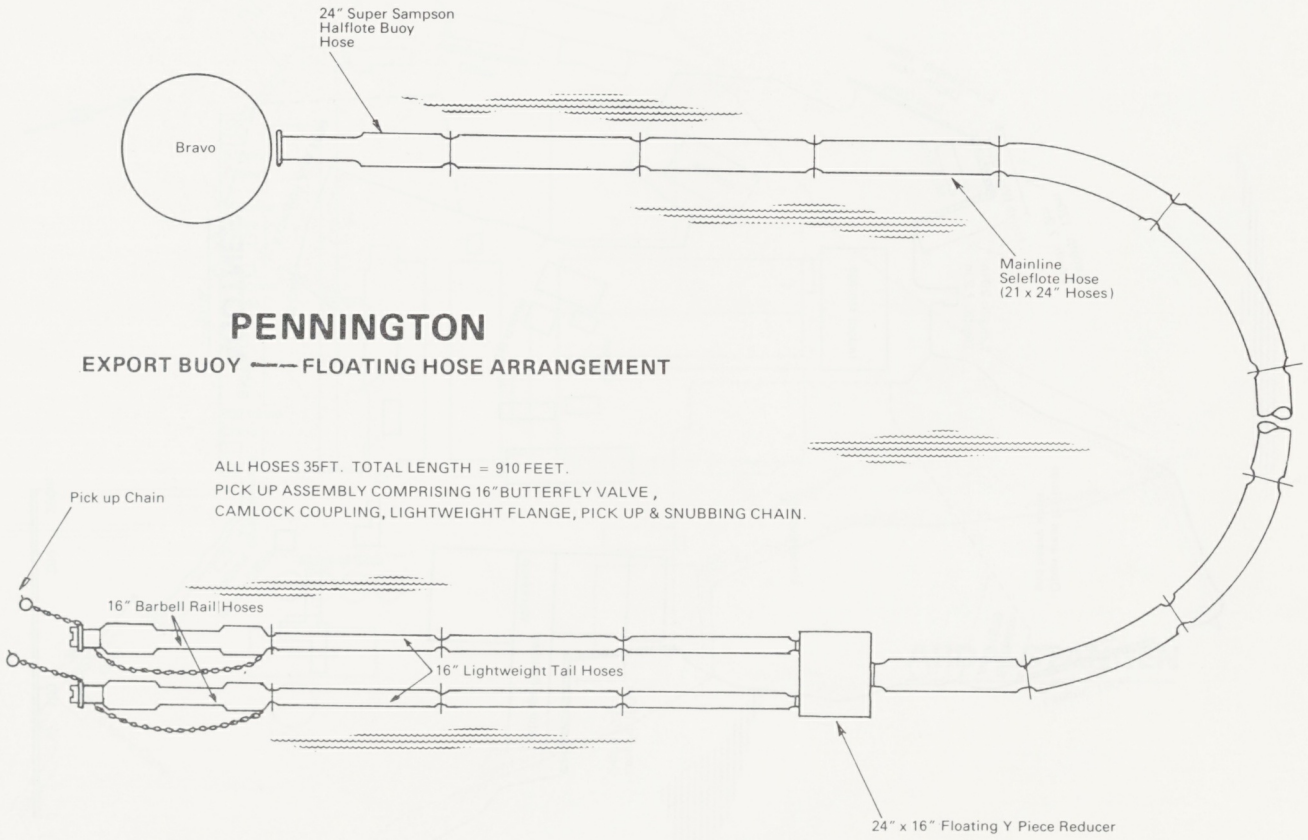


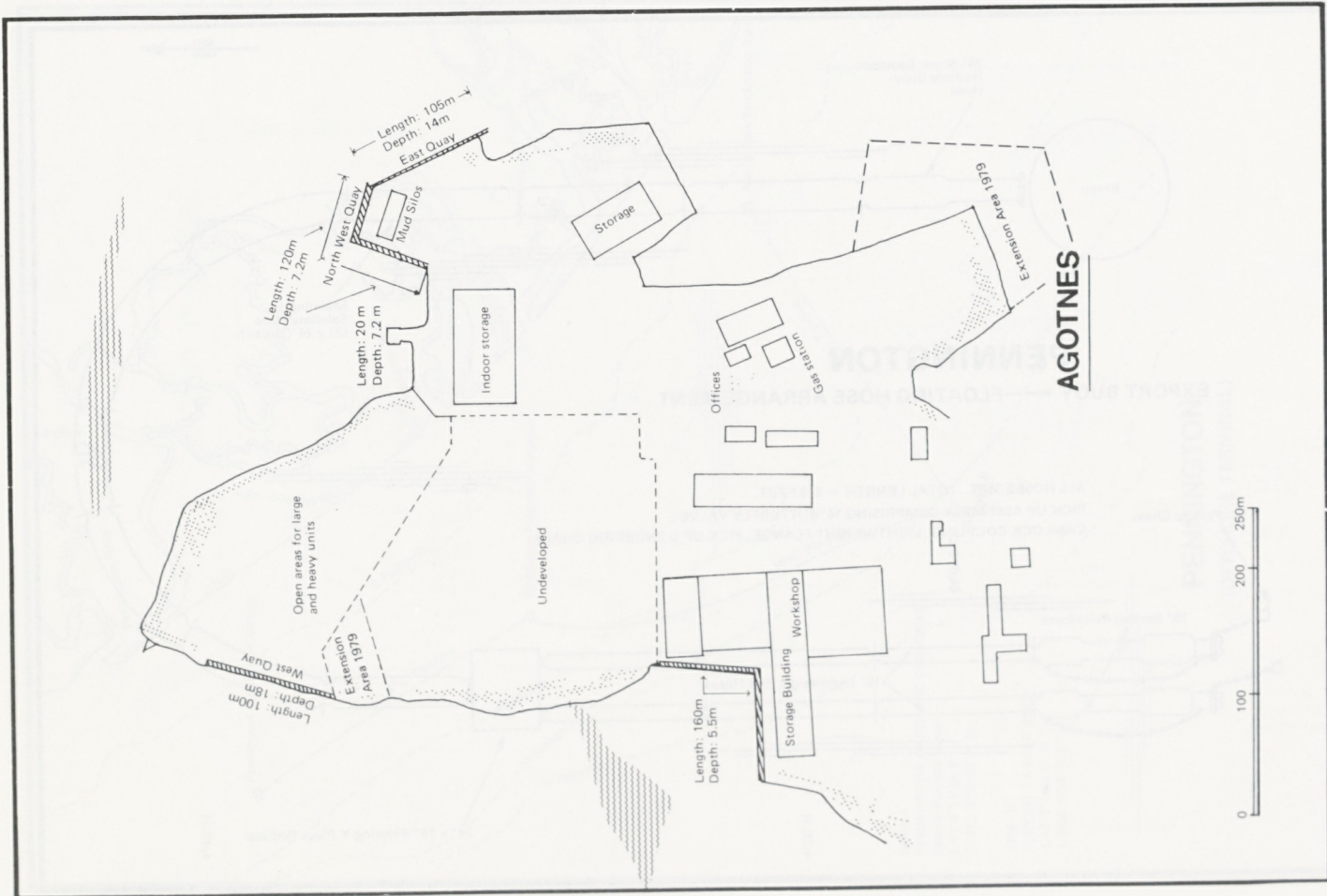
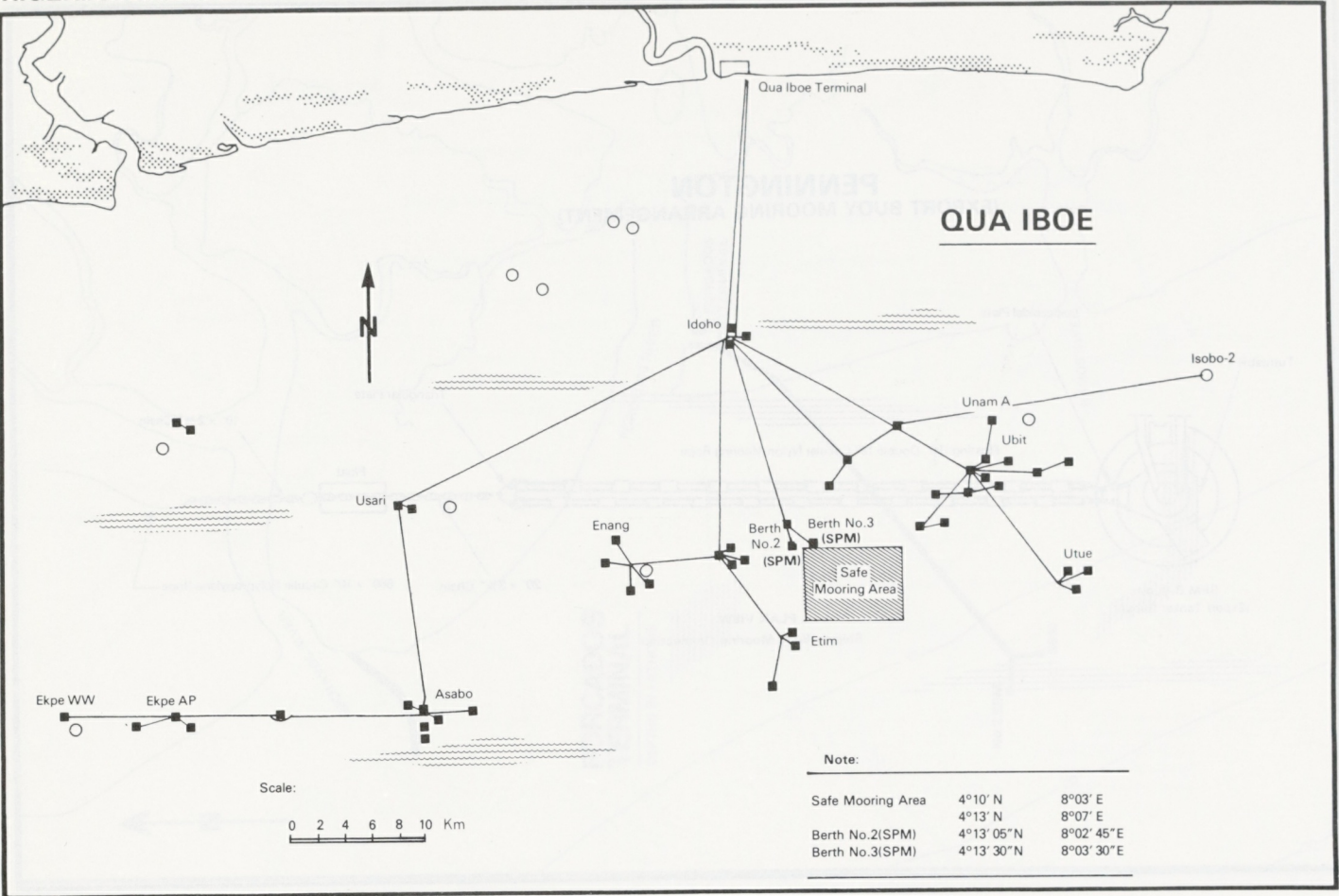


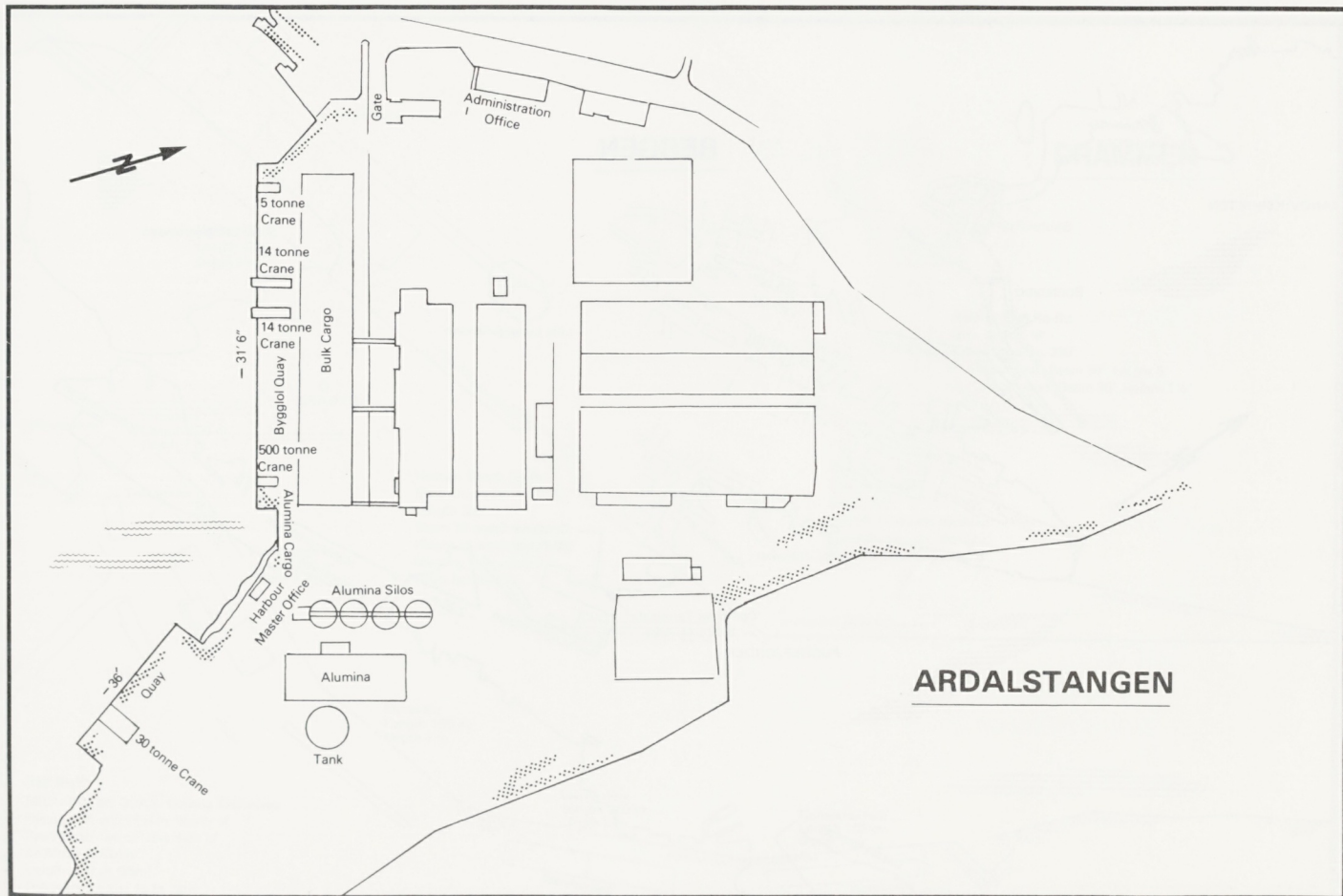
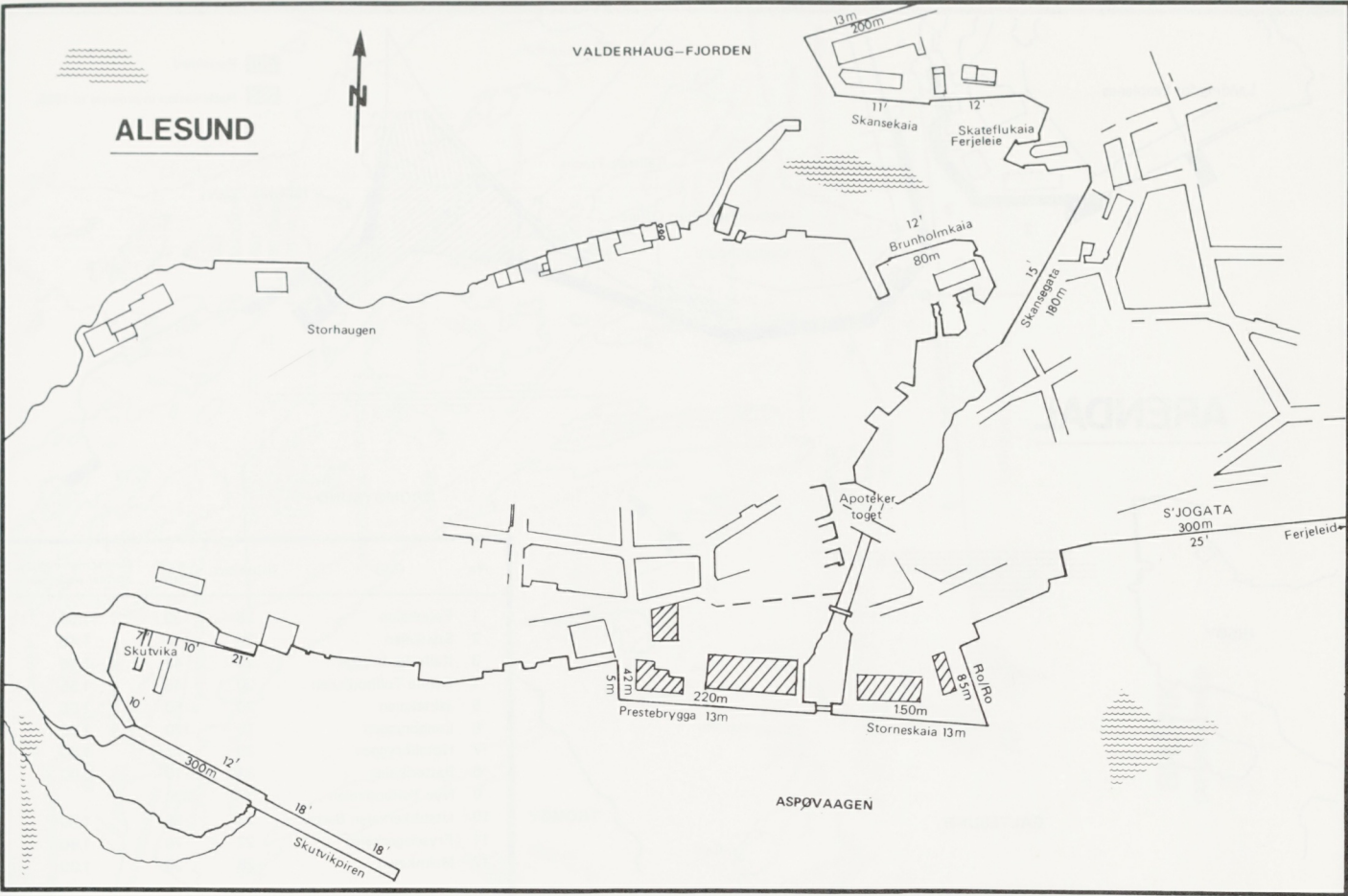
PENNINGTON
(EXPORT BUOY MOORING ARRANGEMENT)

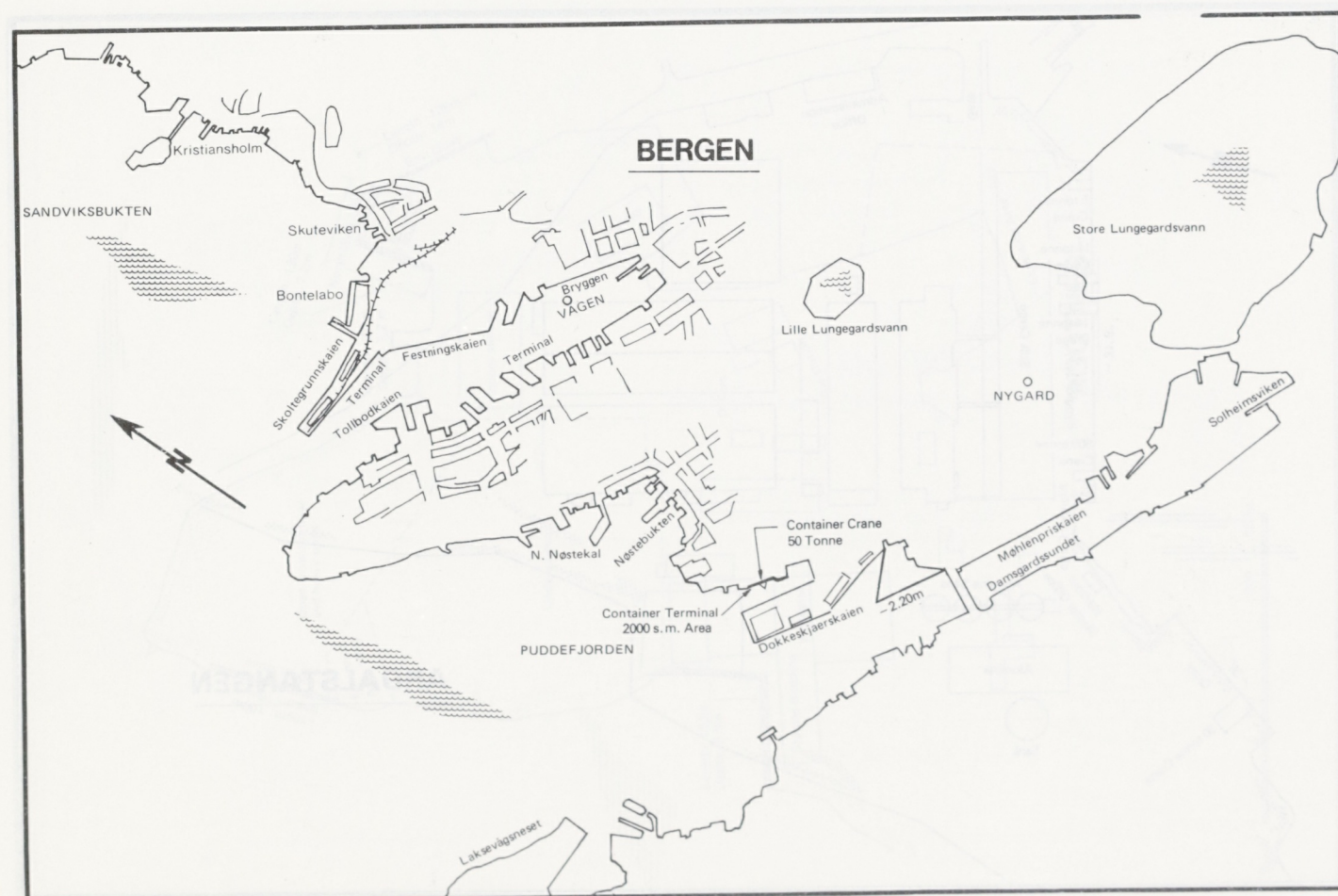
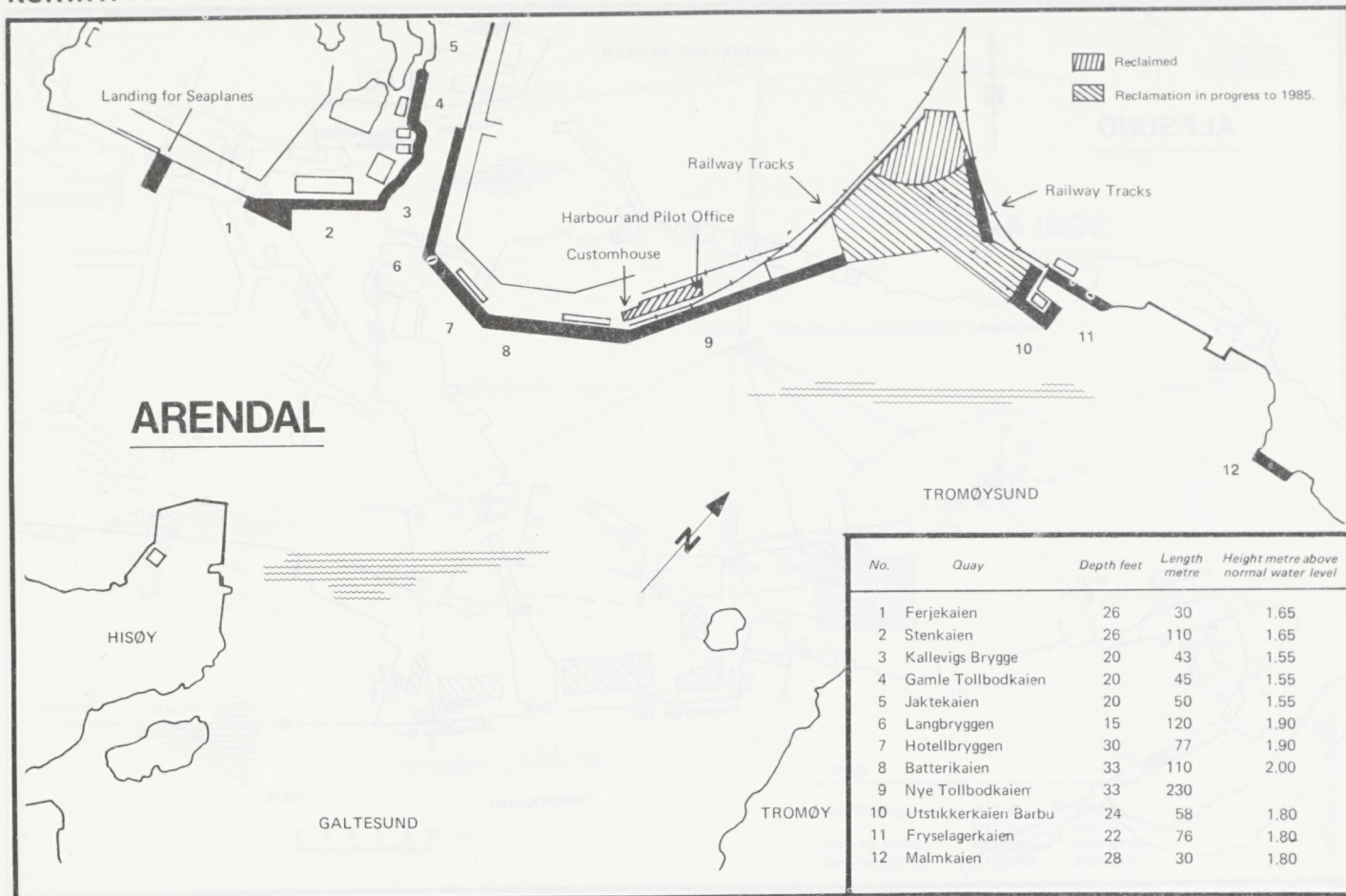


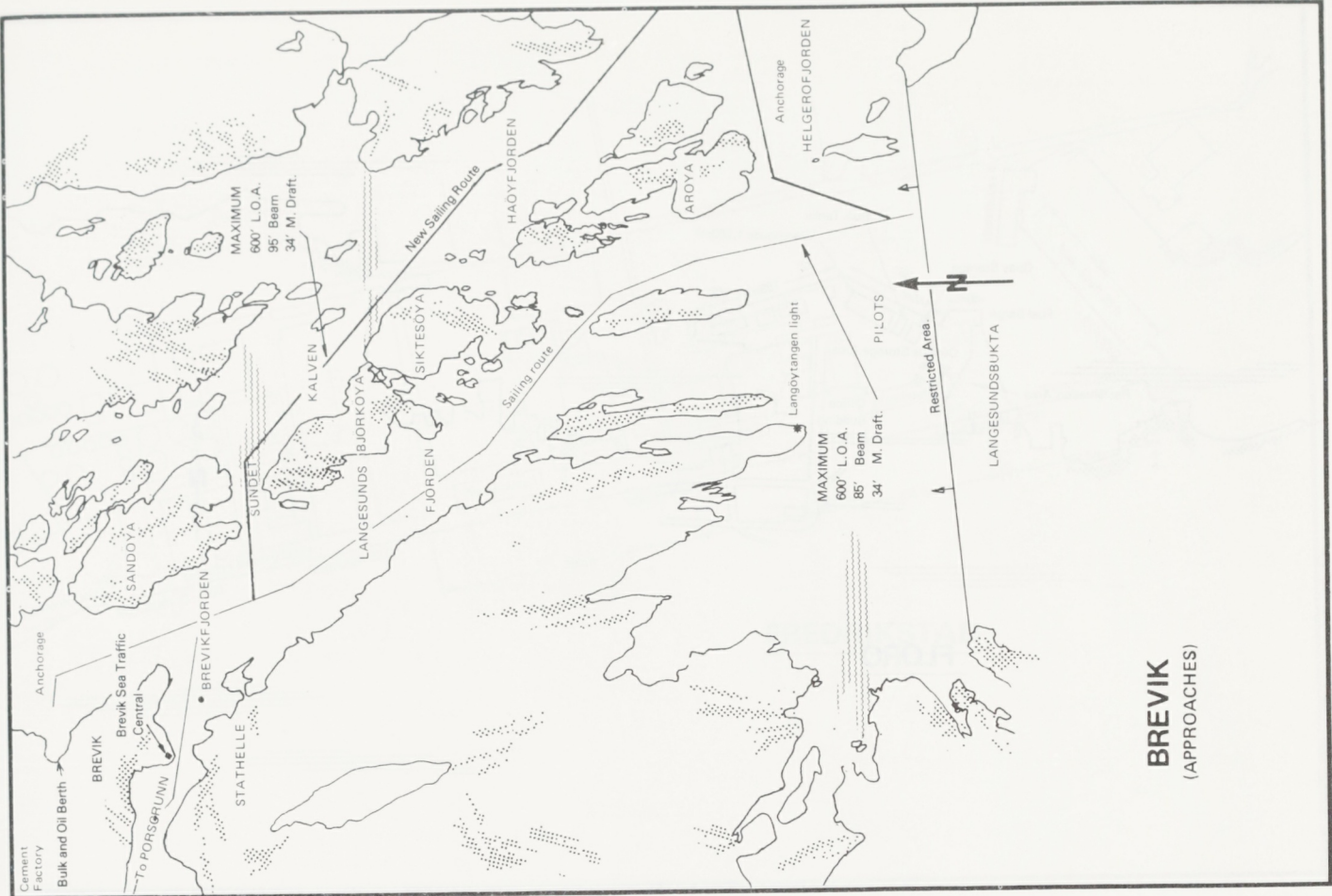
PENNINGTON
EXPORT BUOY — FLOATING HOSE ARRANGEMENT



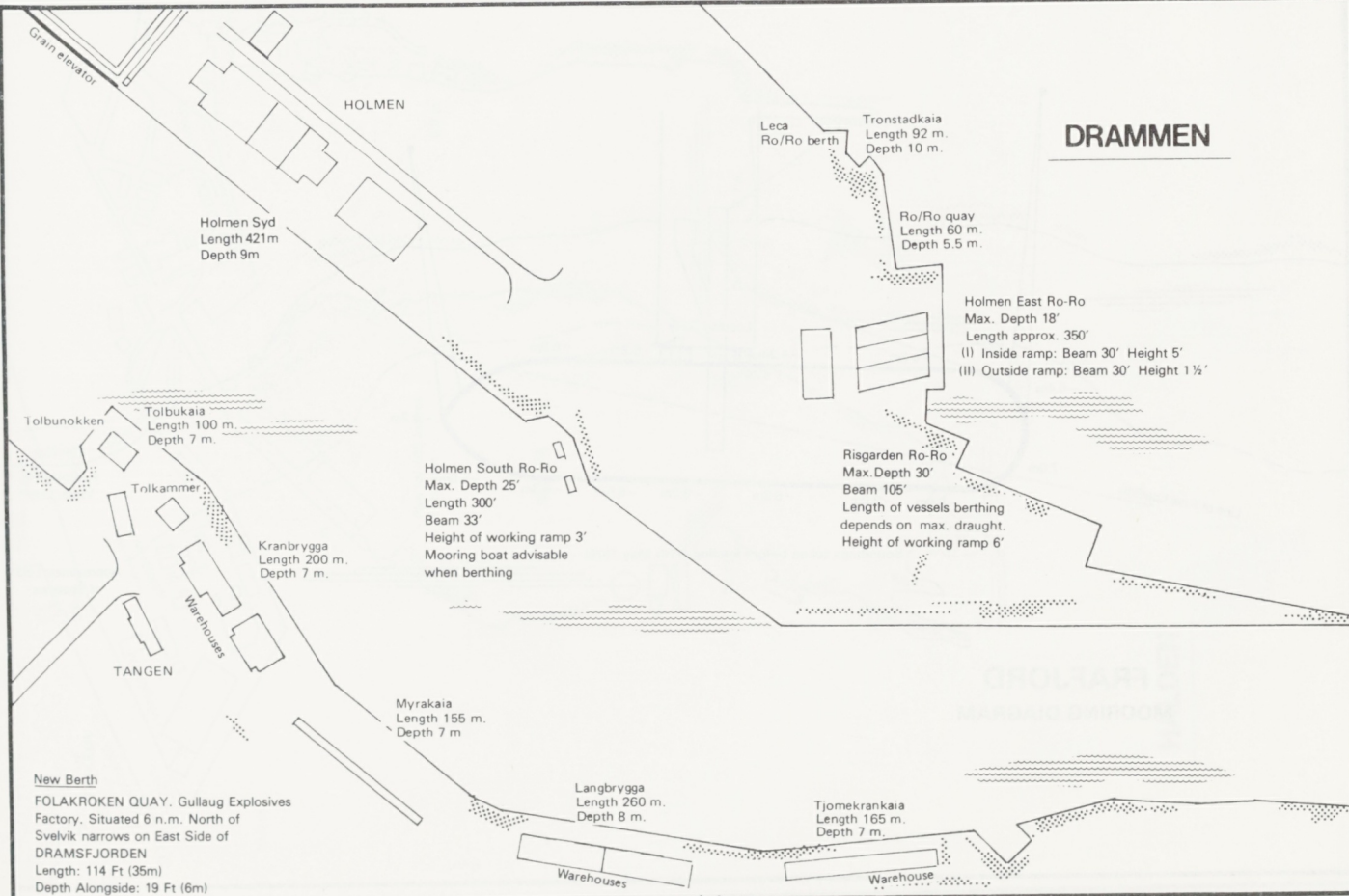






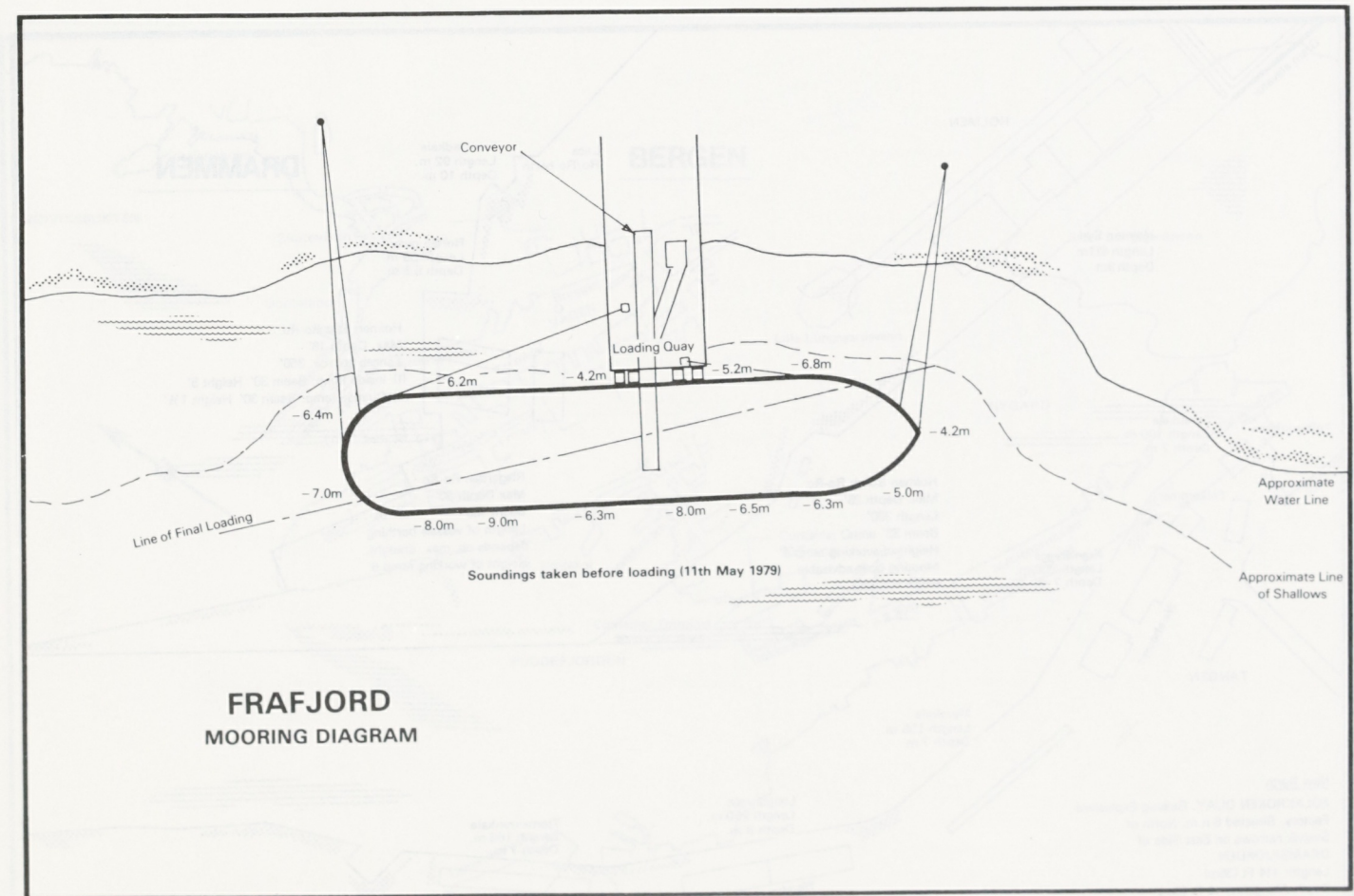
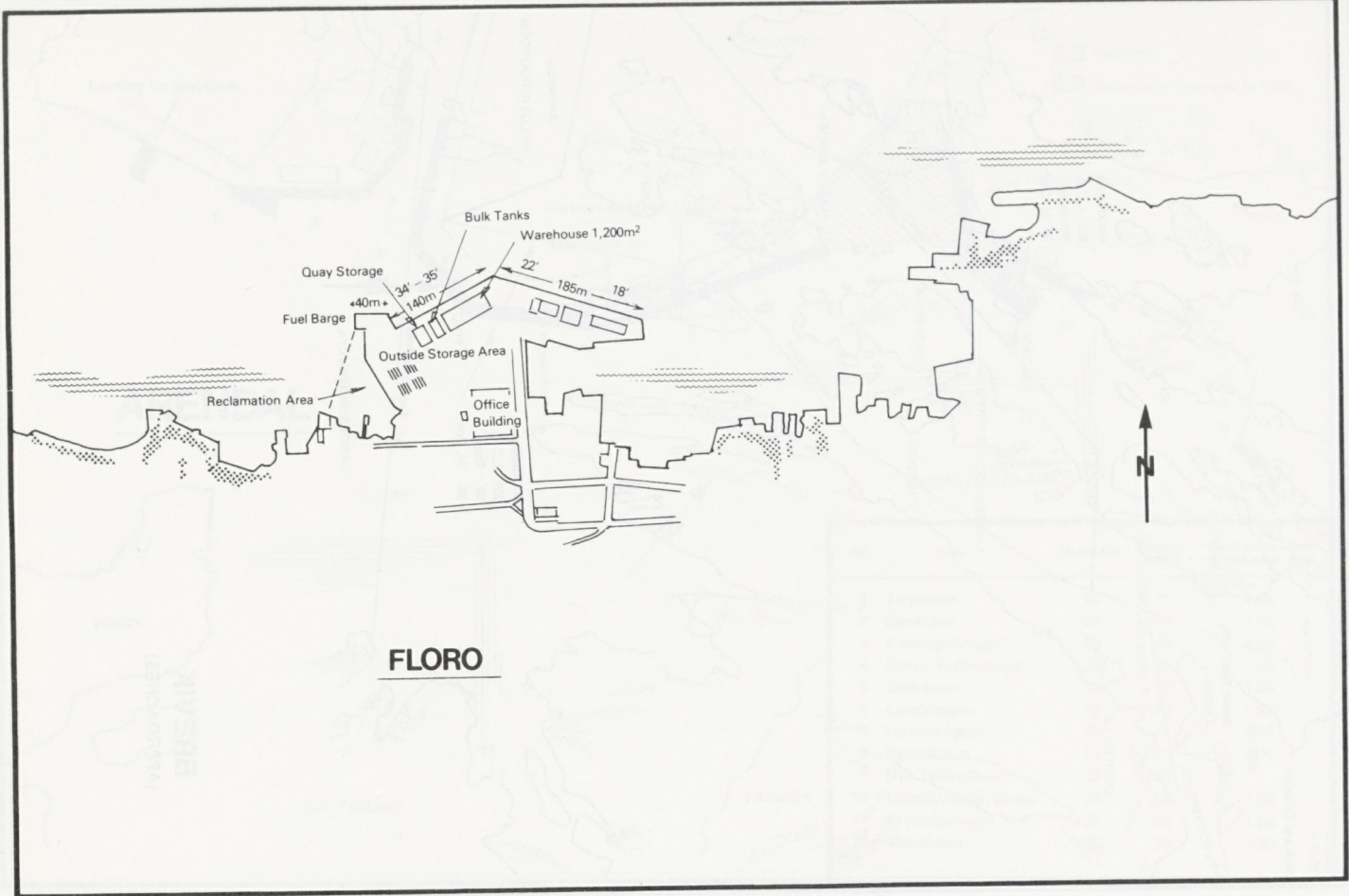


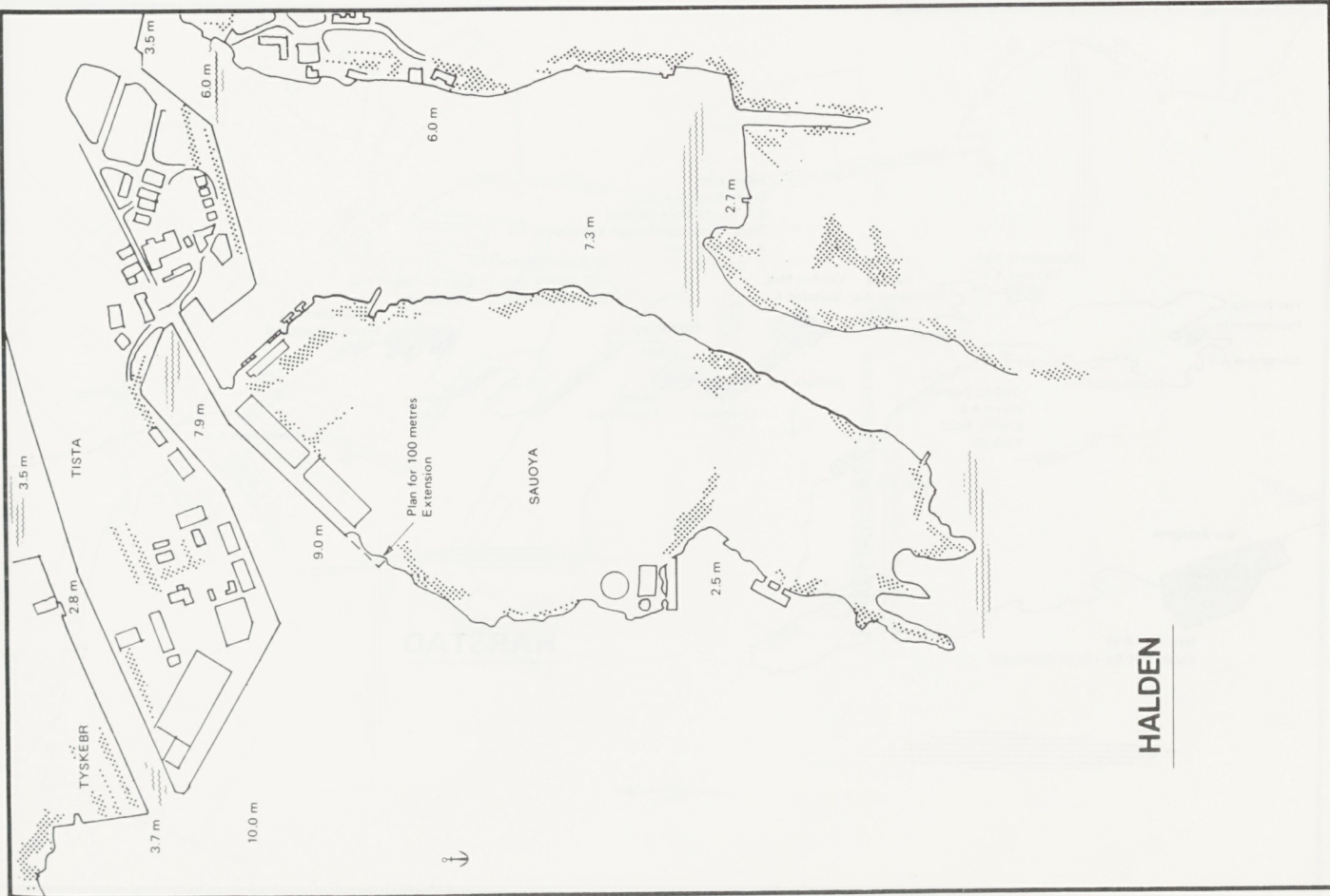
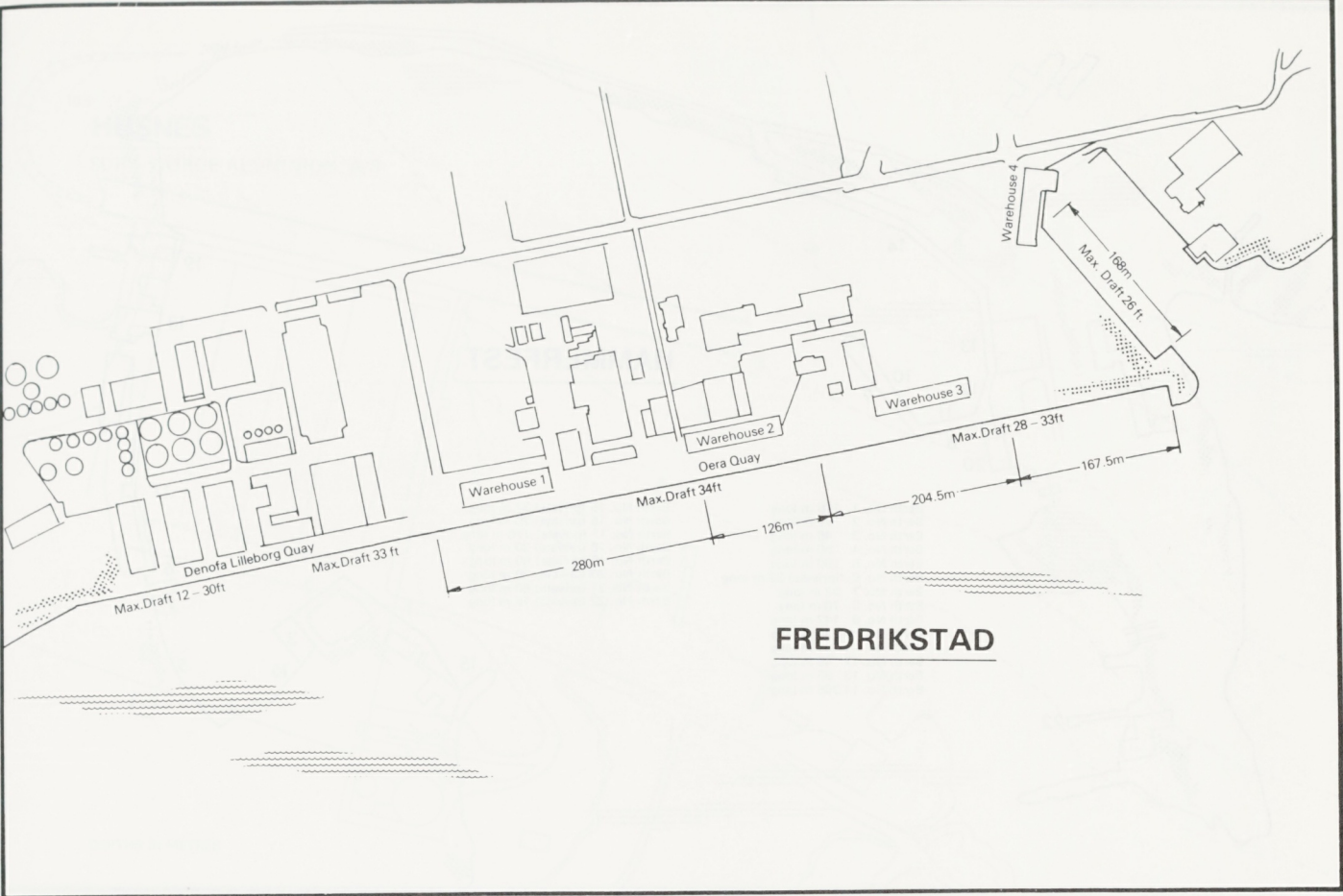
BREVIK
(APPROACHES)

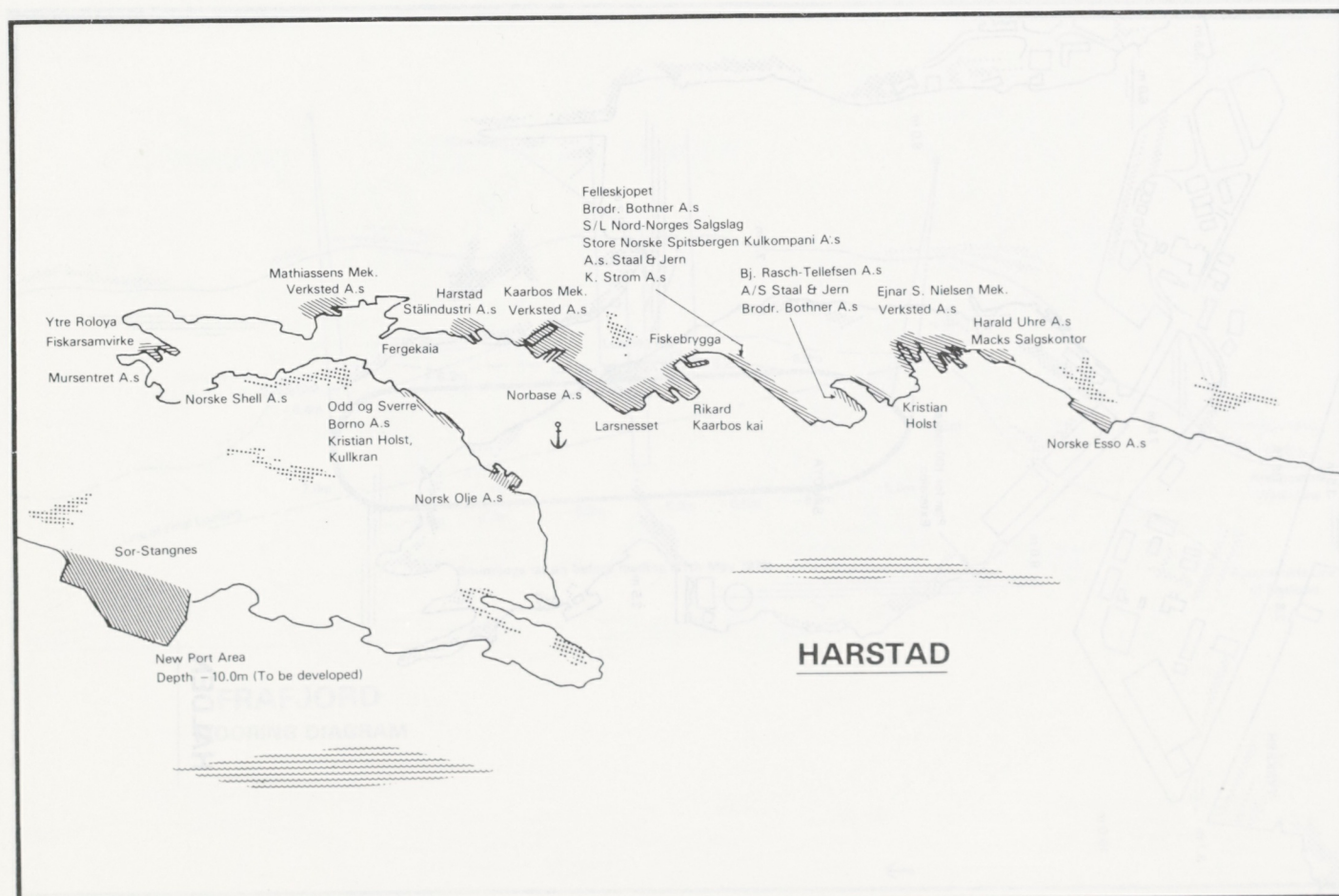
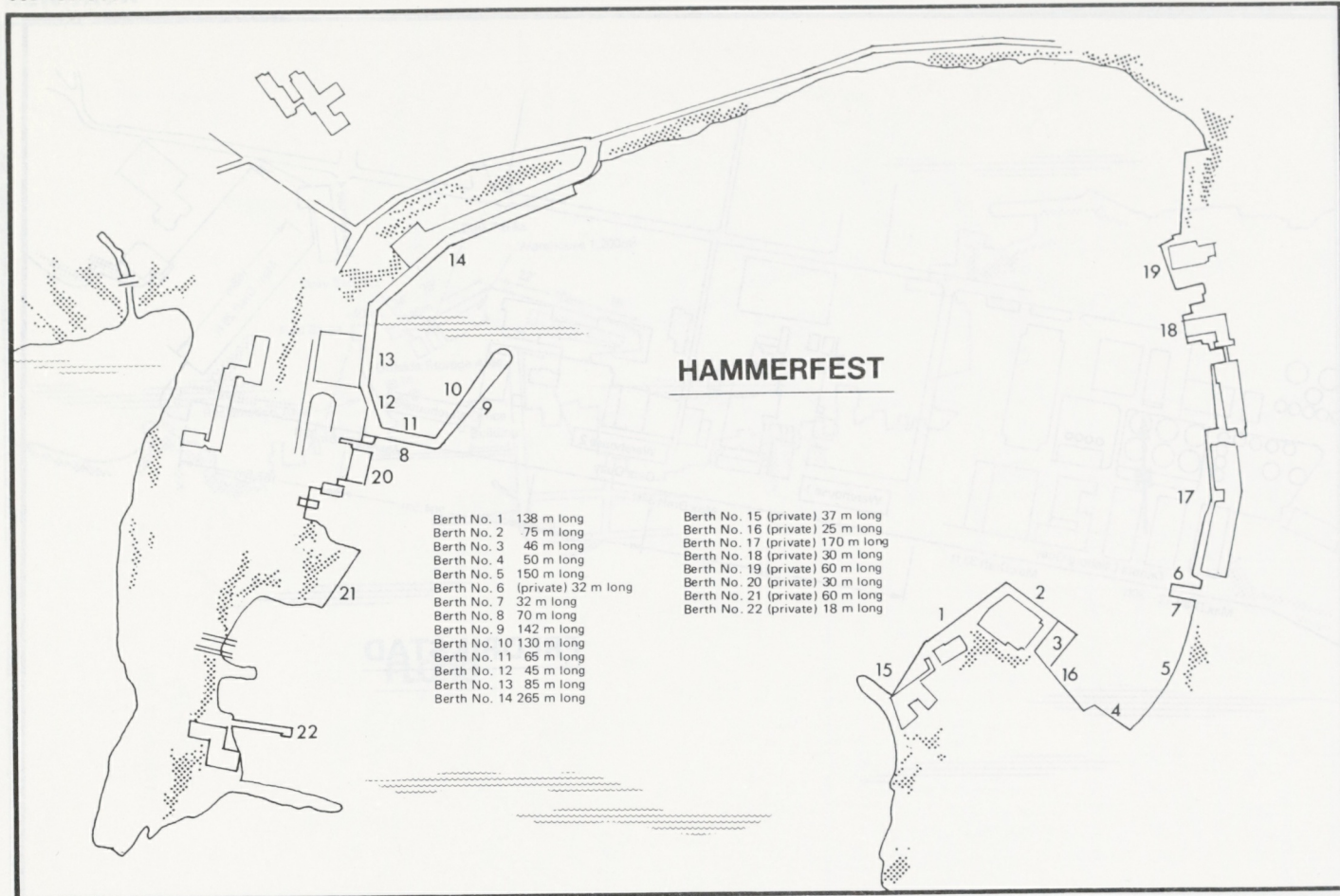


DRAMMEN

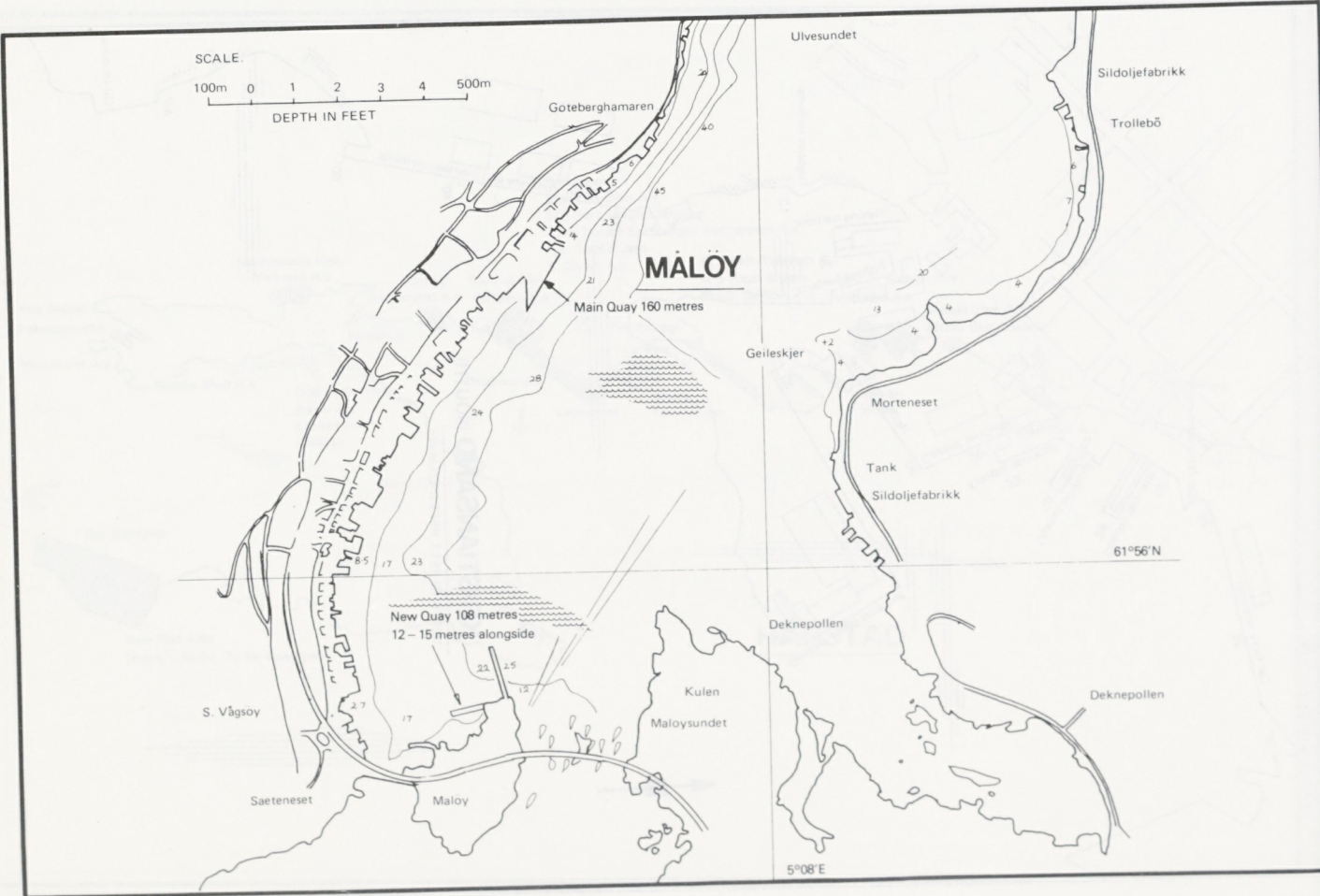
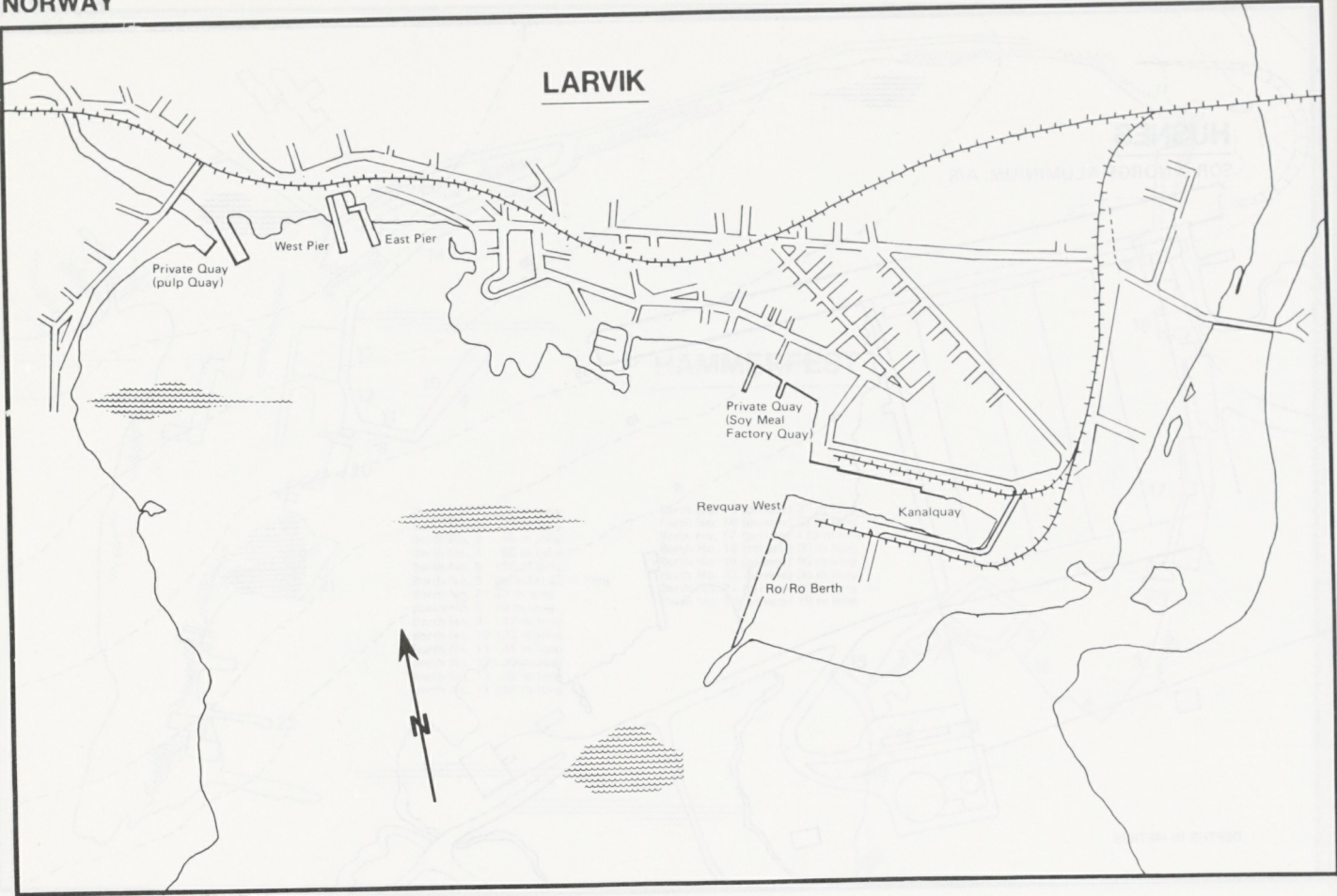
New Berth
FOLAKROKEN QUAY. Gullaug Explosives
Factory. Situated 6 n.m. North of
Svelvik narrows on East Side of
DRAMSFJORDEN
Length: 114 Ft (35m)
Depth Alongside: 19 Ft (6m)

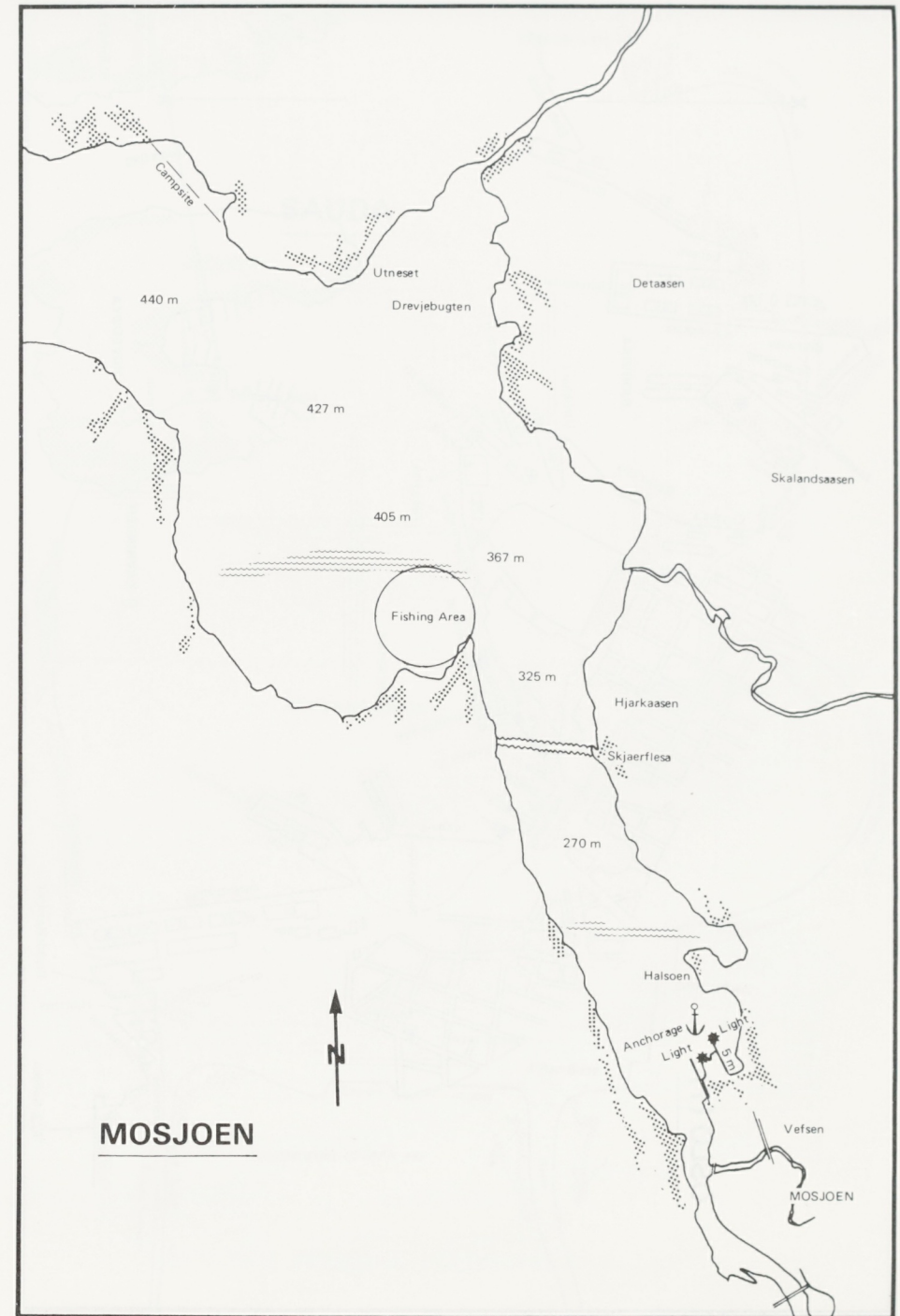
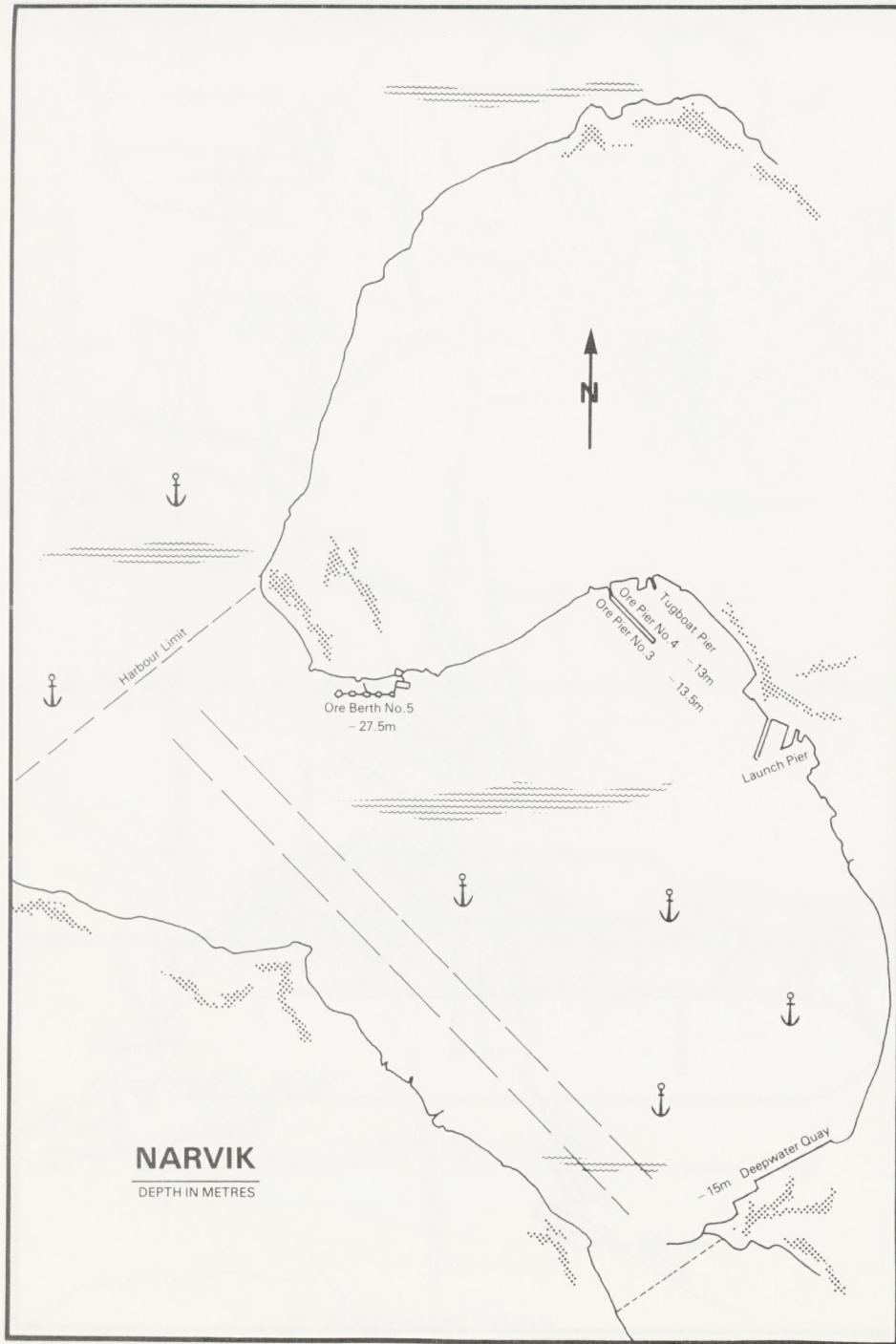




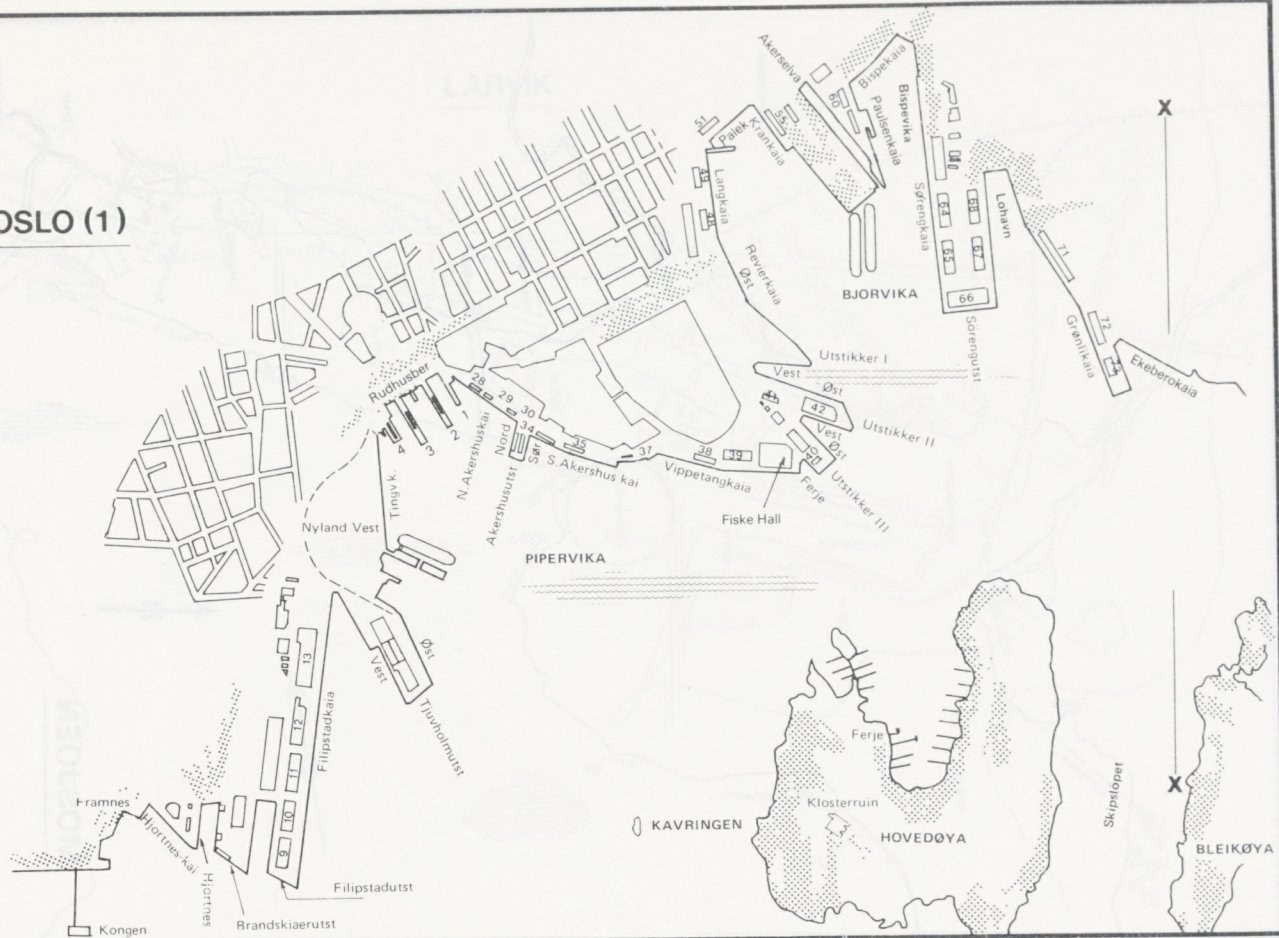




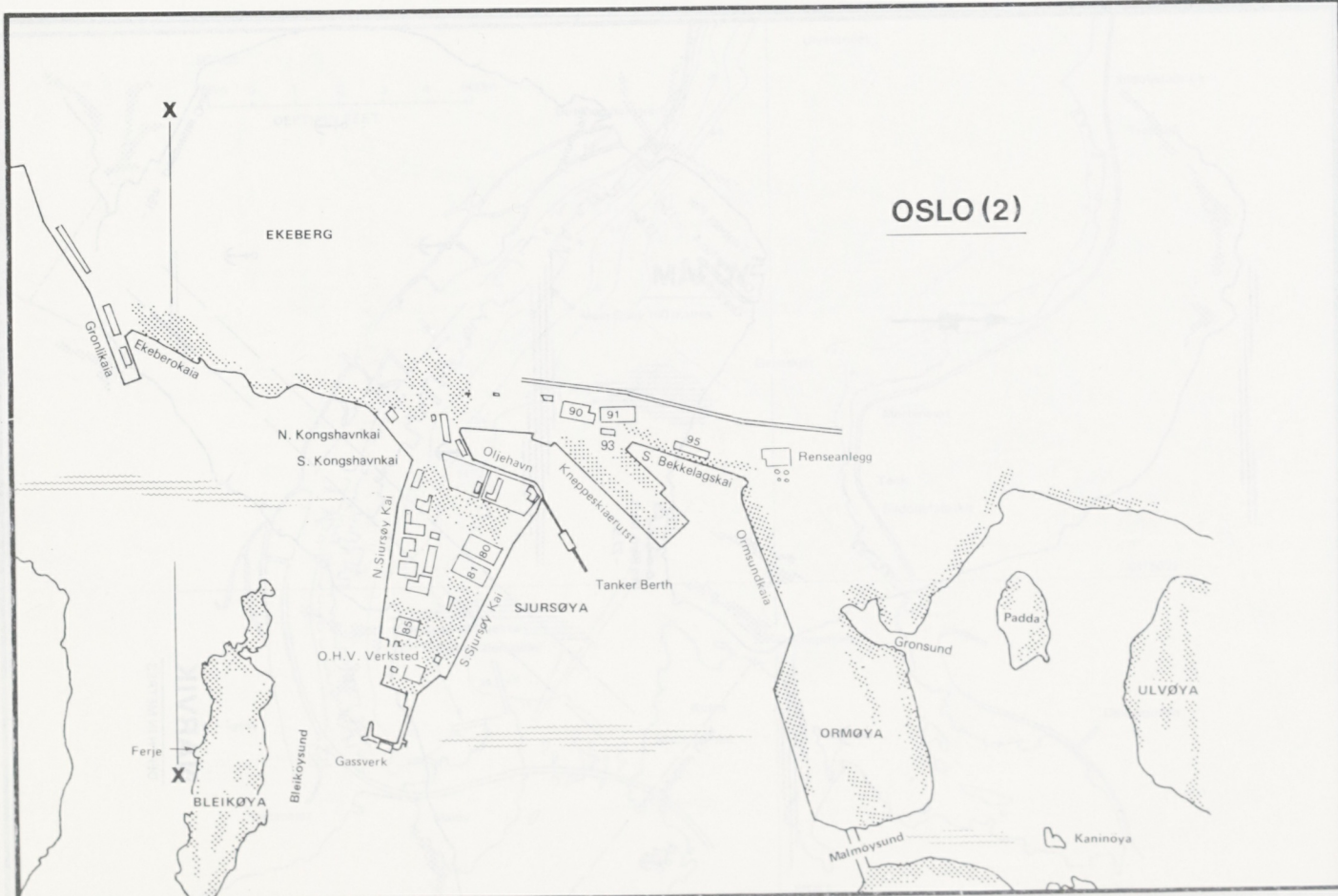


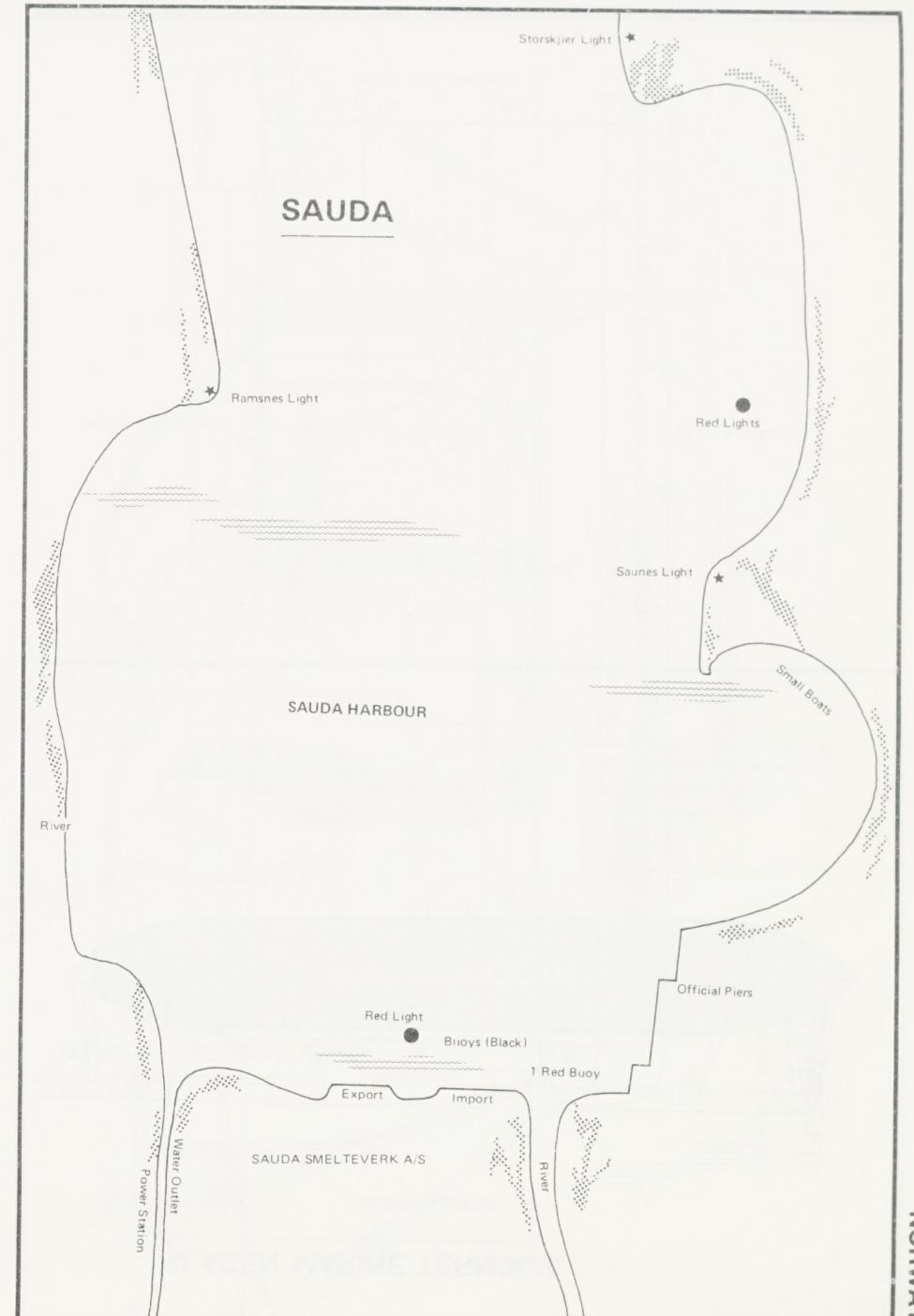
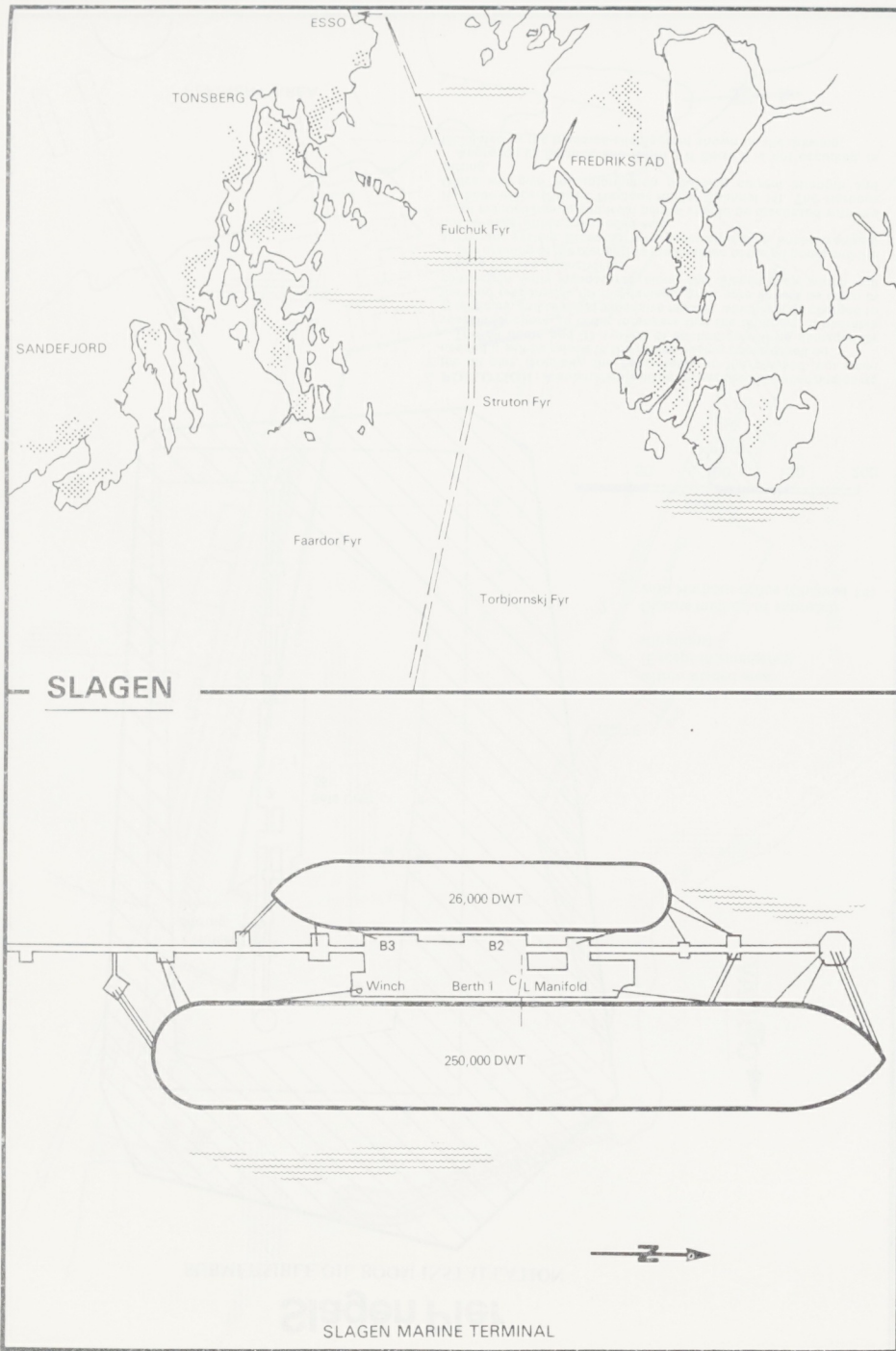


OSLO (1)



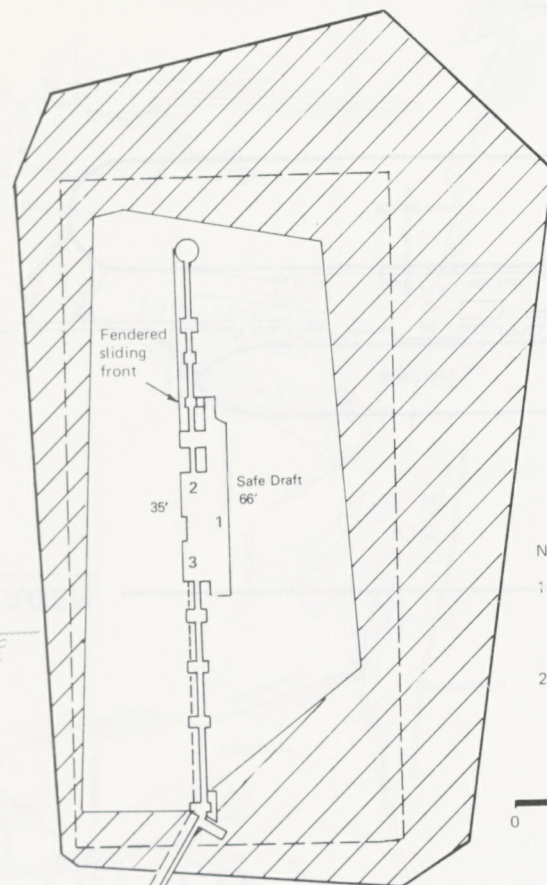
OSLO (2)





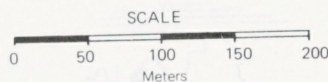
Slagen Pier

SUBMERSIBLE OIL BOOM INSTALLATION



NOTE:

- 1 No anchors to be used within shaded area (Except in emergency situations)
- 2 Discuss method of approach with Harbour office (Channel 14)



POLLUTION: A submersible oil boom has been installed enclosing the oil pier. Normally, the boom rests on the sea-bed, but when needed it will be raised to the surface using compressed air.

The oil boom and its system of anchorage will be damaged by vessels' anchors. In order to ensure that the oil boom is operable at all times, and to avoid expensive repairs, which will be charged to the ship responsible for the damage, great care should be taken in connection with manoeuvres along the Slagen pier, which will require the use of anchors.

The drawing of the pier shows the position of the oil boom and the anchorage system. Except for emergency situations, anchors should not be used within the shaded area.

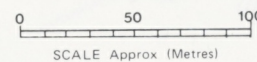
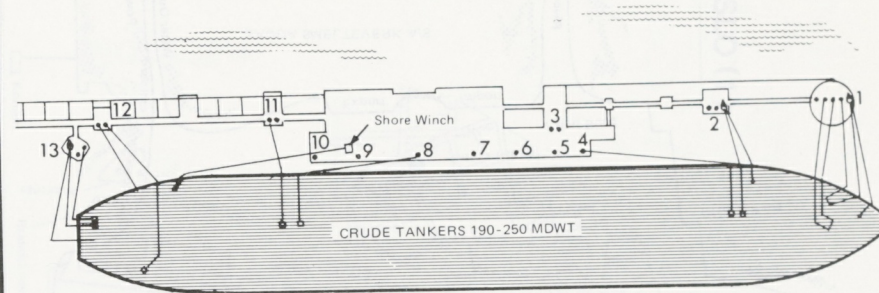
All manoeuvres to and from berths should be discussed with the Harbour office (Slagen Harbour Radio, Channel 14). The Harbour Office will give you information regarding current strength and setting.

Approach to Berth 2, and Berth 3 if Berth 2 is not occupied, is facilitated by the fendered sliding front shown on the drawing.

REFINERY AREA

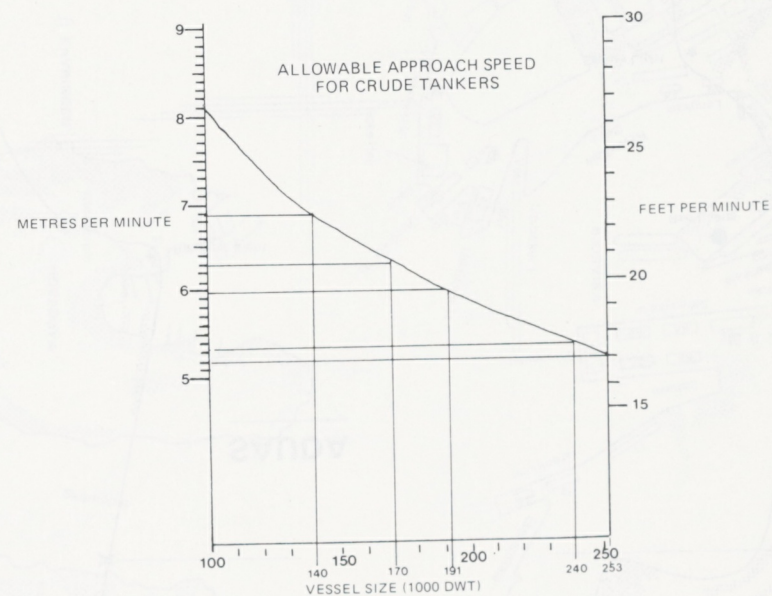
SLAGEN MARINE TERMINAL

MOORING SKETCH



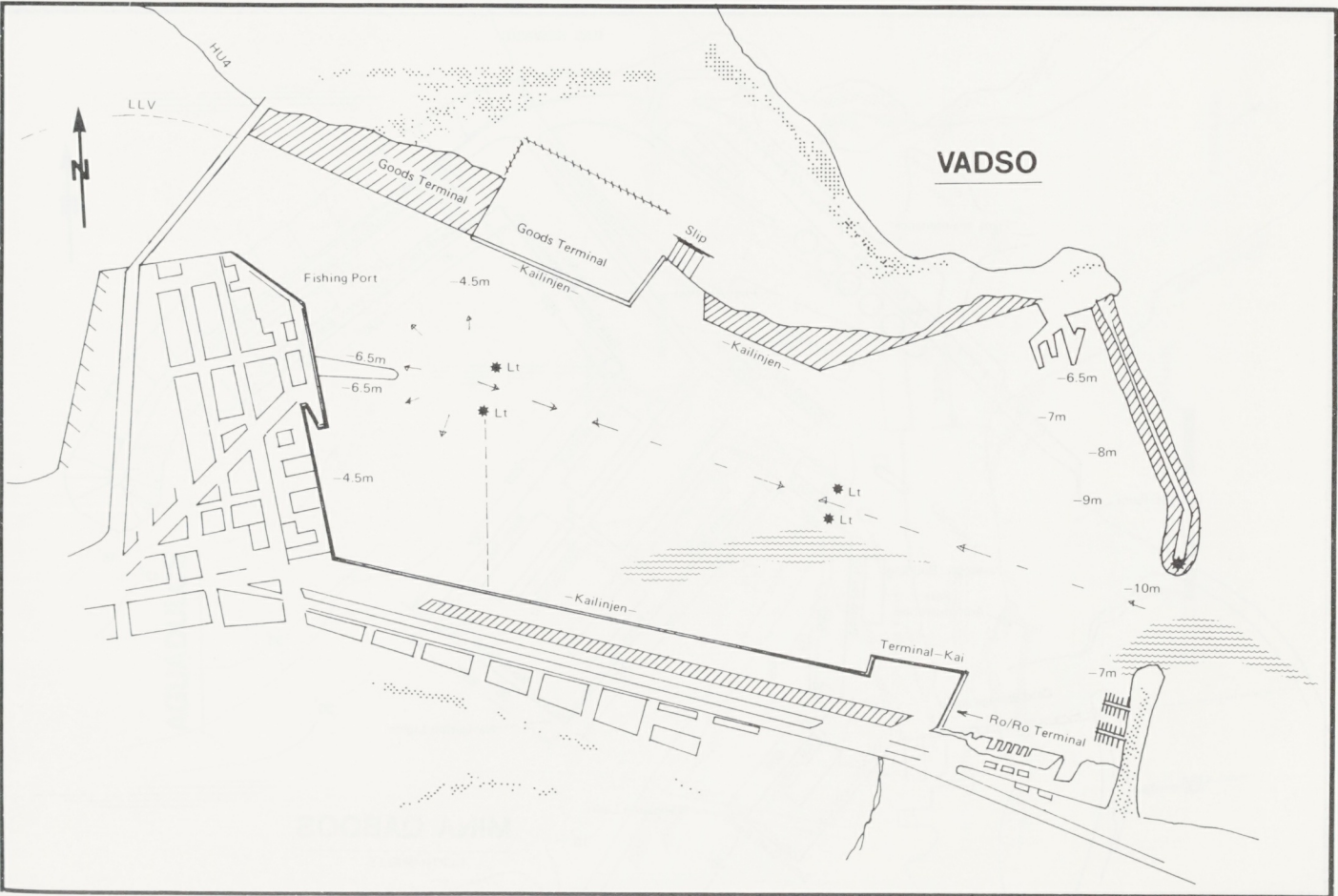
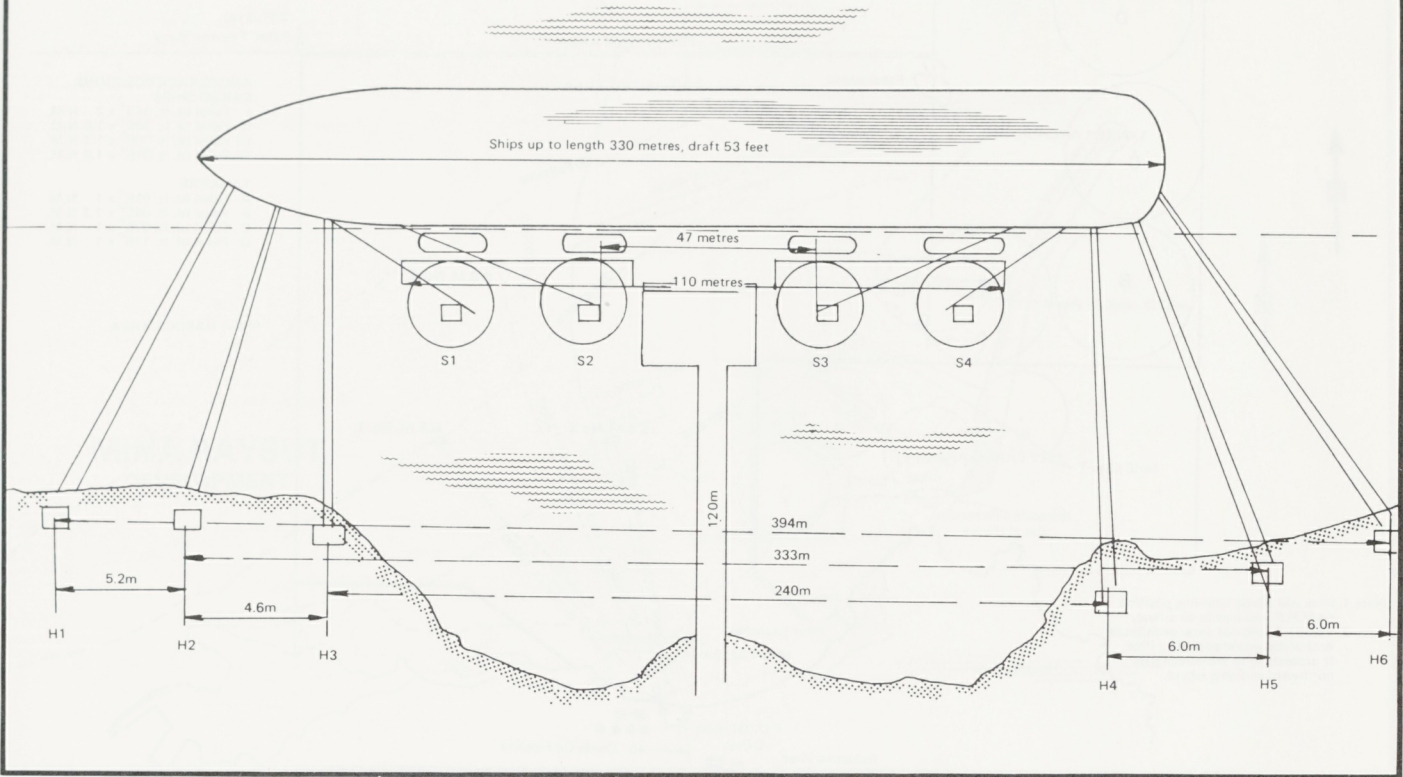
LEGEND

- Quick Release Hook
- ◊ Quick Release Pulley
- ◻ Shore Based Mooring Winch

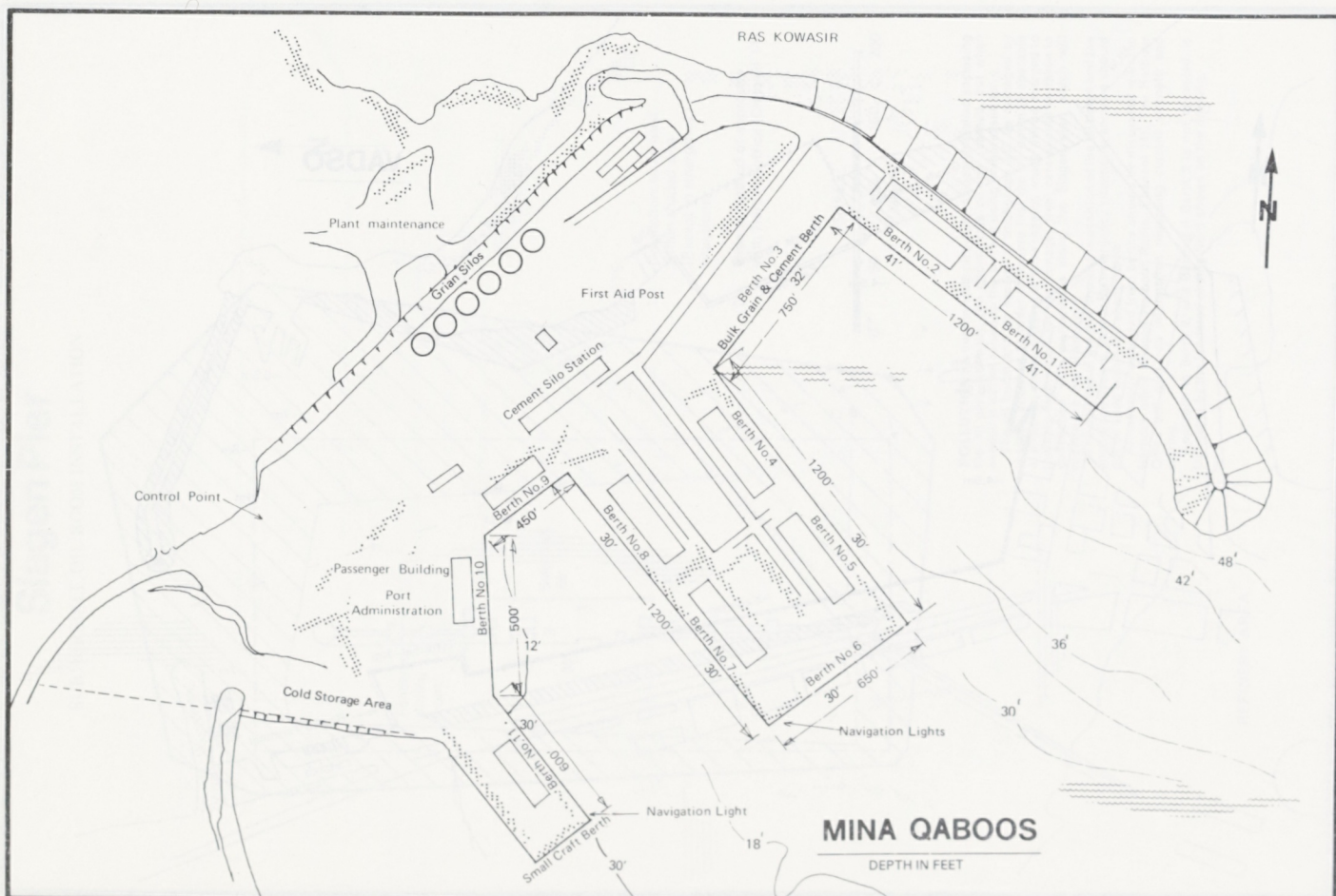
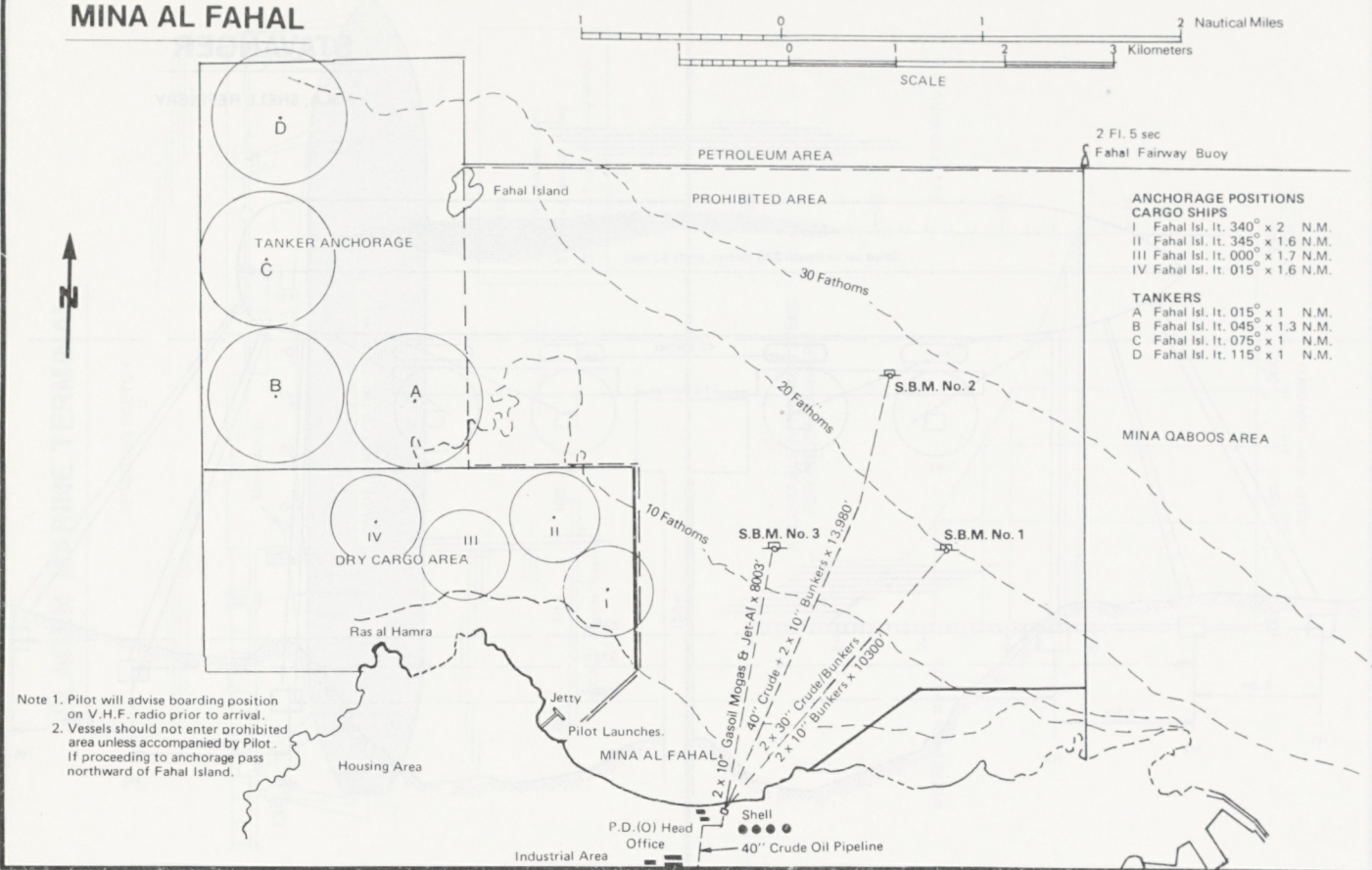


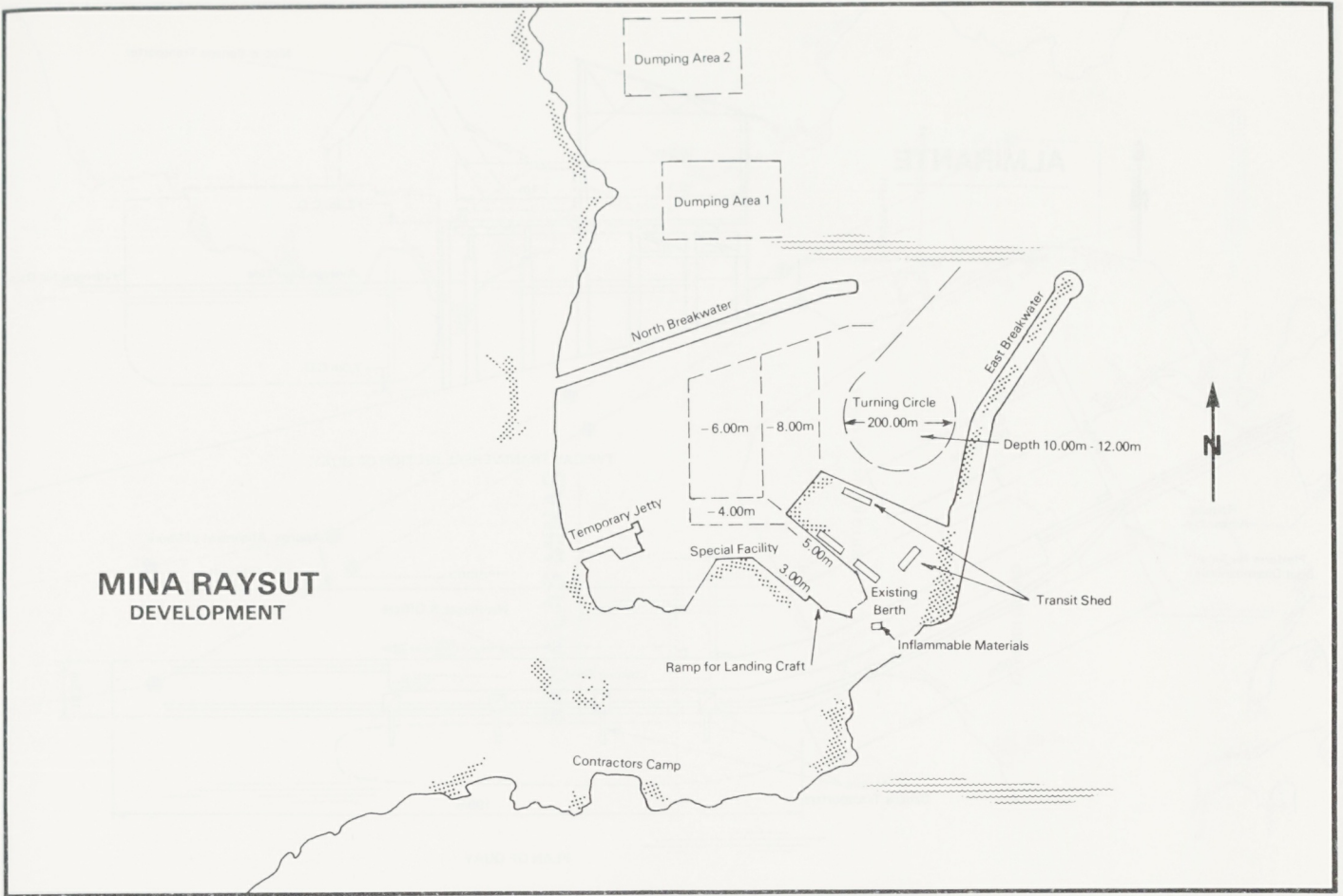
STAVANGER

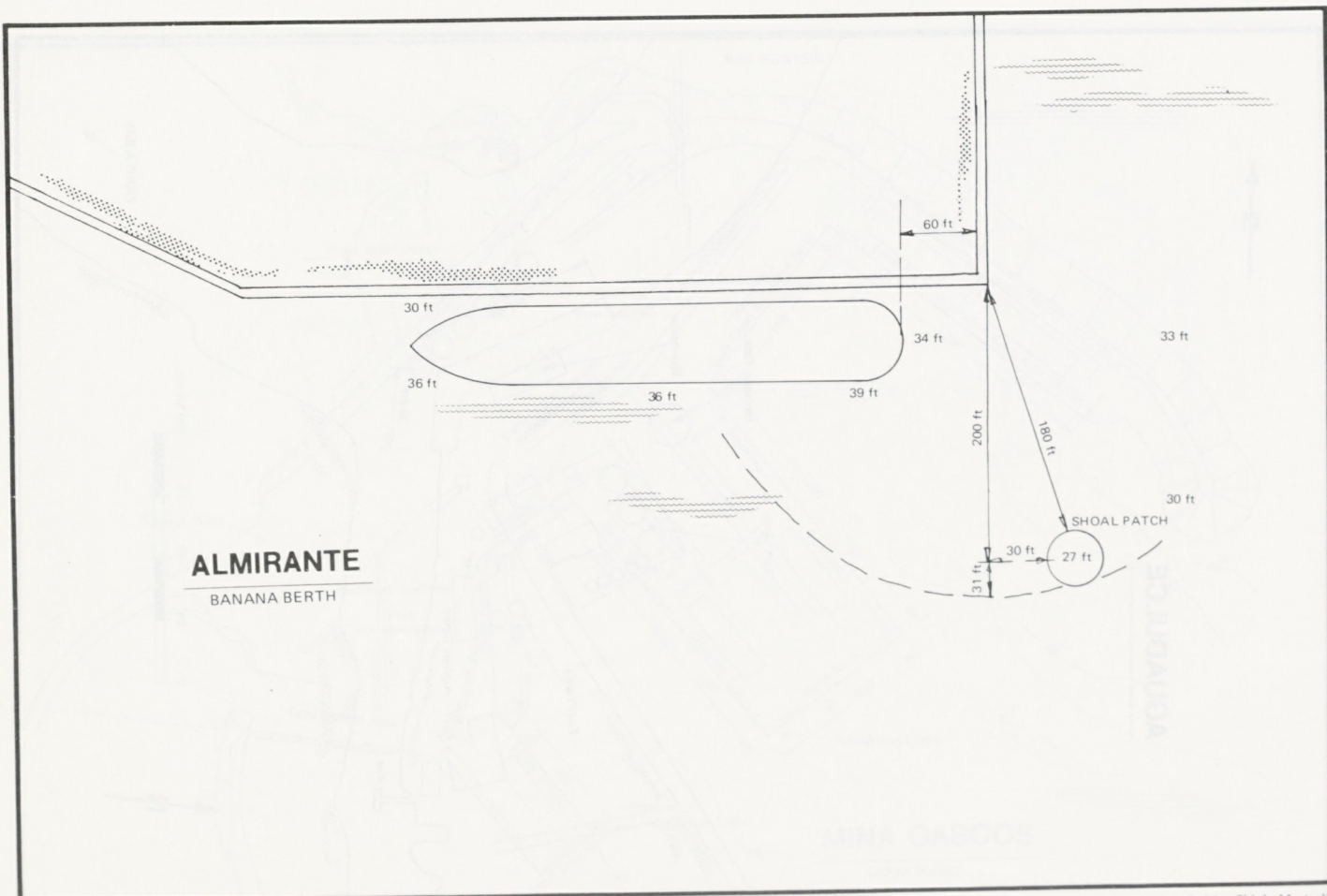
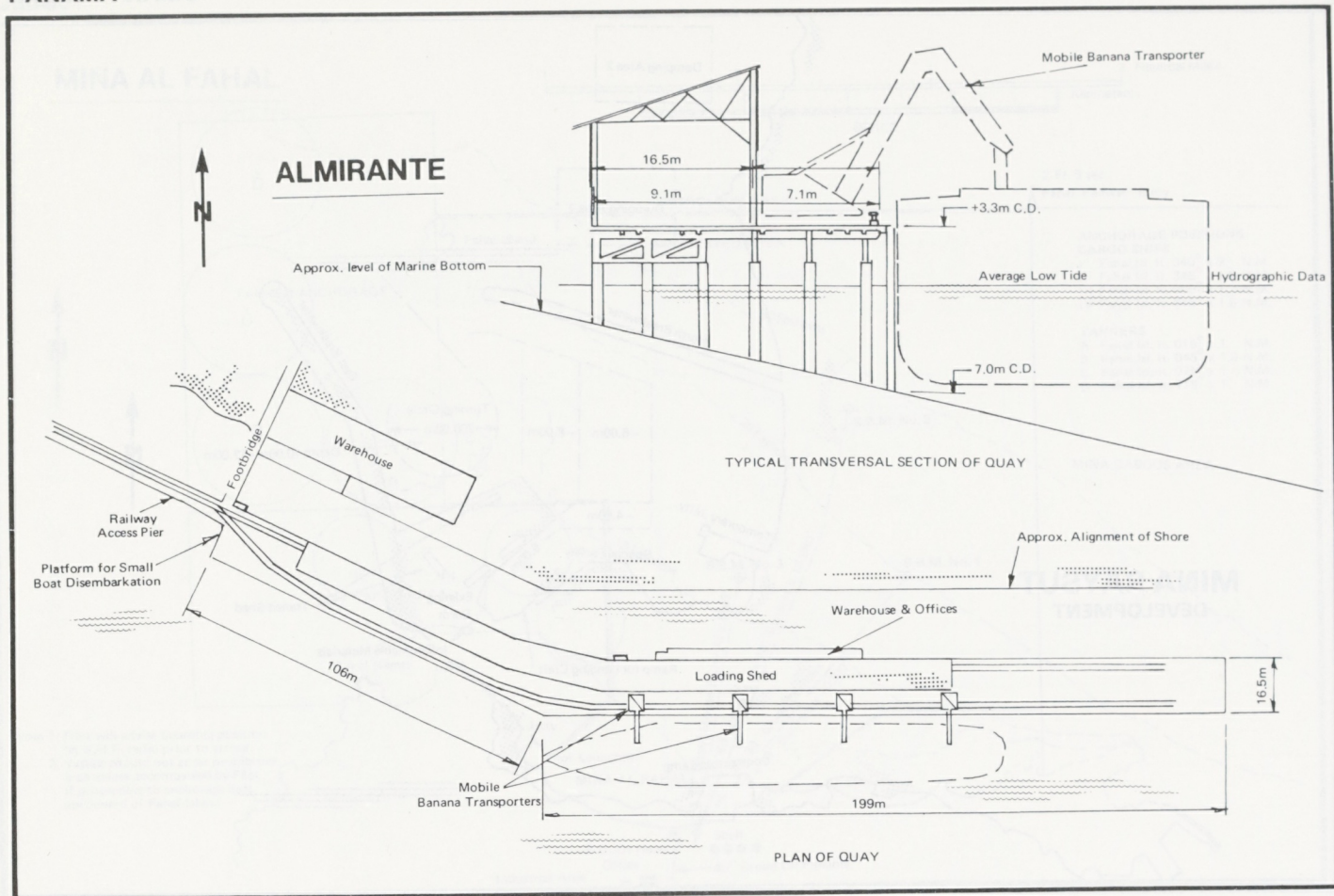
SOLA, SHELL REFINERY

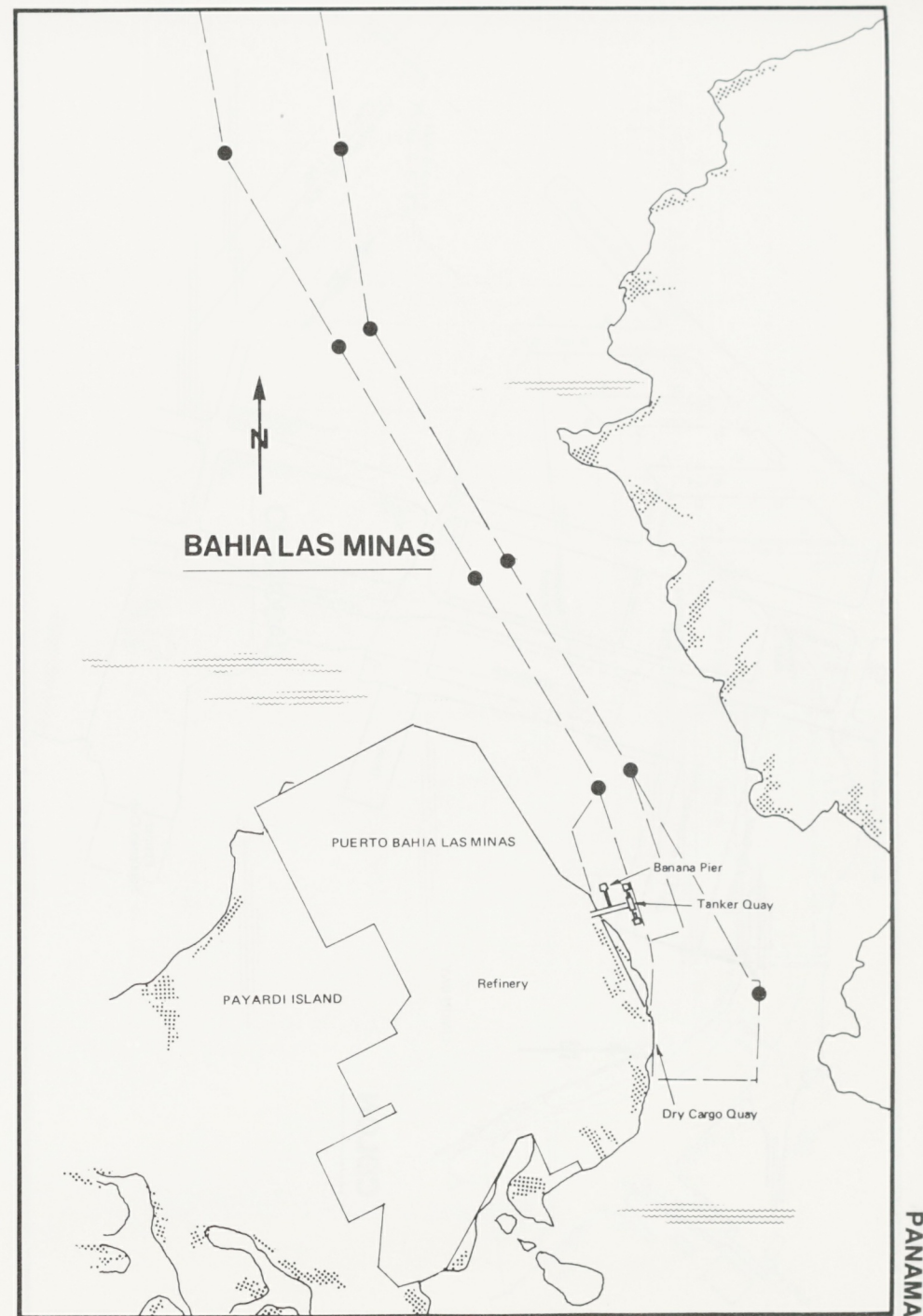
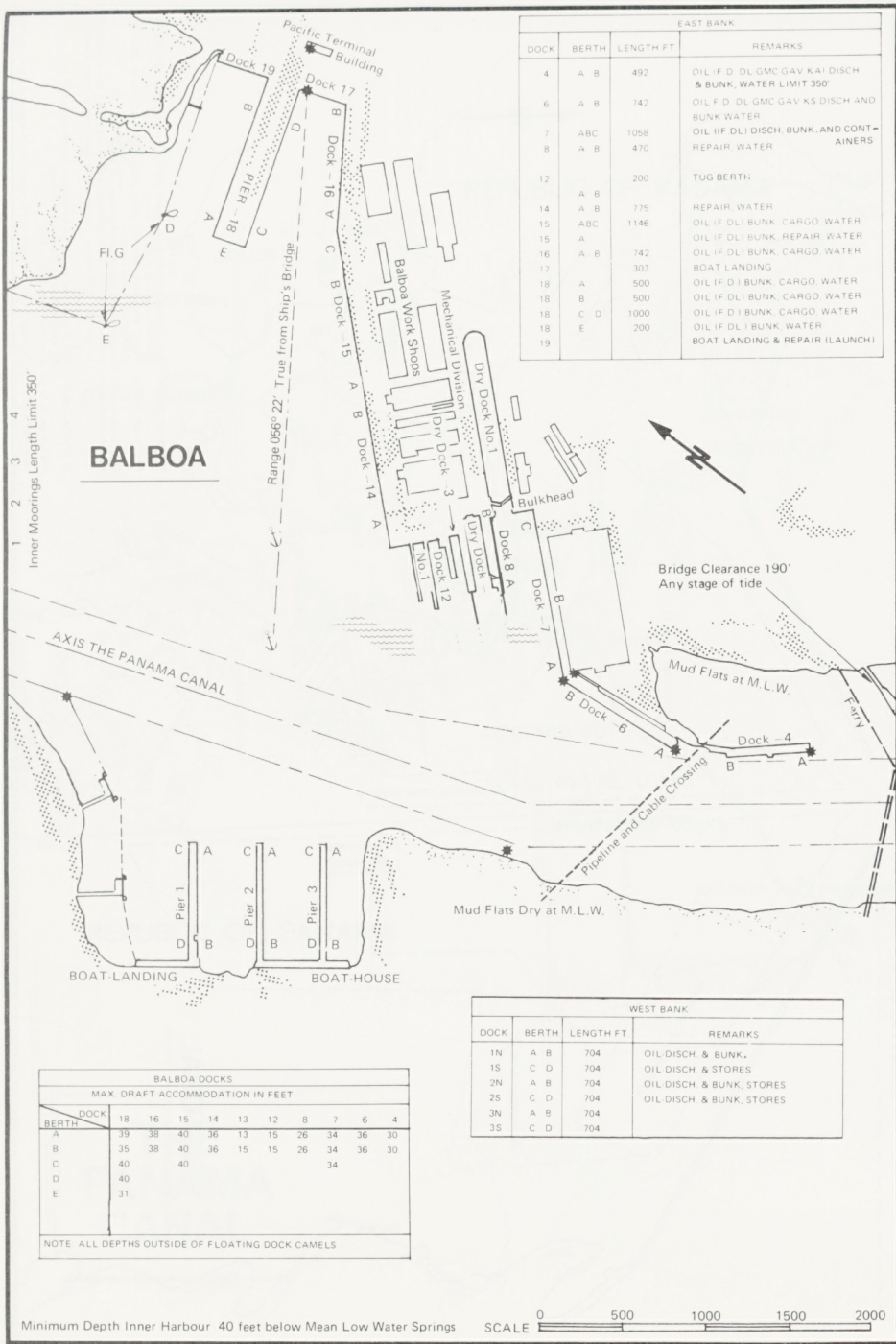


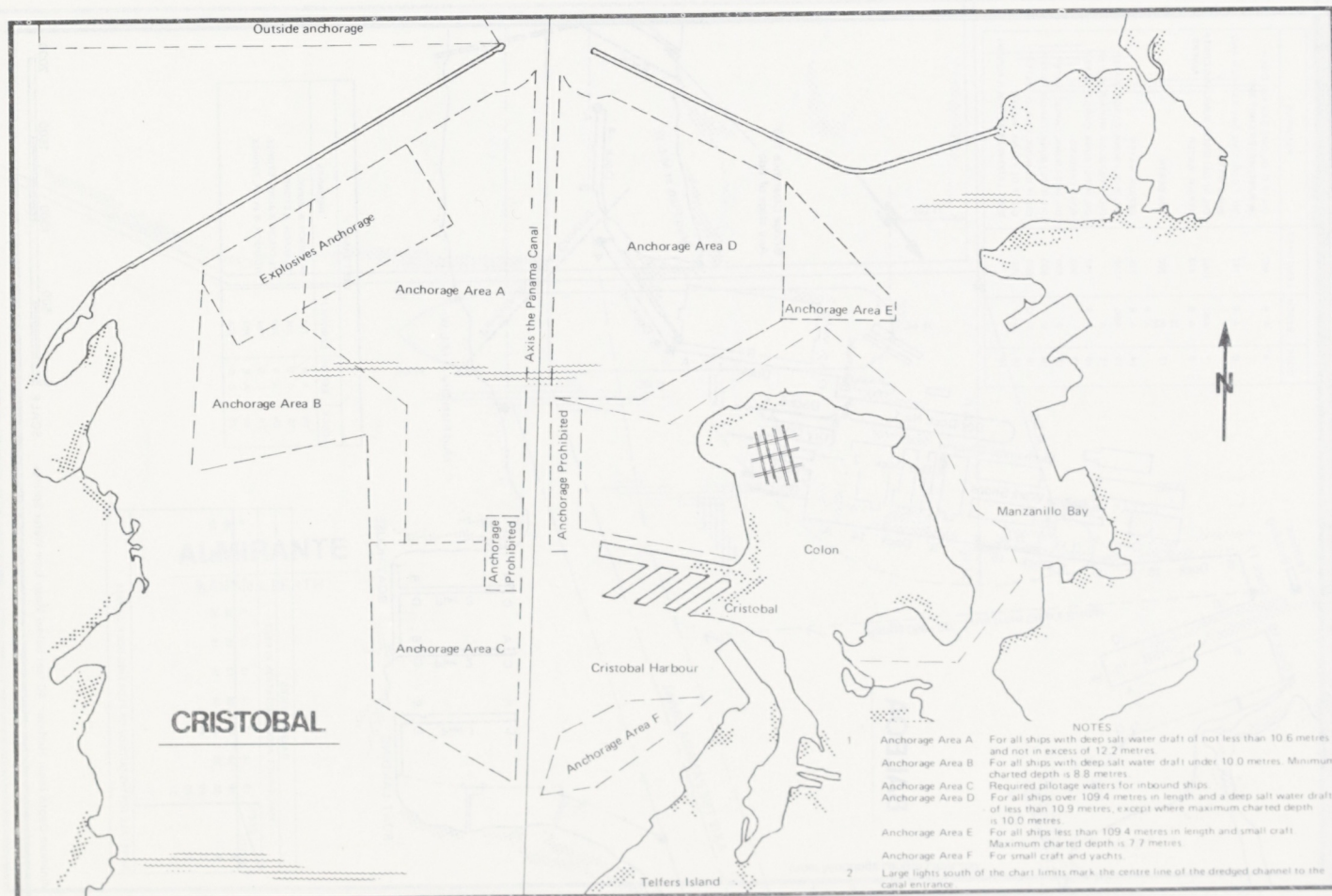
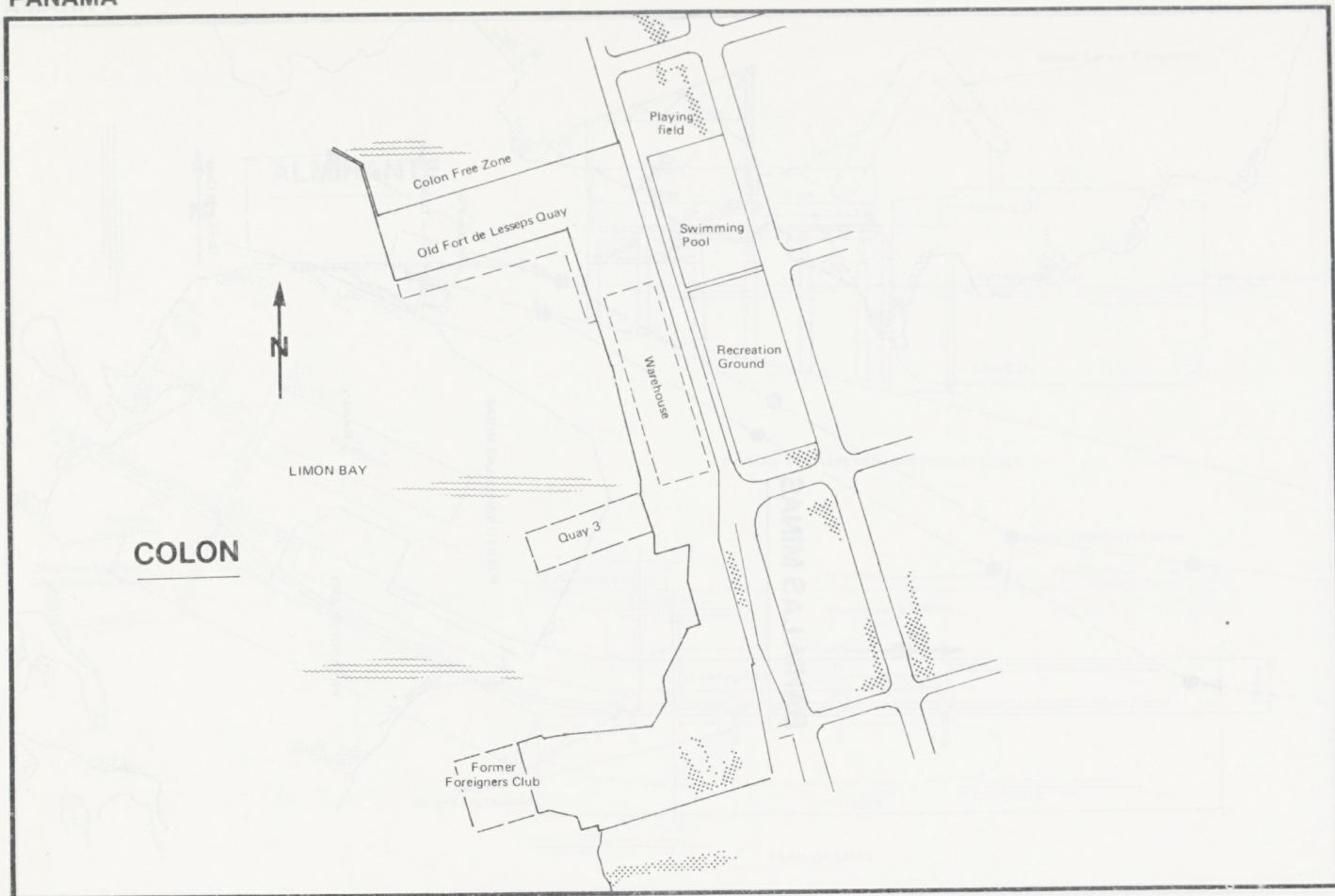
MINA AL FAHAL

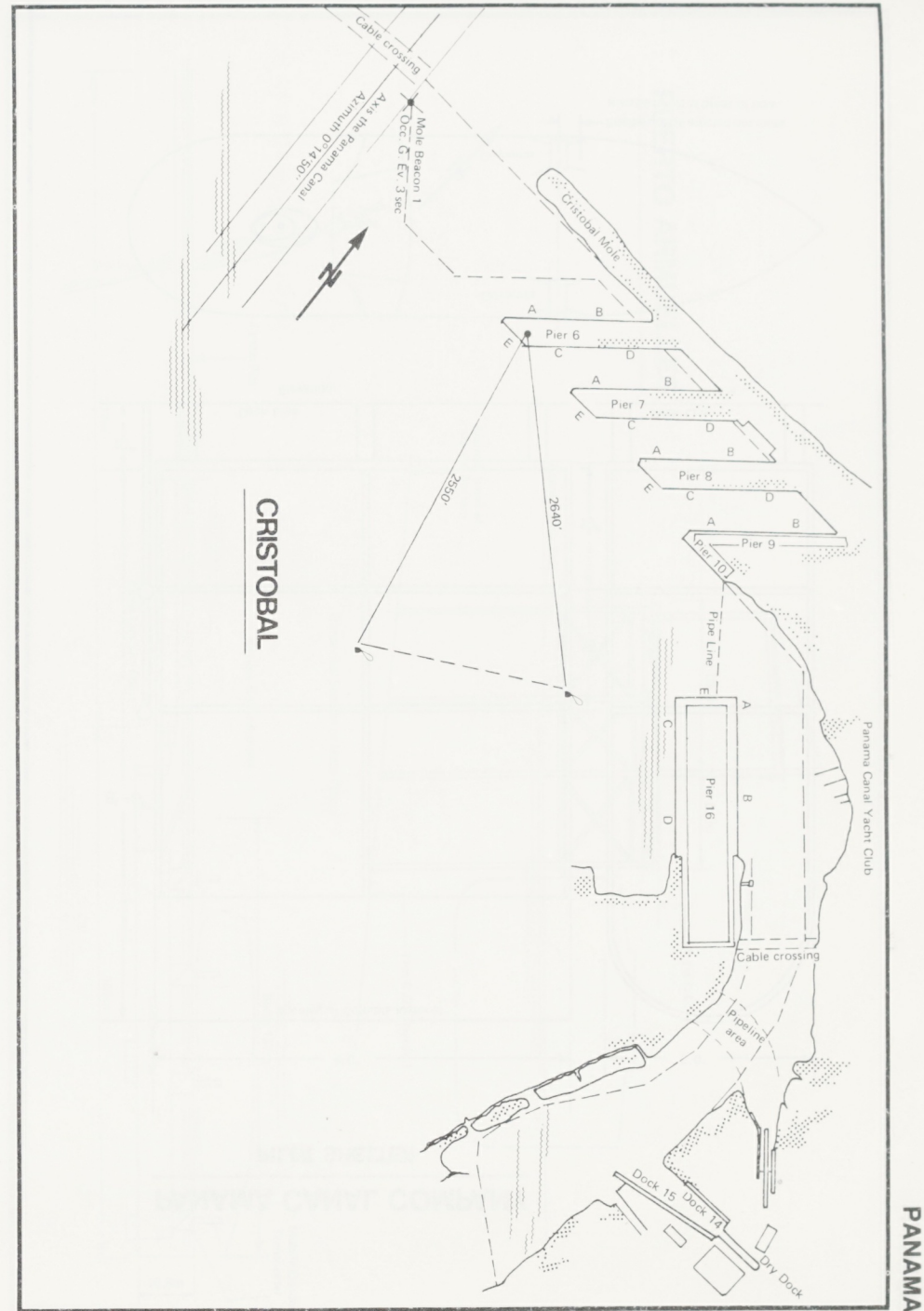
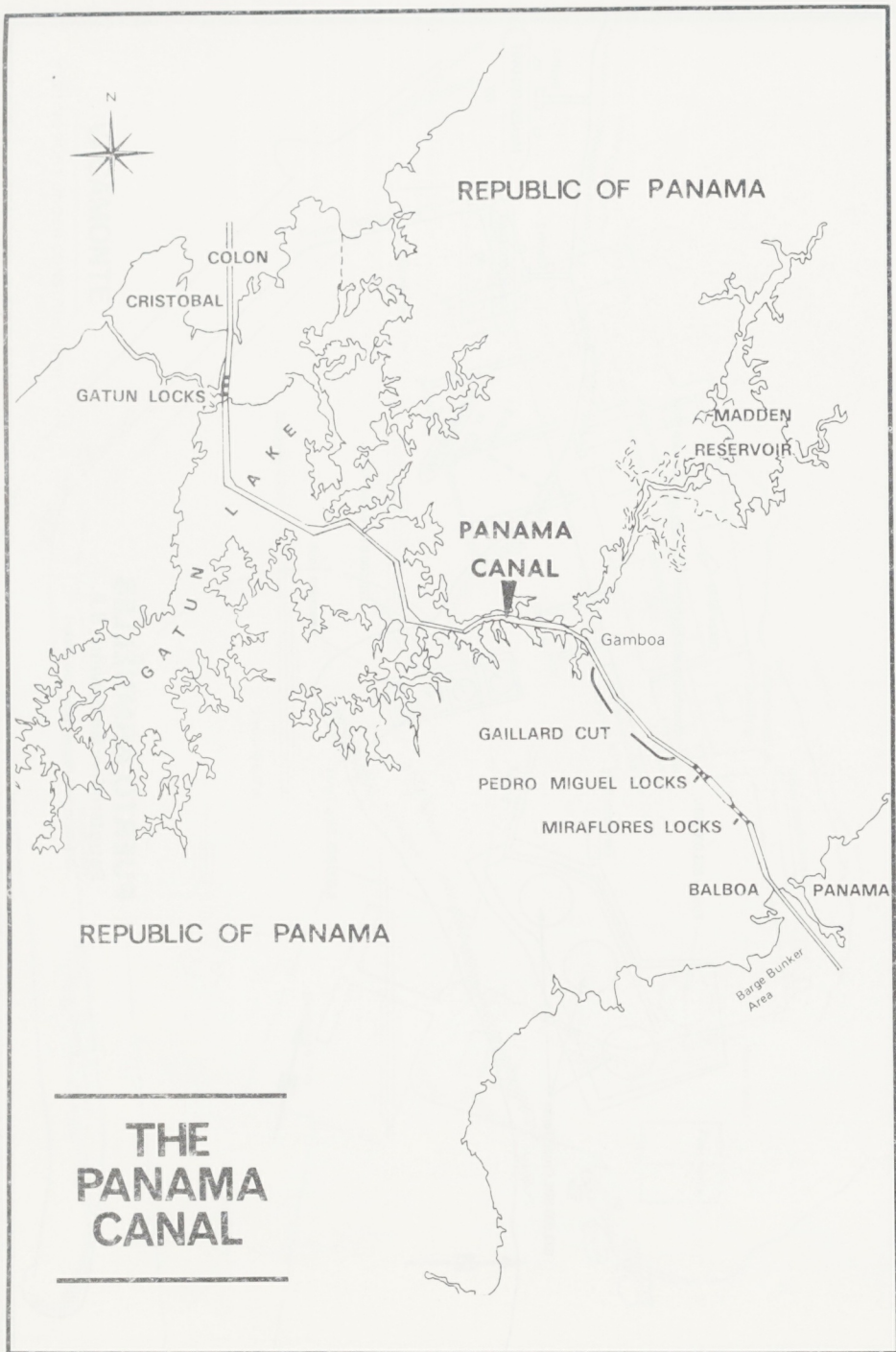






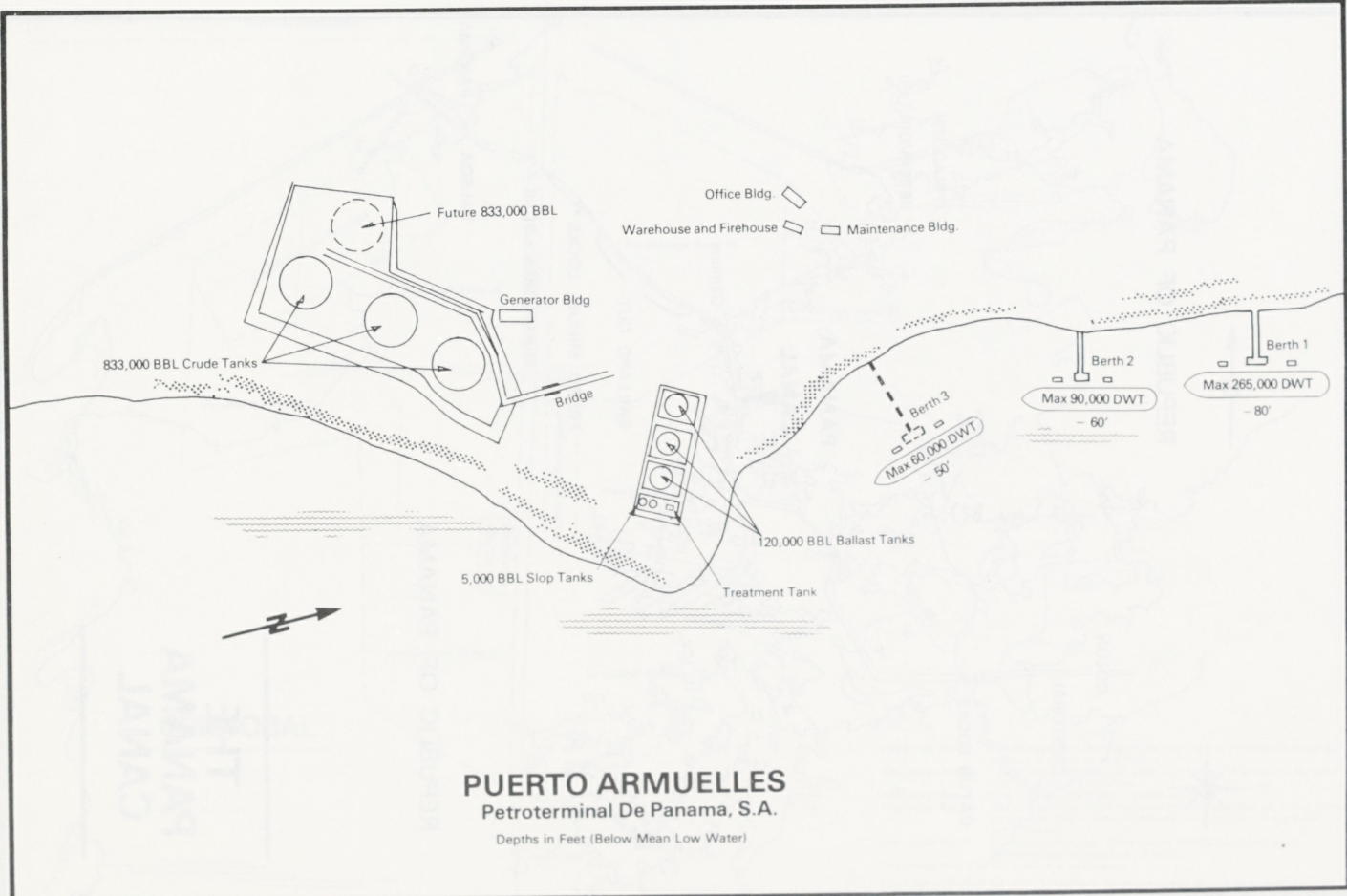
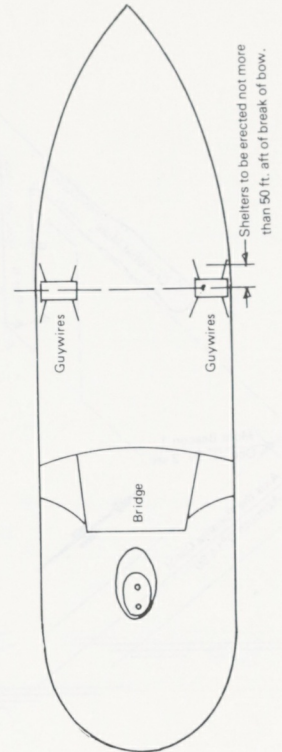
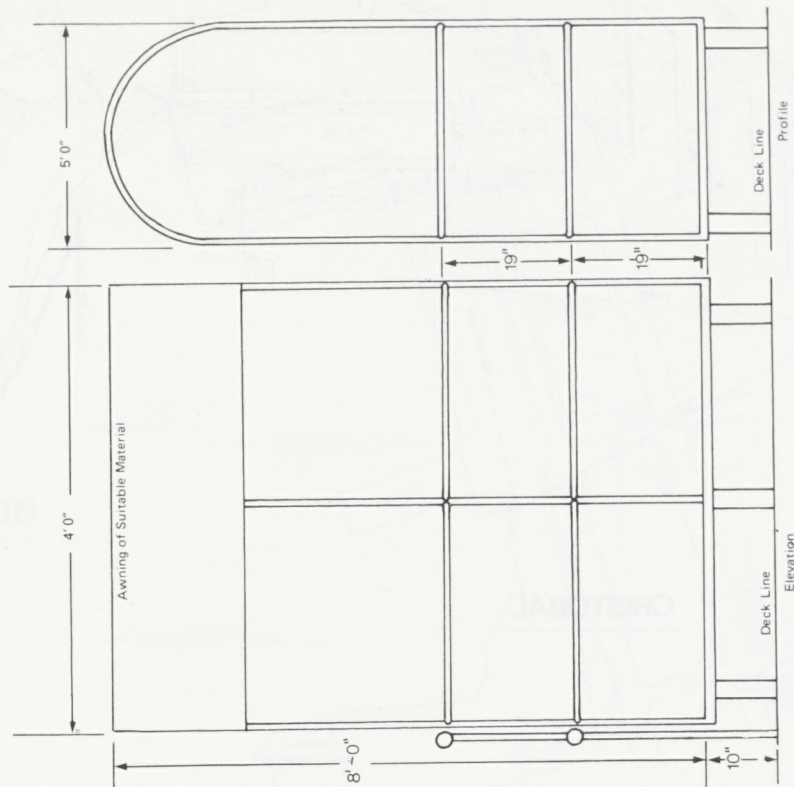






PANAMA CANAL COMPANY

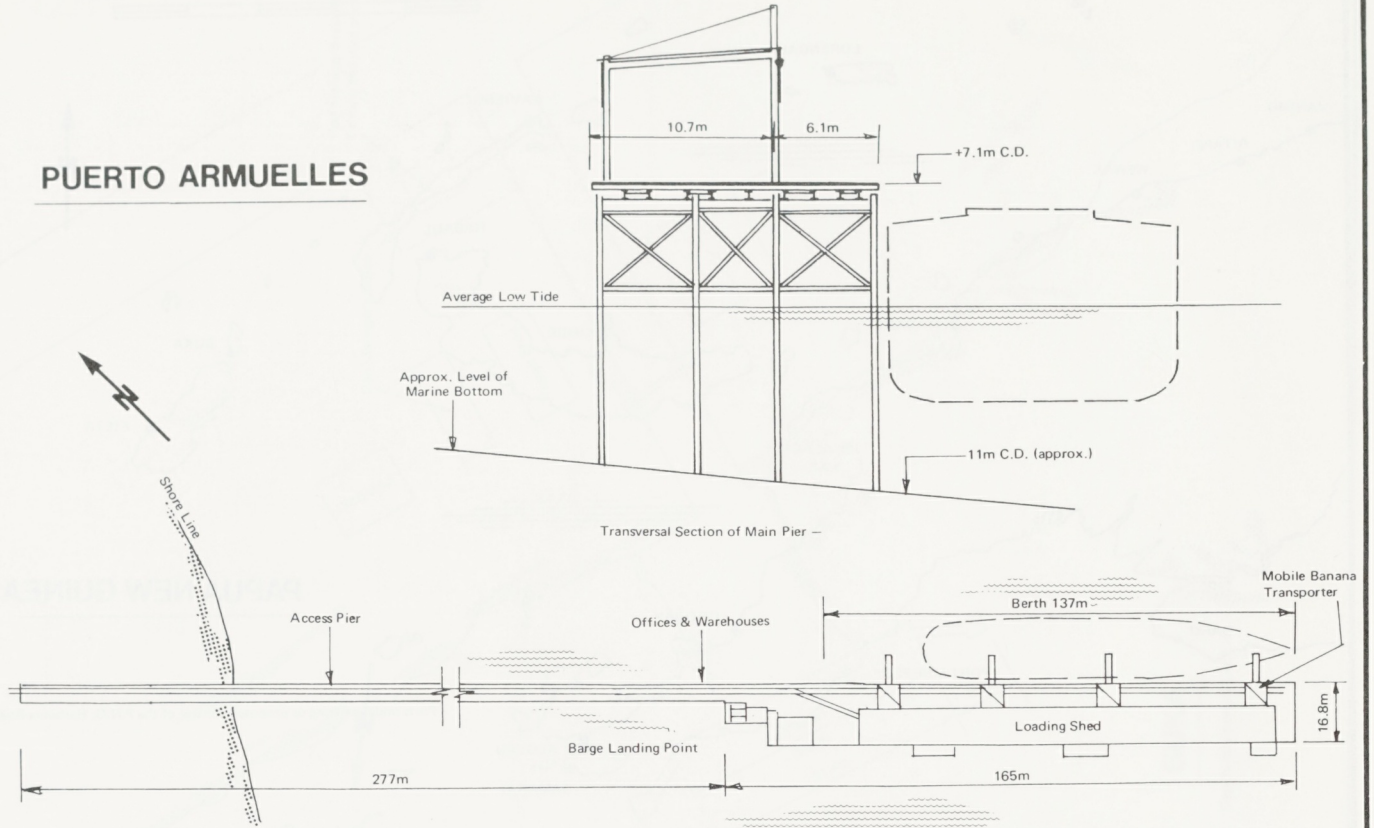
PILOT SHELTER



PUERTO ARMUELLES
Petroterminal De Panama, S.A.

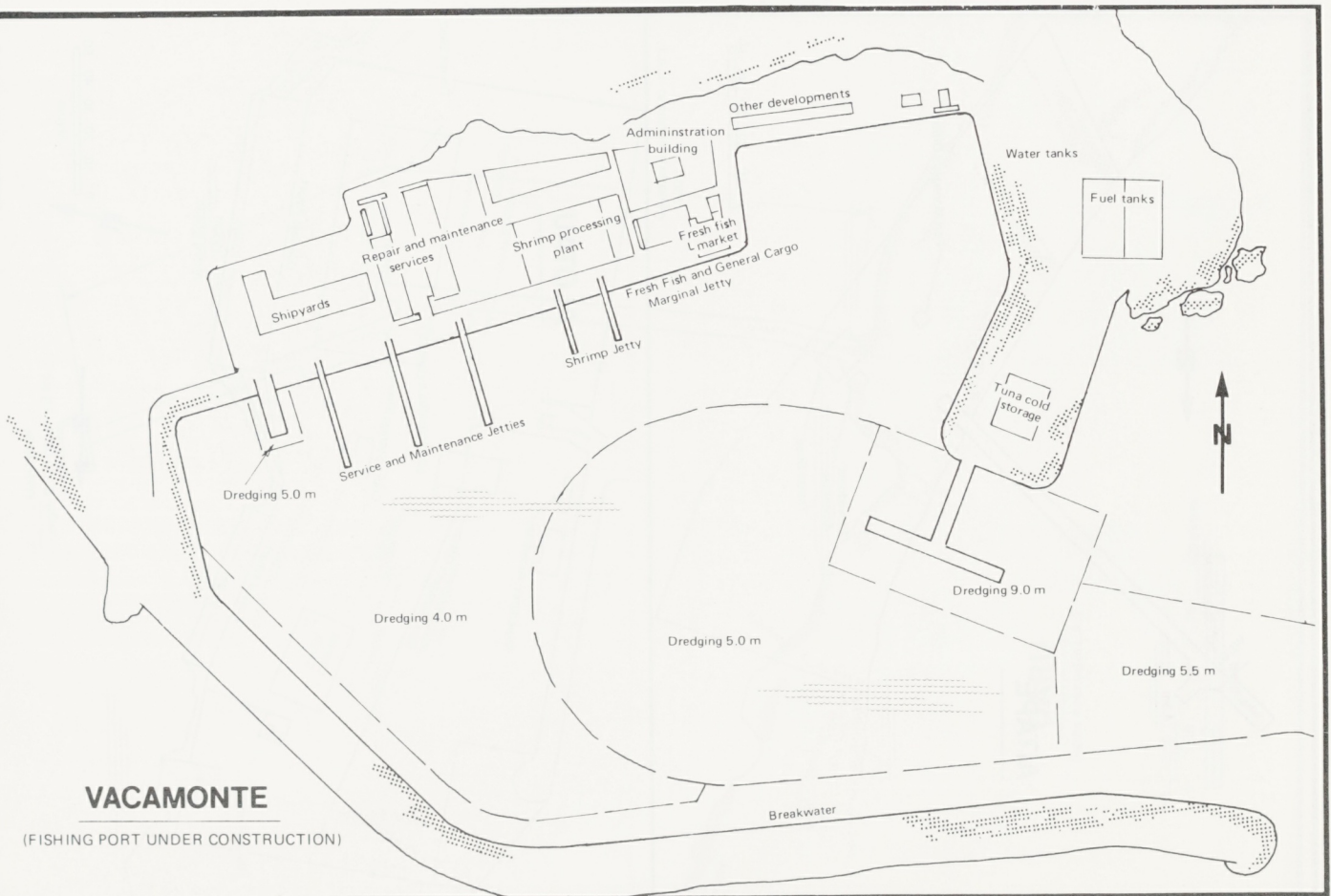
Depths in Feet (Below Mean Low Water)

PUERTO ARMUELLES

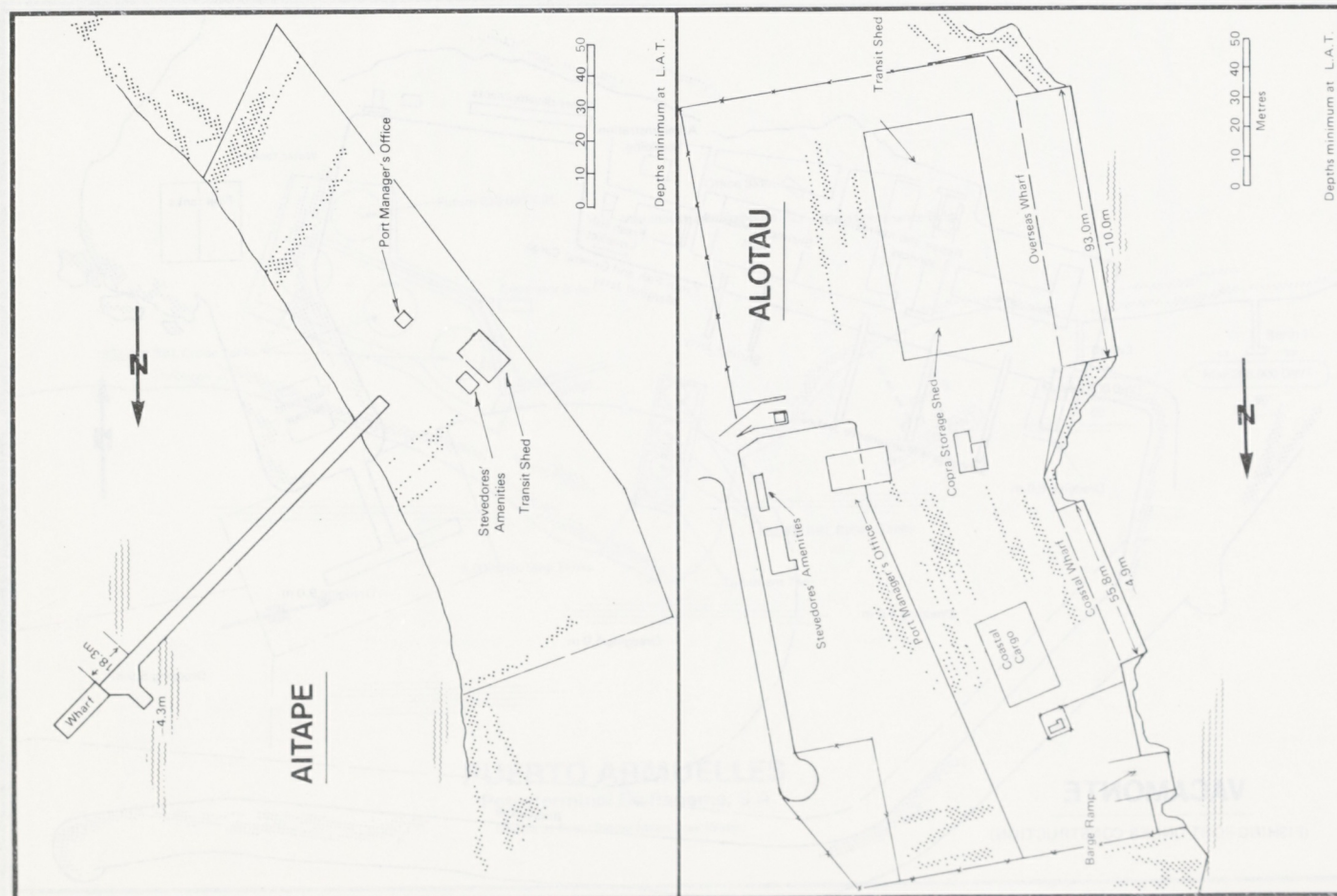
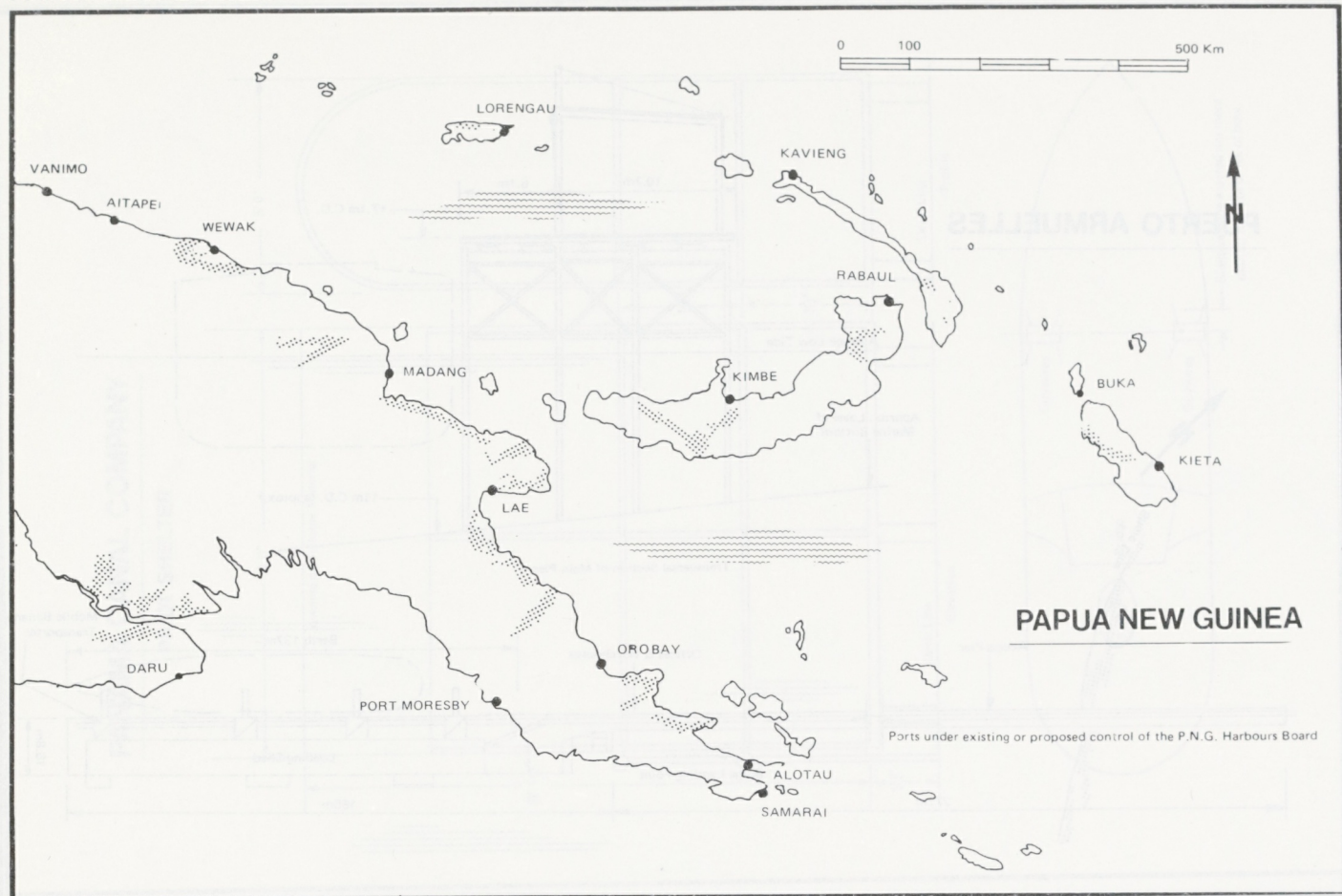


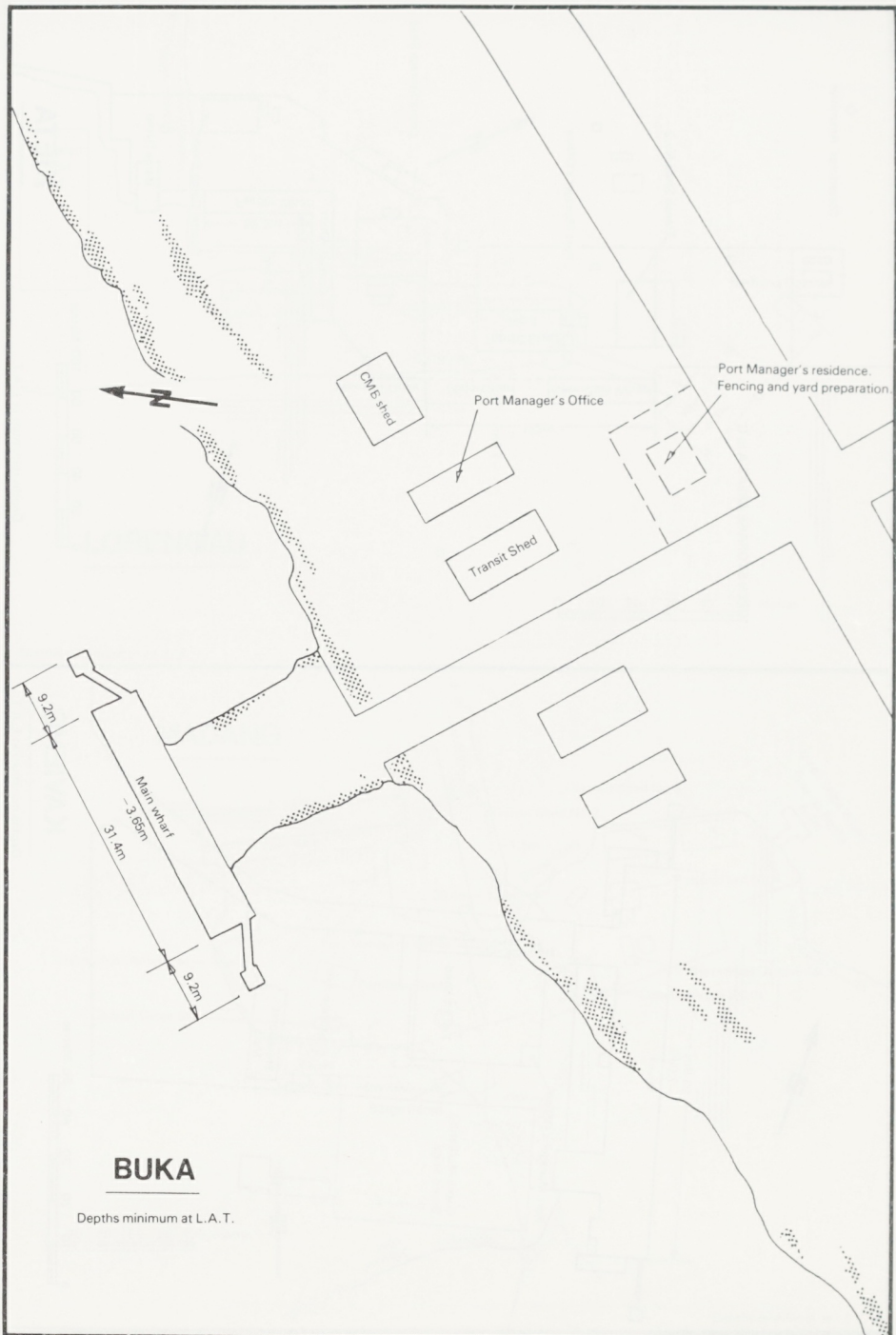
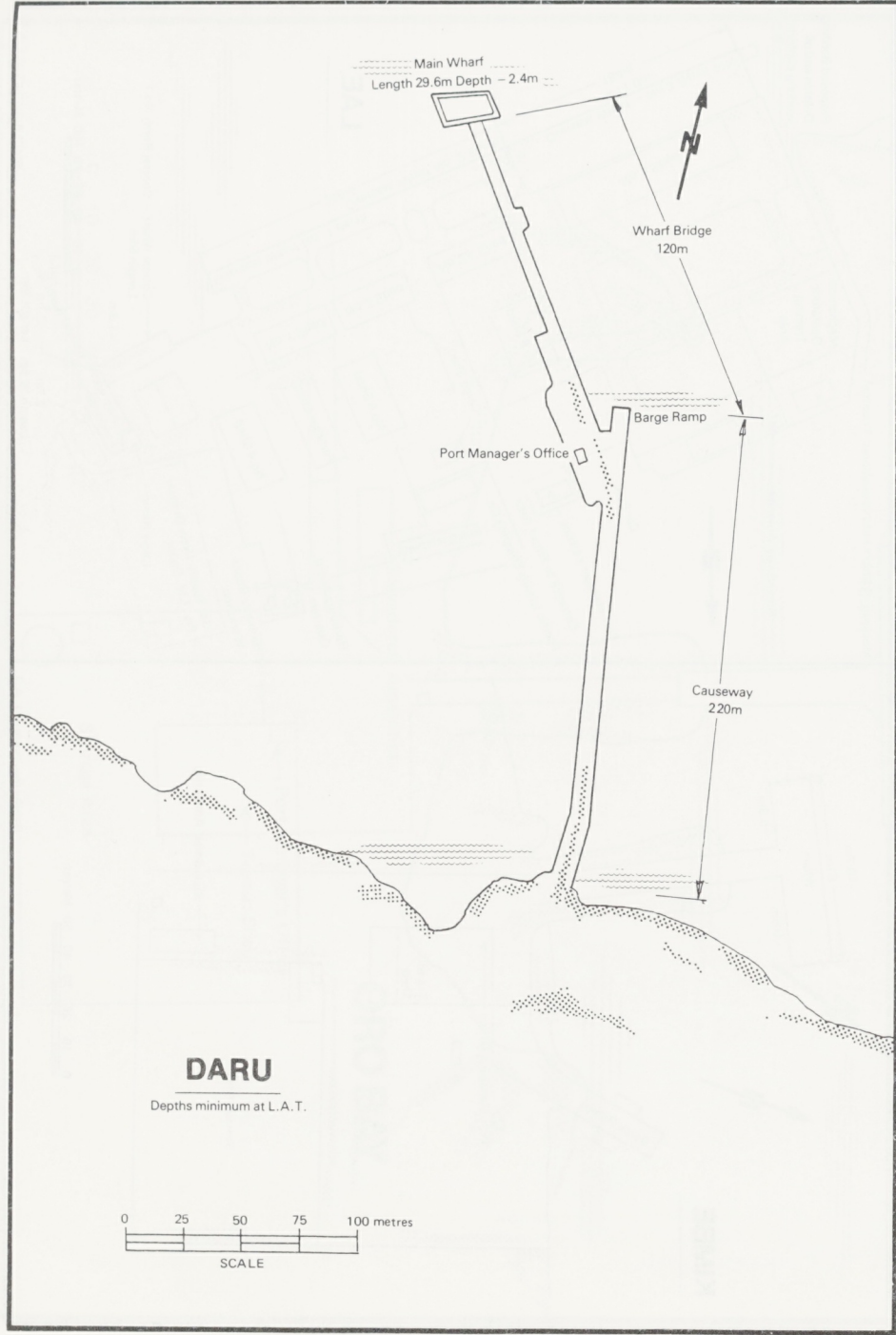
VACAMONTE

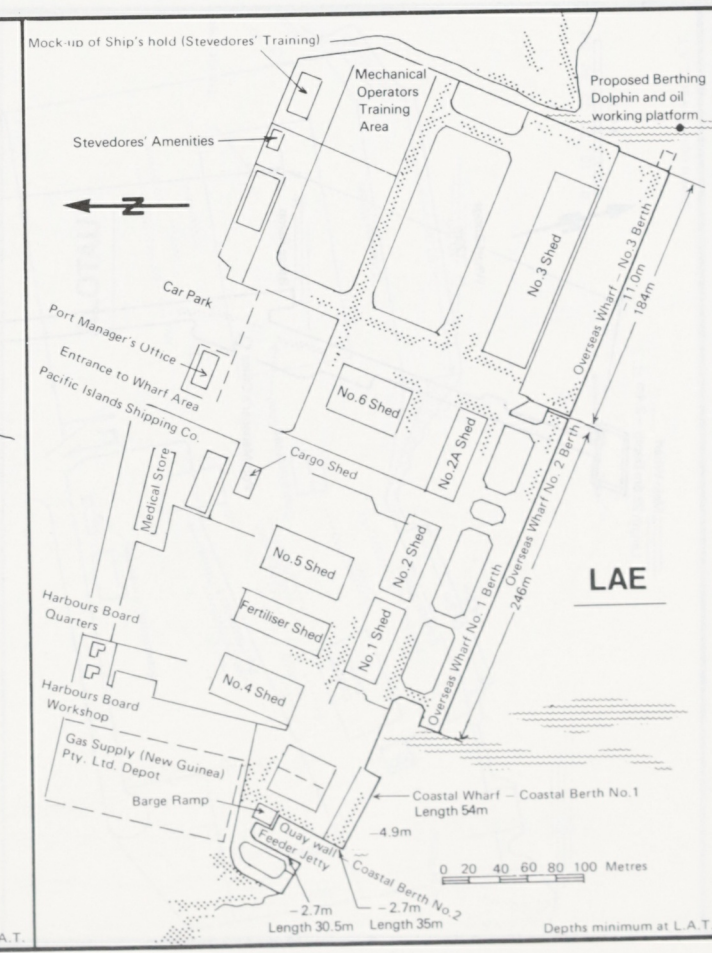
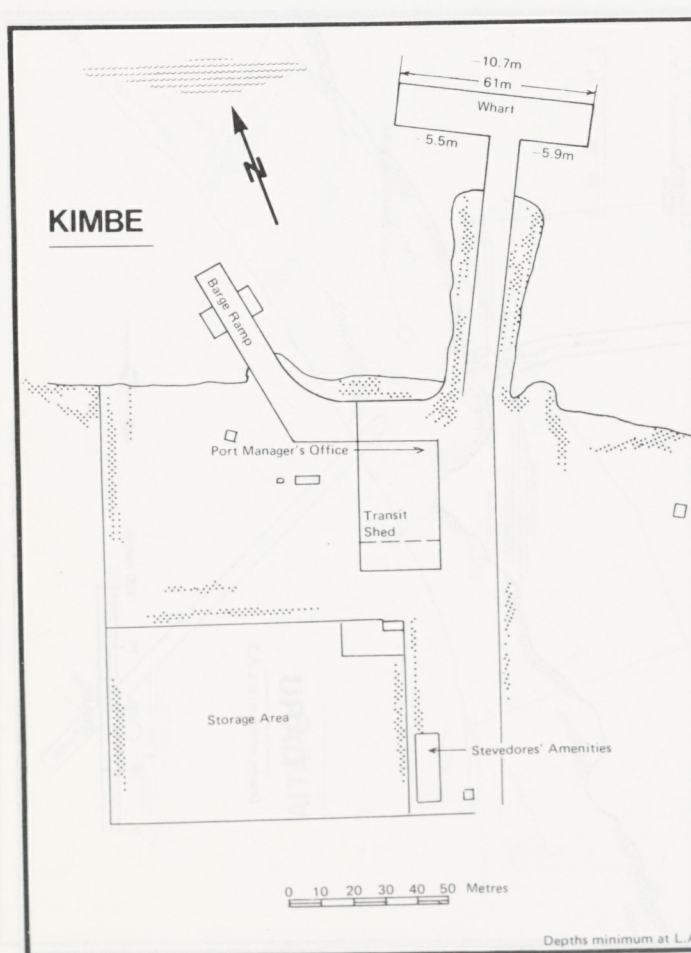
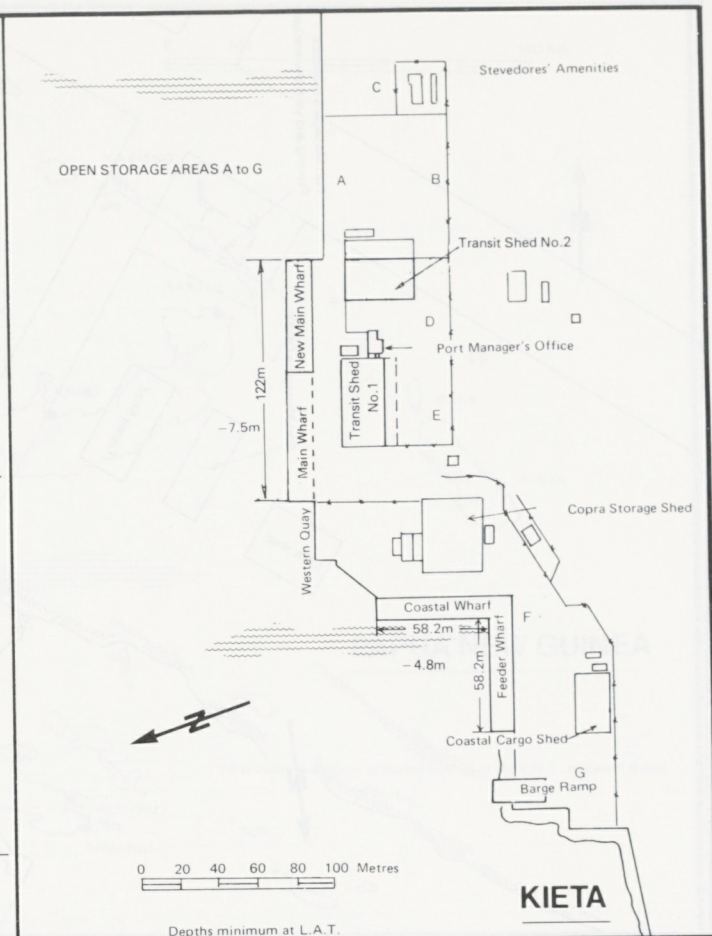
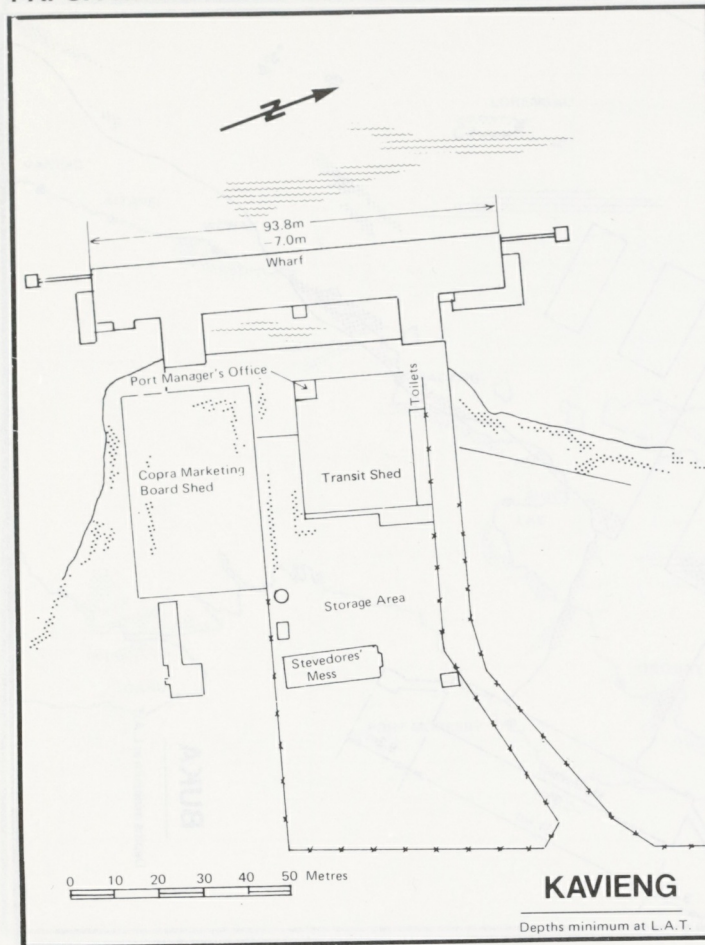
(FISHING PORT UNDER CONSTRUCTION)

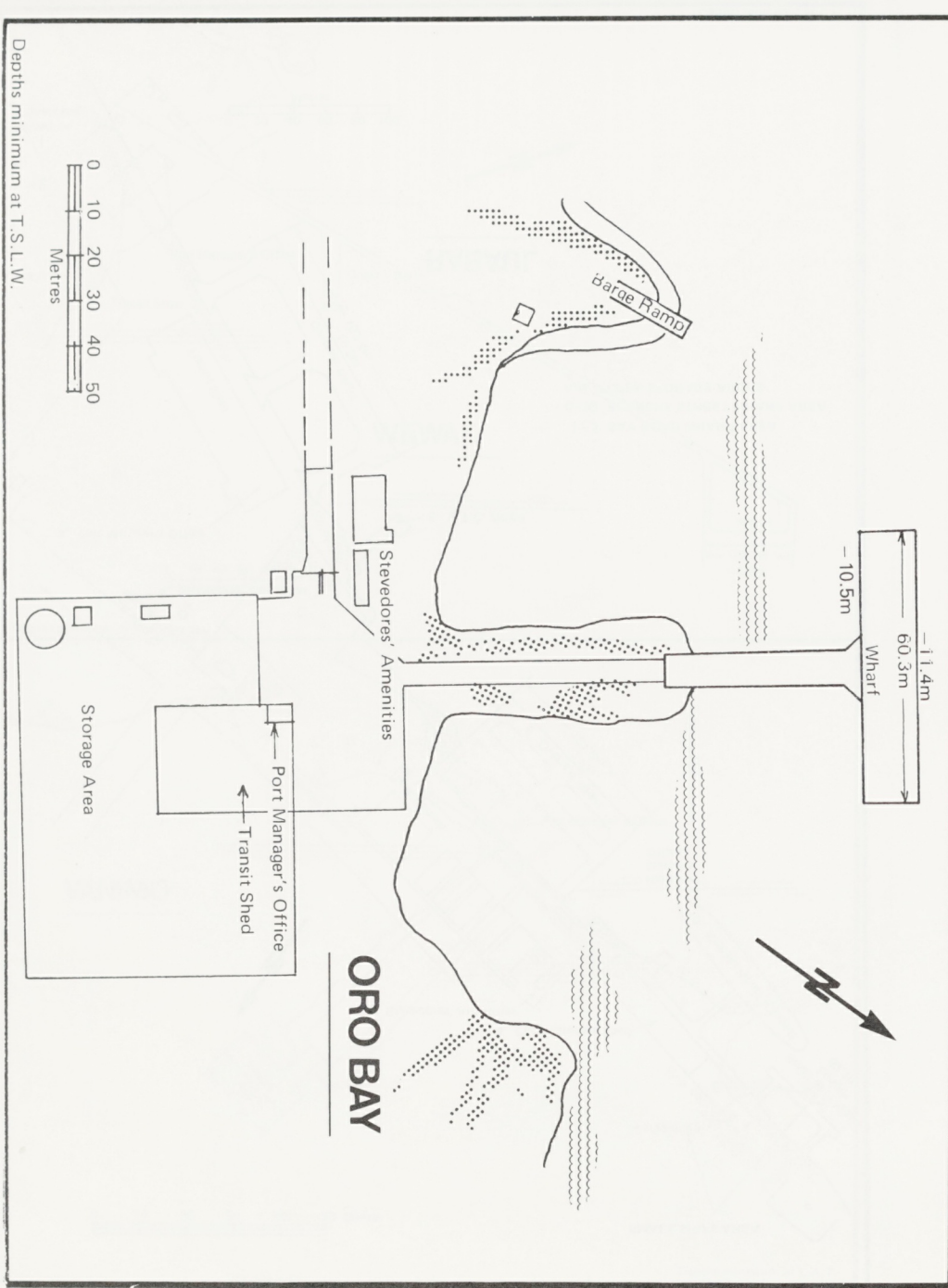
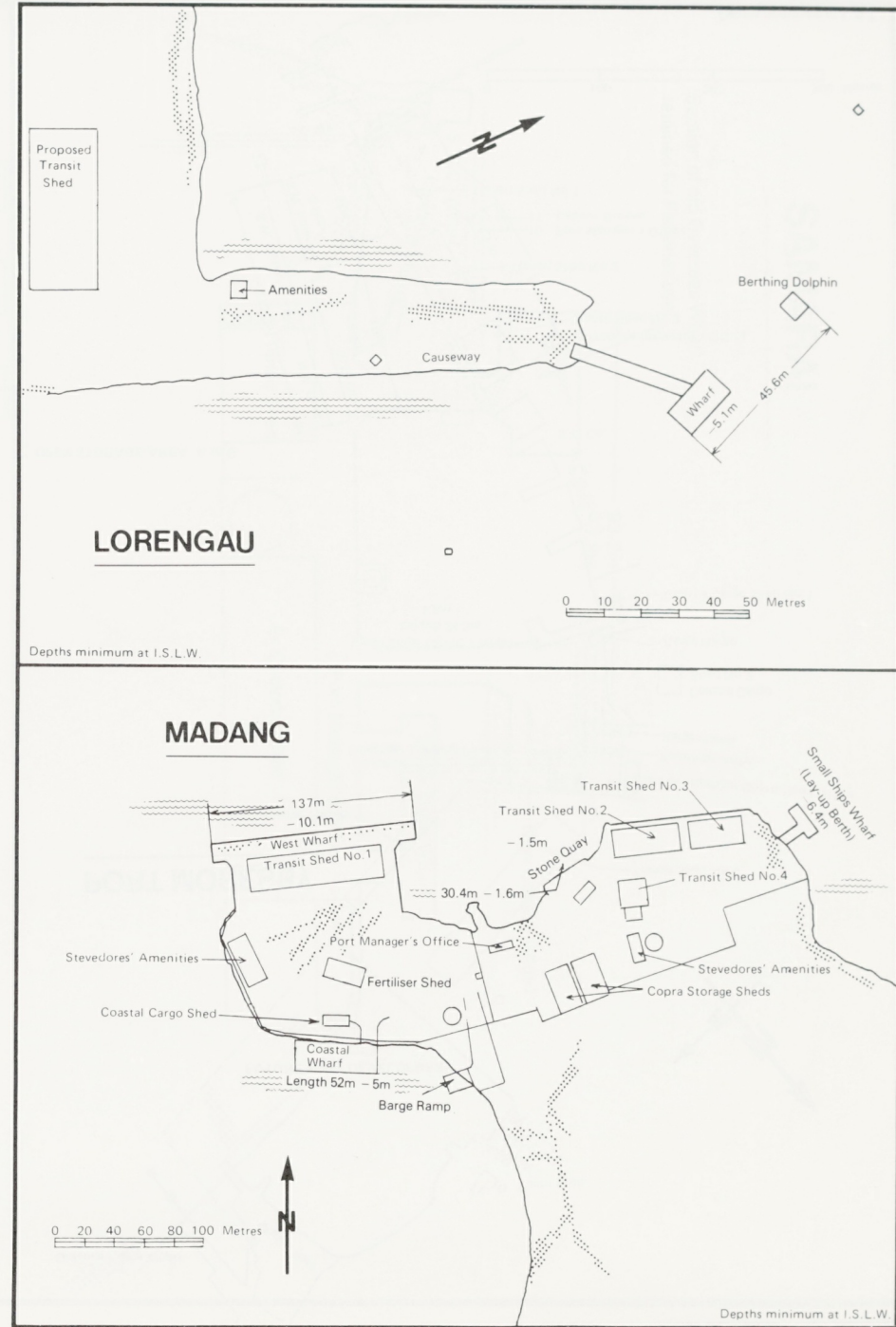


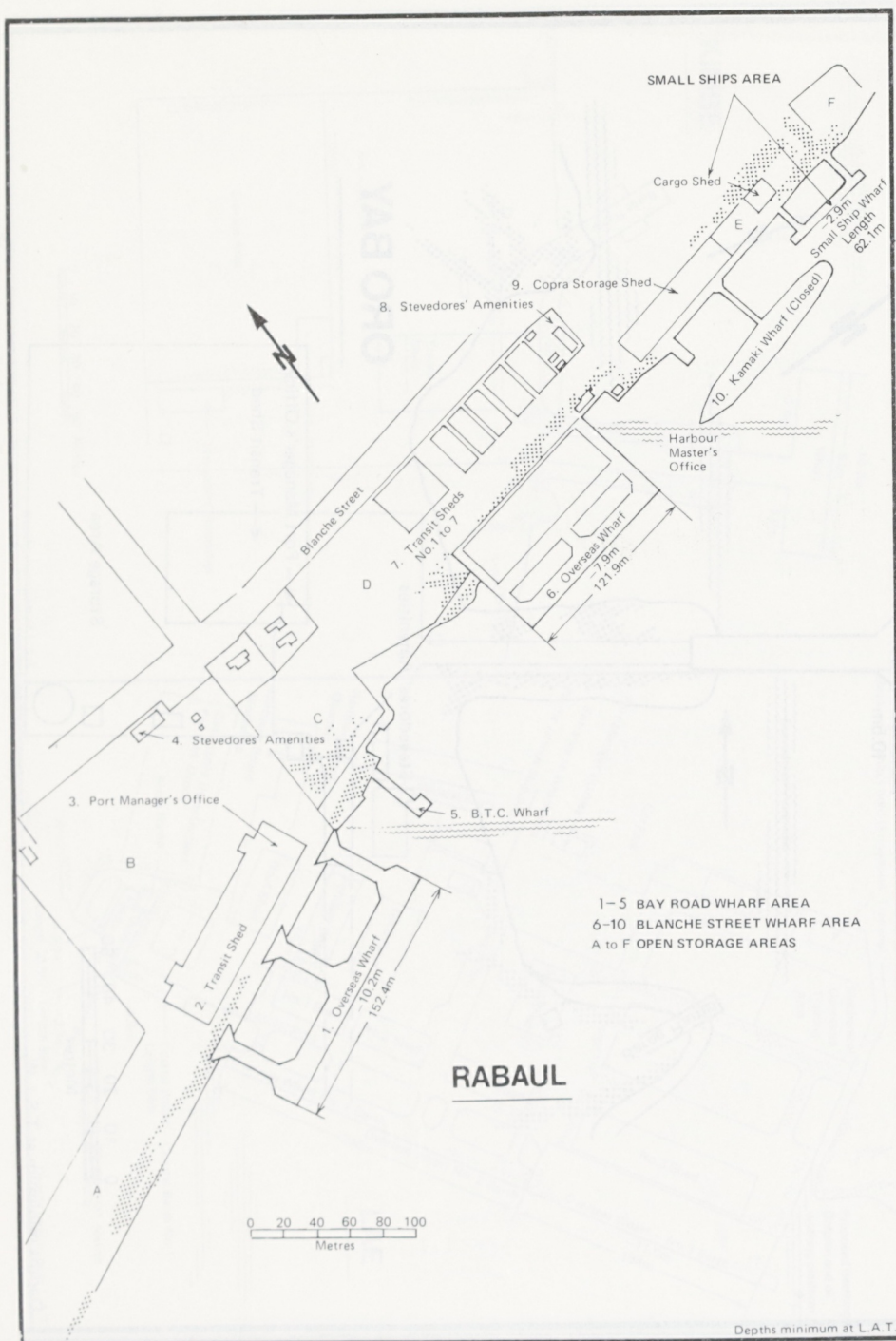
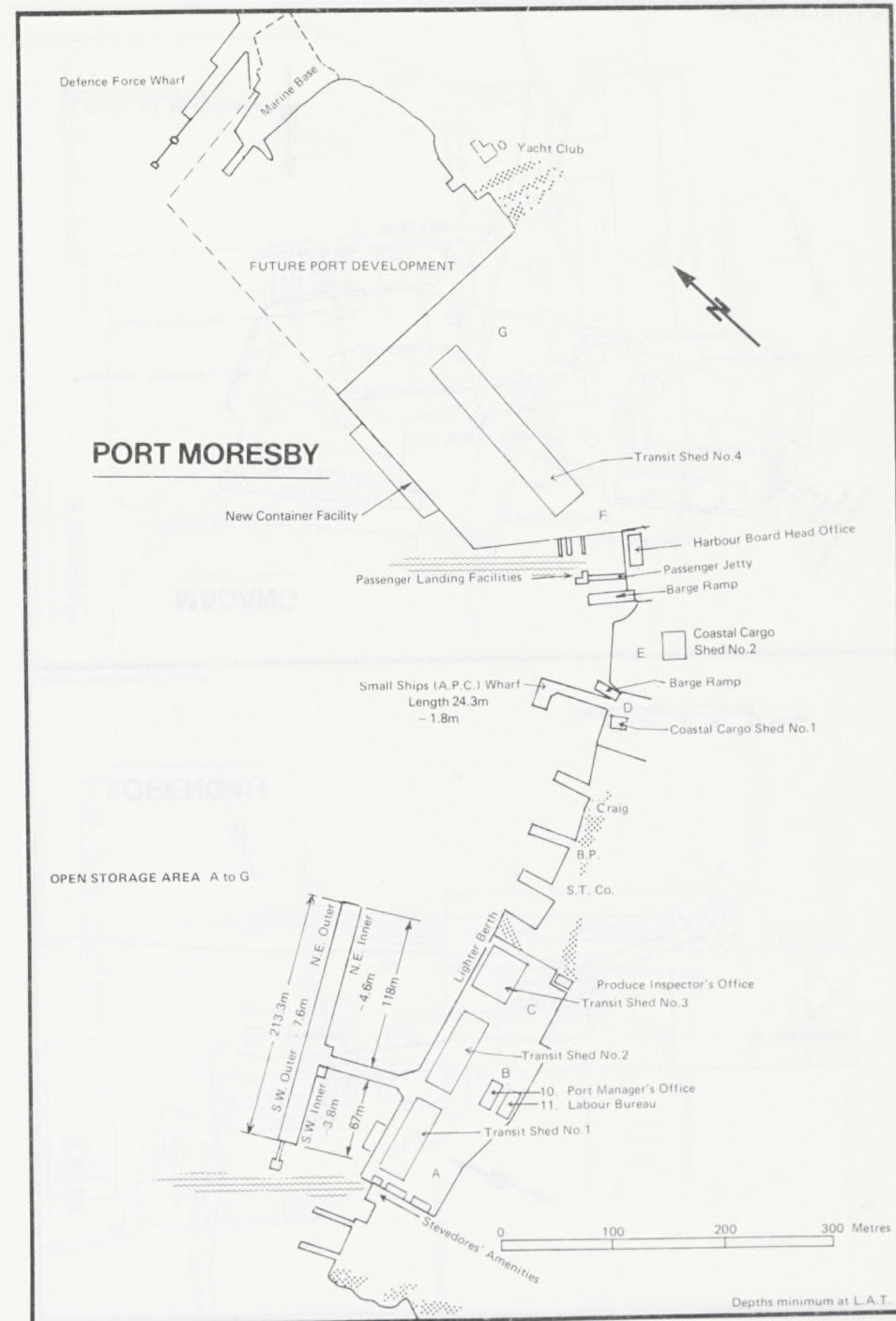
PAPUA NEW GUINEA











SAMARAI

Section of old Overseas Wharf retained for Fisheries use.

93.2m
7.8m

New Coastal Wharf

Small Ships Wharf

Port Manager's Office

Ex Customs Shed

Transit Shed

S.T.C. Wharf

Landing Steps

0 10 20 30 40 50 Metres

Depths minimum at L.W.O.S.T.

WEWAK

Wharf
73.1m
6.7m

Coastal Berth
2.0m

Port Manager's Office

Transit Shed

Storage Area

Stevedores' Amenities

0 20 40 60 80 100
SCALE

Depths minimum at Chart Datum

VANIMO

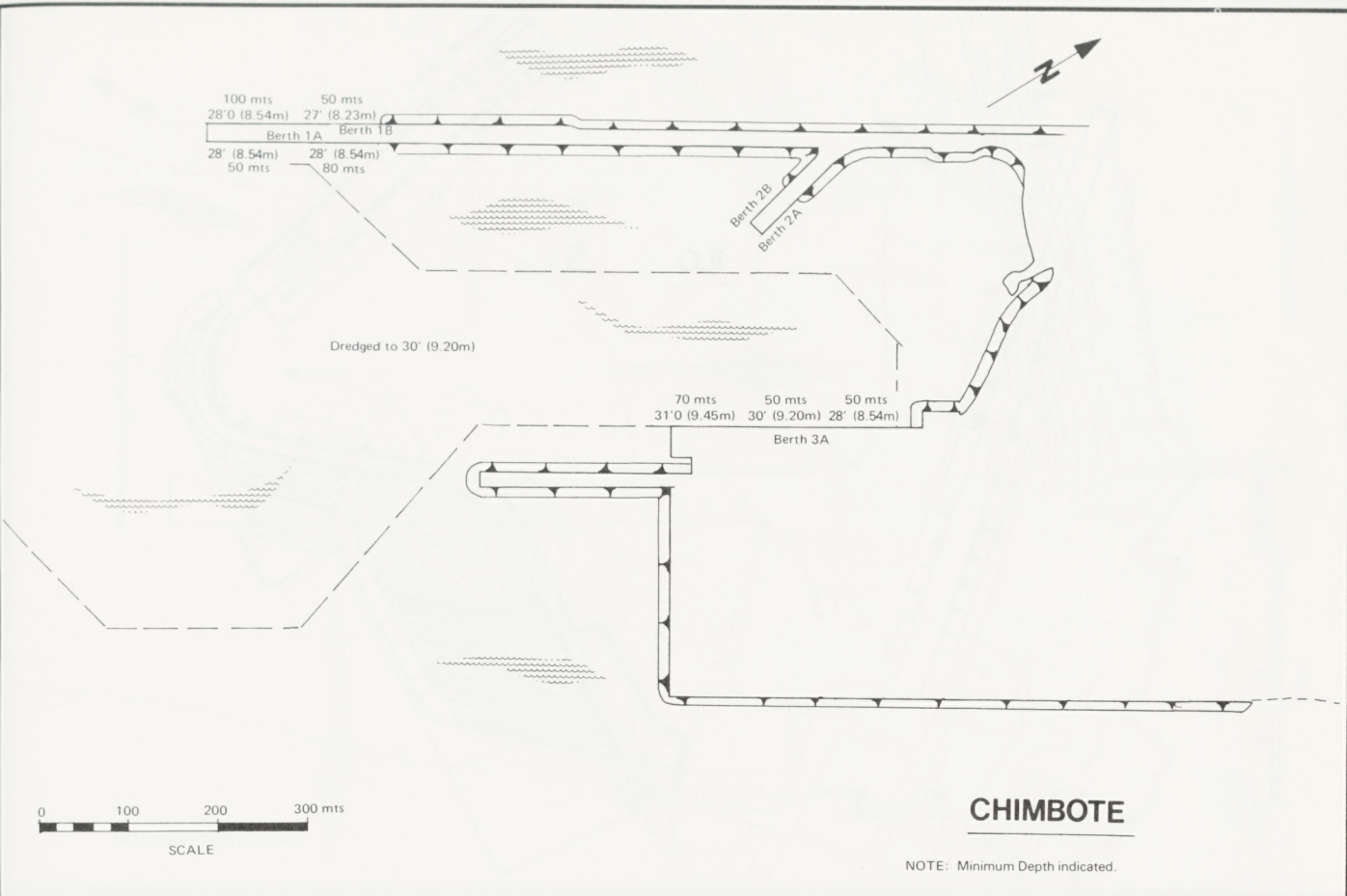
Port Manager's Office

Transit Shed

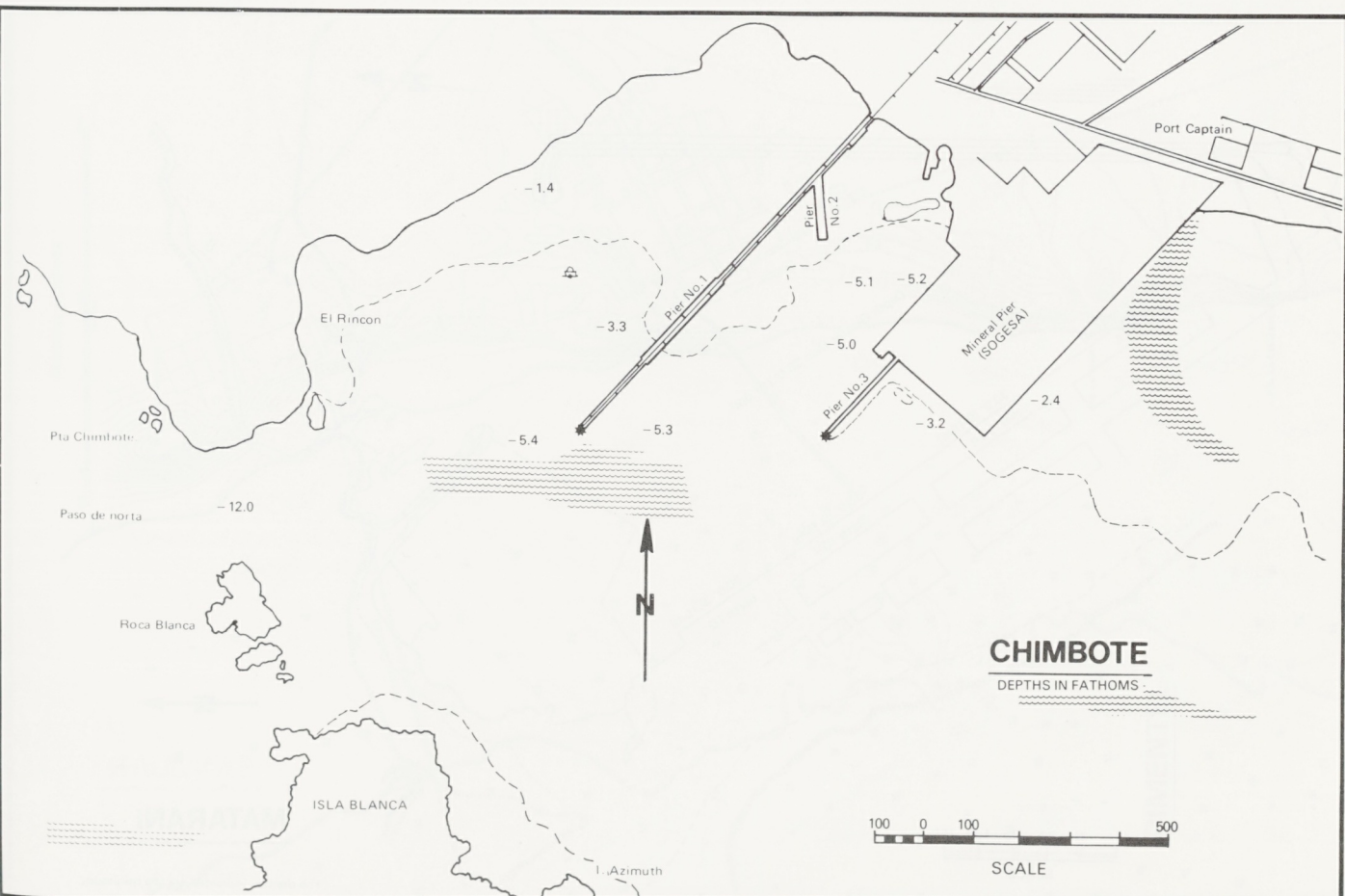
Wharf
4.9m
18.7m

0 10 20 30 40 50 Metres

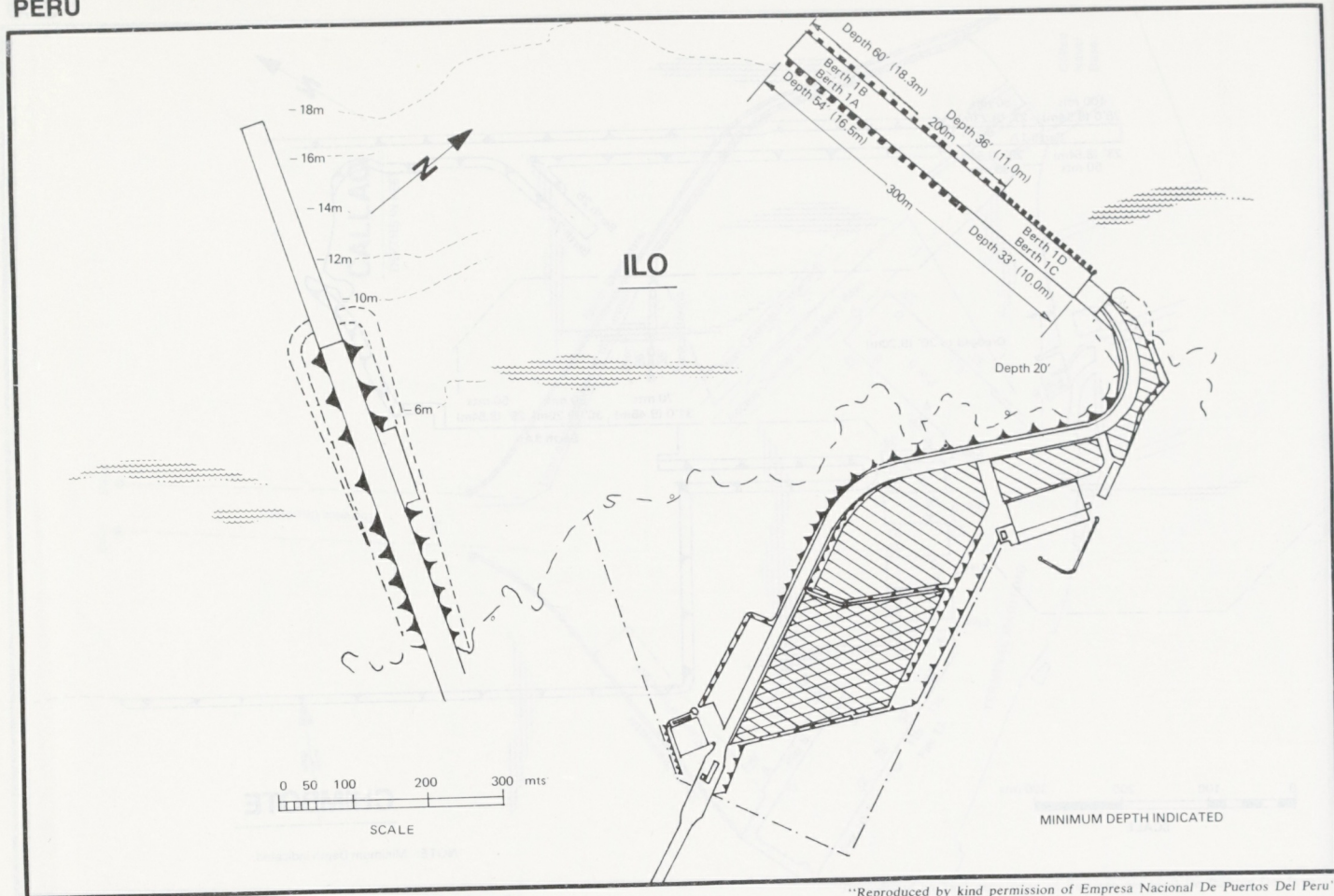
Depths minimum at L.A.T.



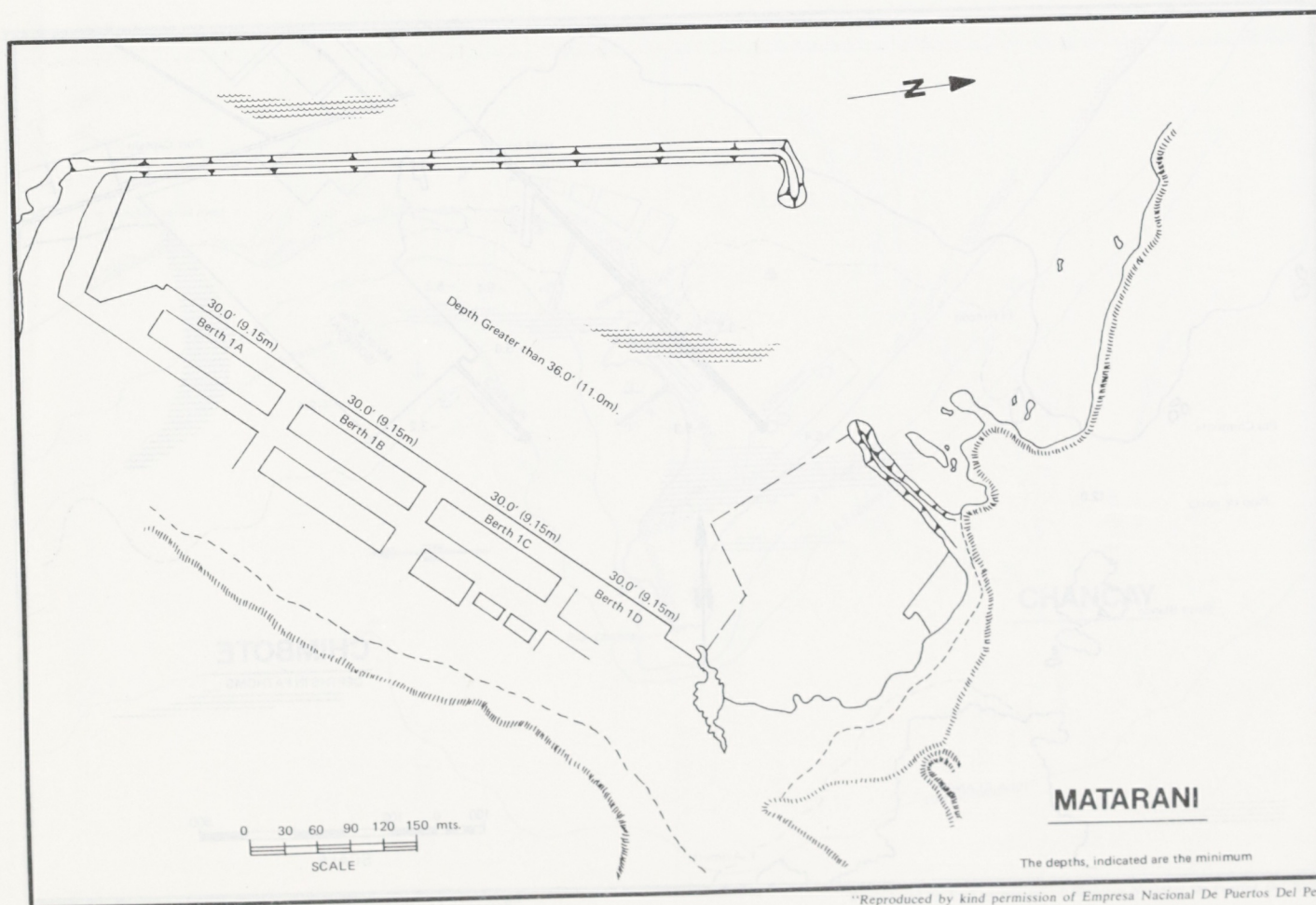
"Reproduced by kind permission of Empresa Nacional De Puertos Del Peru"



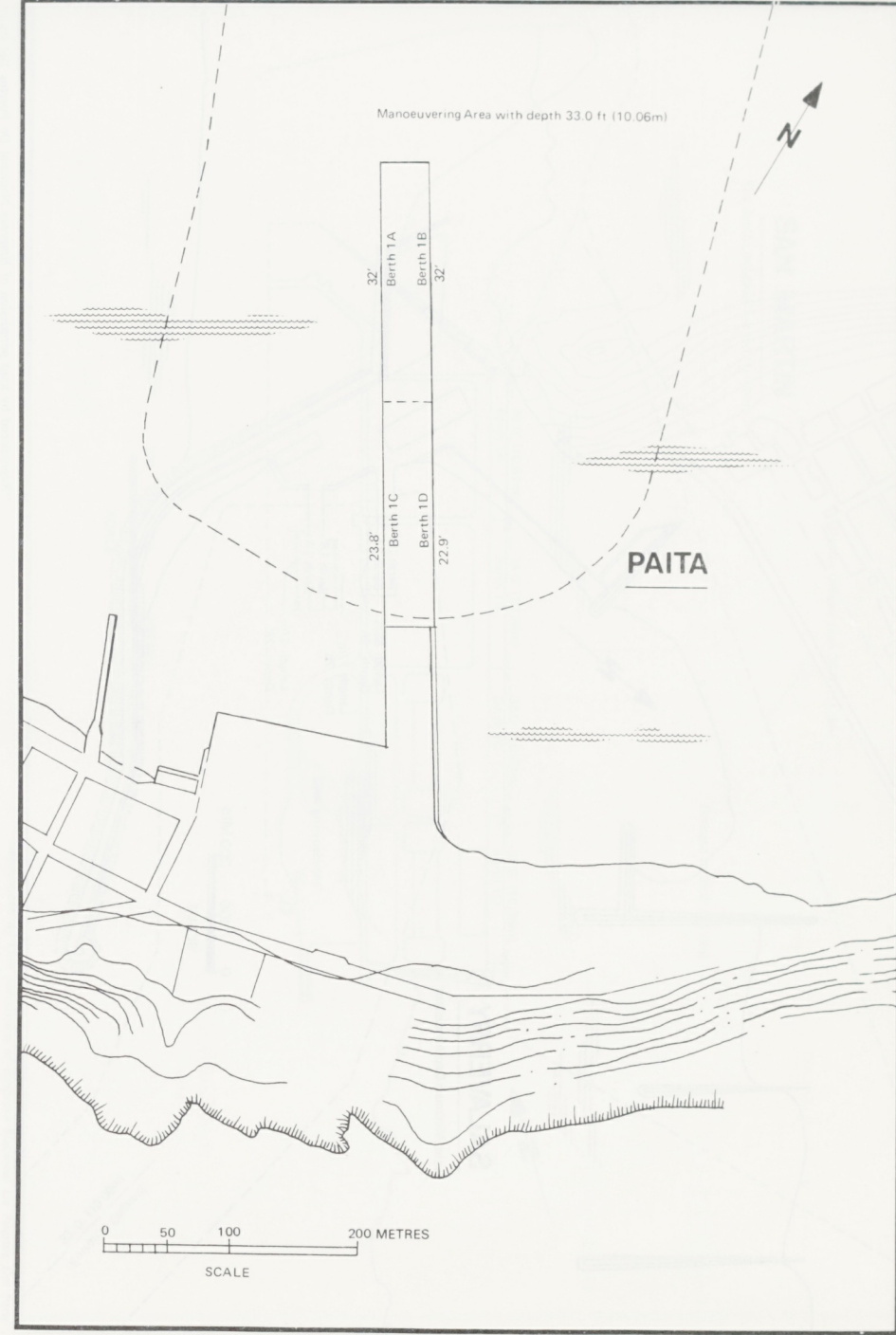
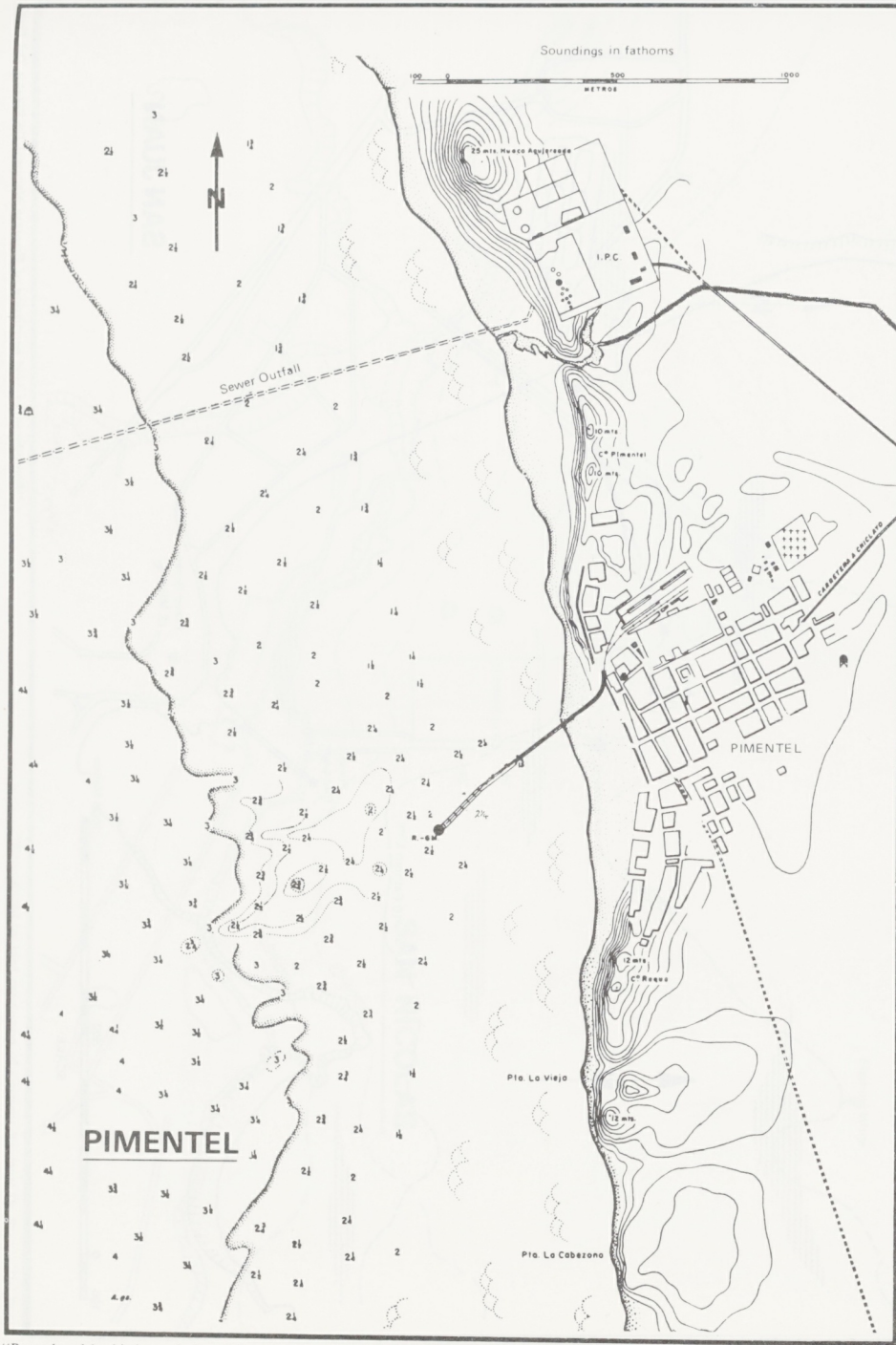
"Reproduced by kind permission of Empresa Nacional De Puertos Del Peru"



"Reproduced by kind permission of Empresa Nacional De Puertos Del Peru".

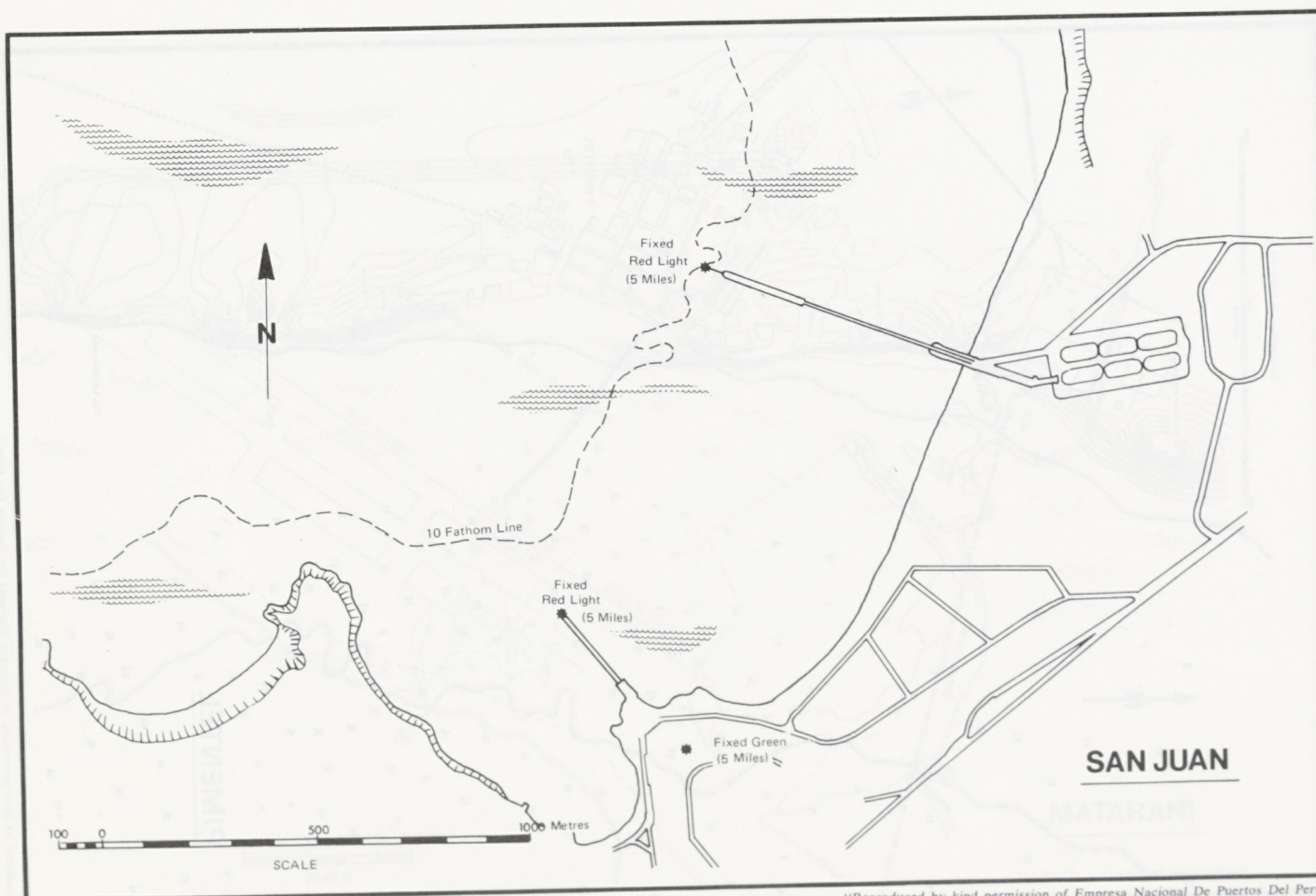
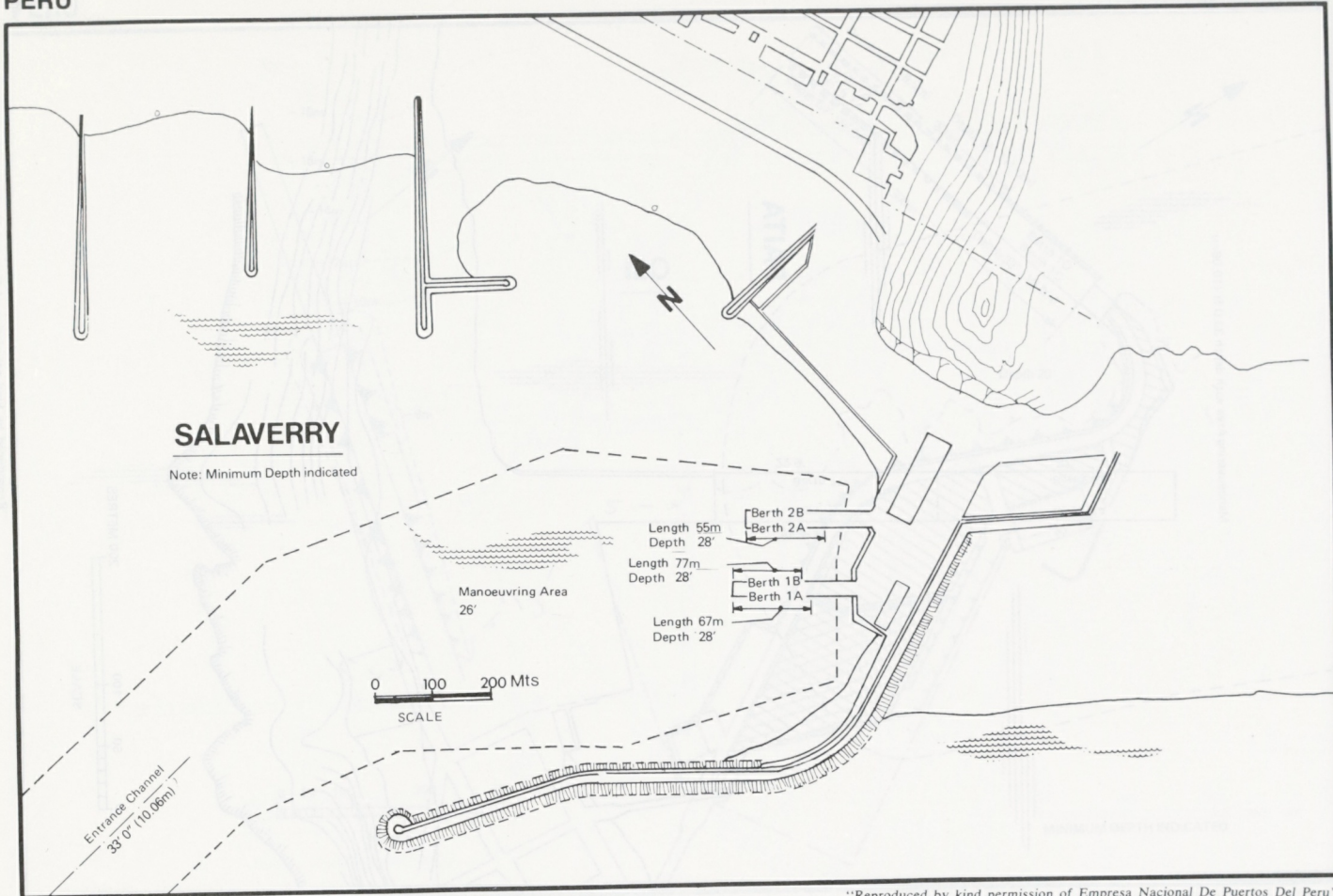


"Reproduced by kind permission of Empresa Nacional De Puertos Del Peru".



"Reproduced by kind permission of Empresa Nacional De Puertos Del Peru".

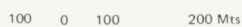
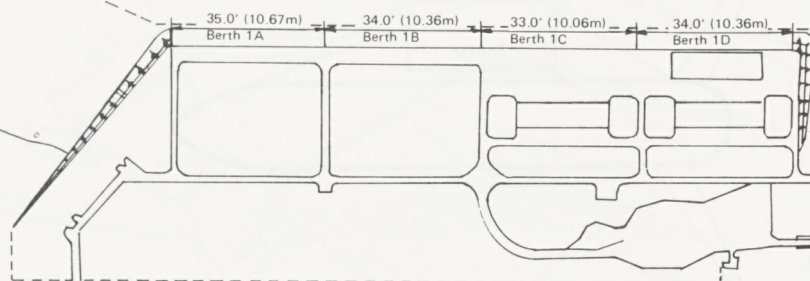
"Reproduced by kind permission of Empresa Nacional De Puertos Del Peru".



Depths Greater than 36.0' (11.0m)

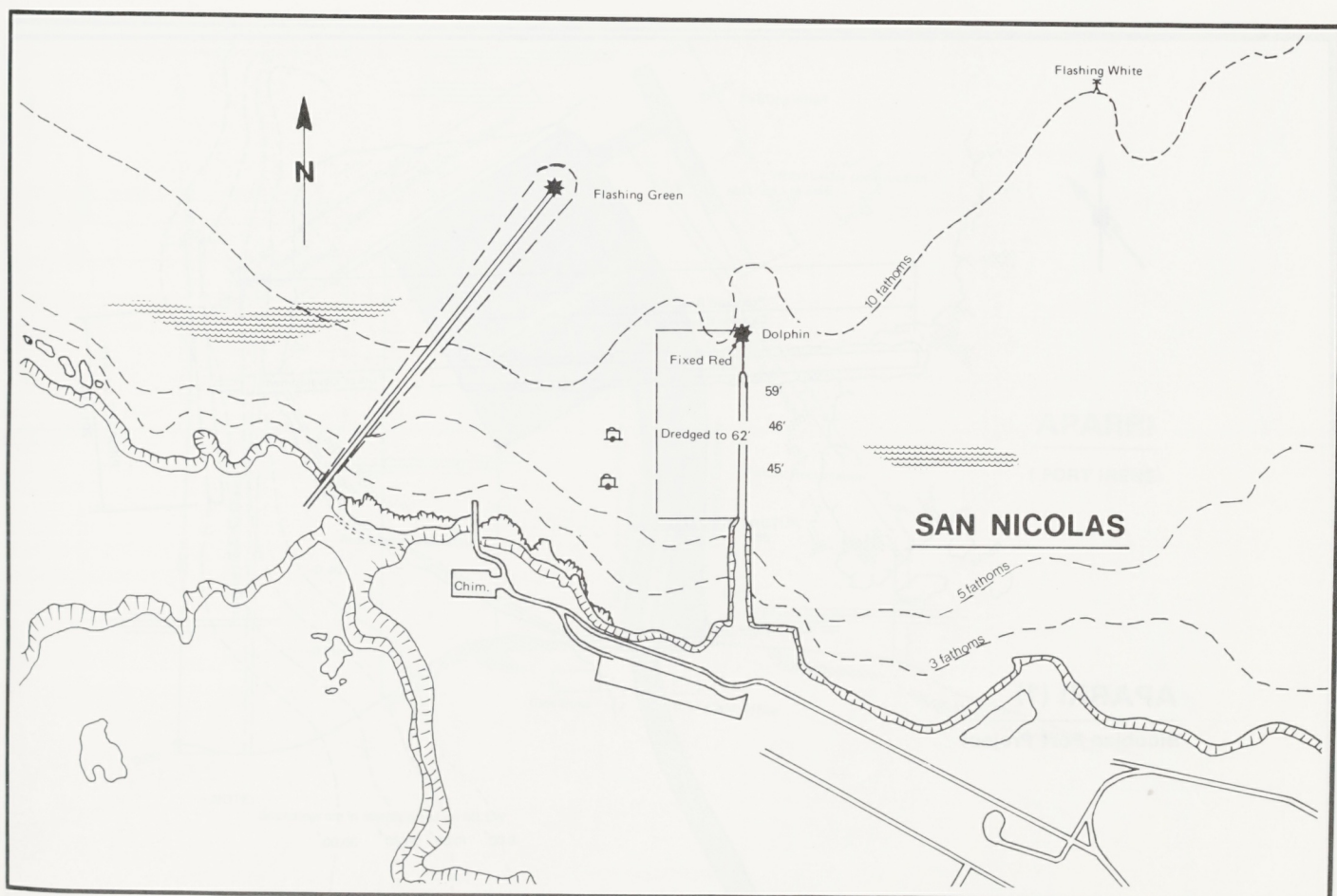
The depths indicated are the minimum.

Dredged to 36.0' (11.0m)



SCALE

"Reproduced by kind permission of Empresa Nacional De Puertos Del Peru"



Flashing White

Flashing Green

Dolphin

oxed Red

59'

463

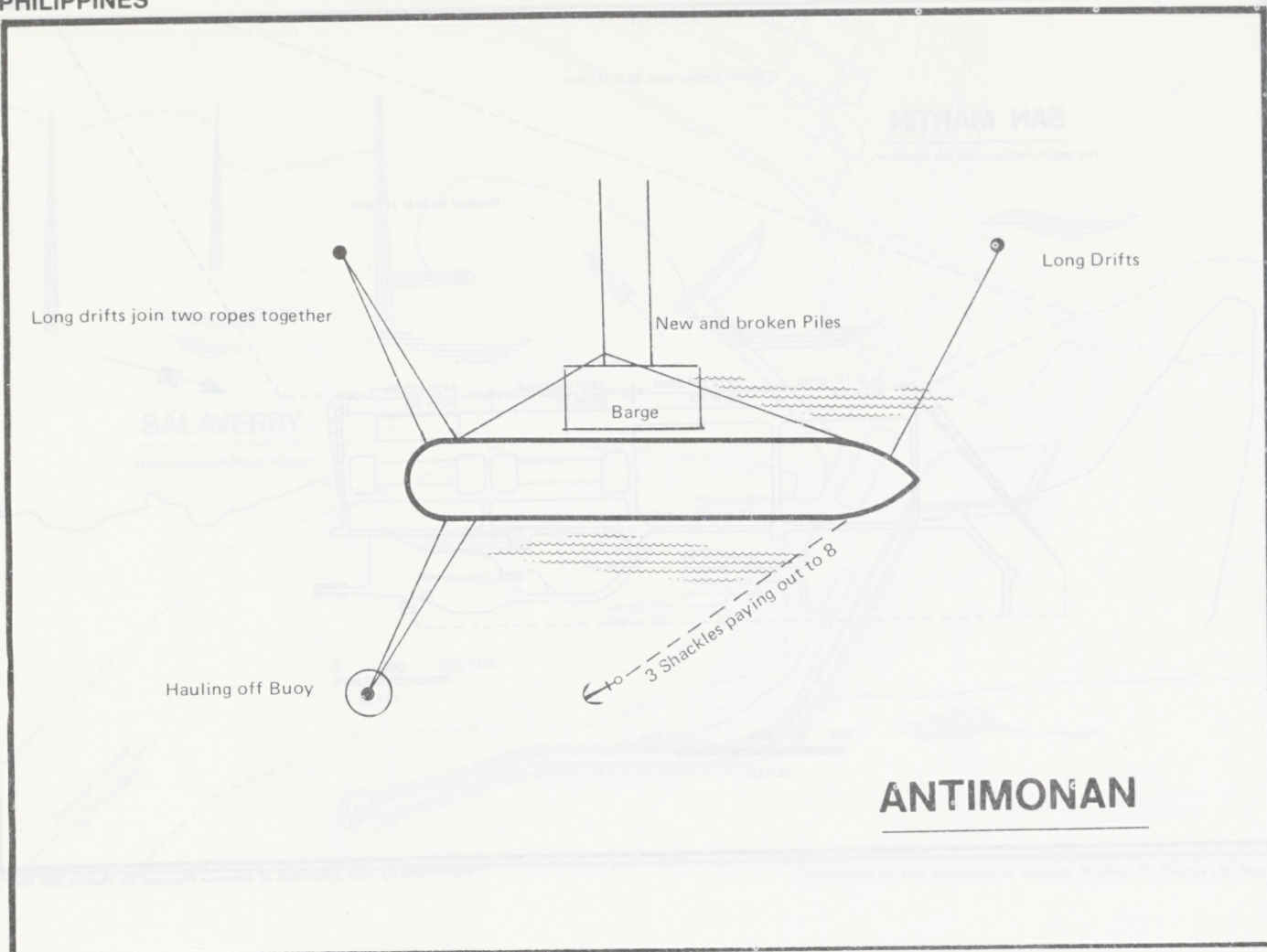
SAN NICOLAS

oms

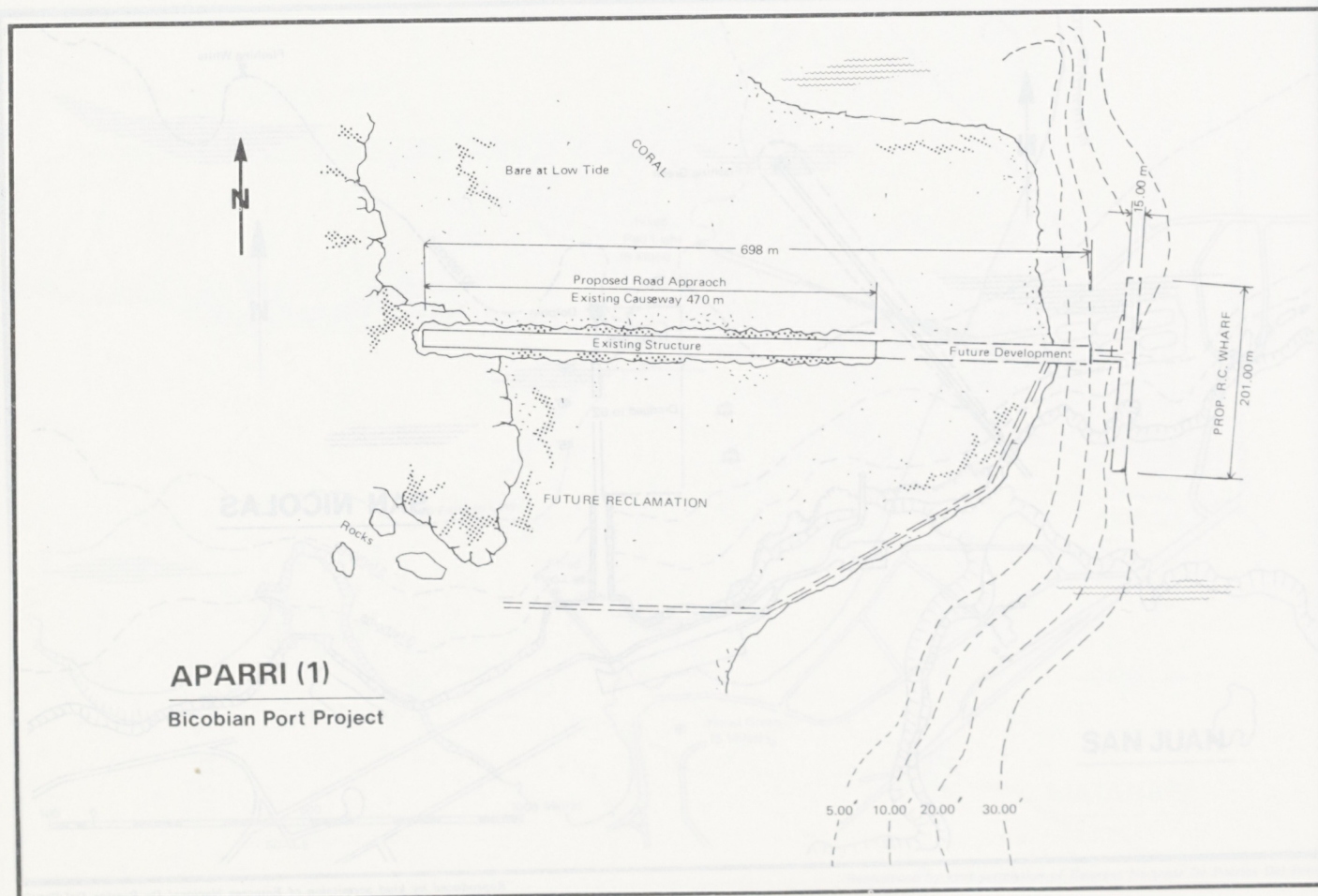
oms

Chim.

"Reproduced by kind permission of Empresa Nacional De Puertos Del Peru"

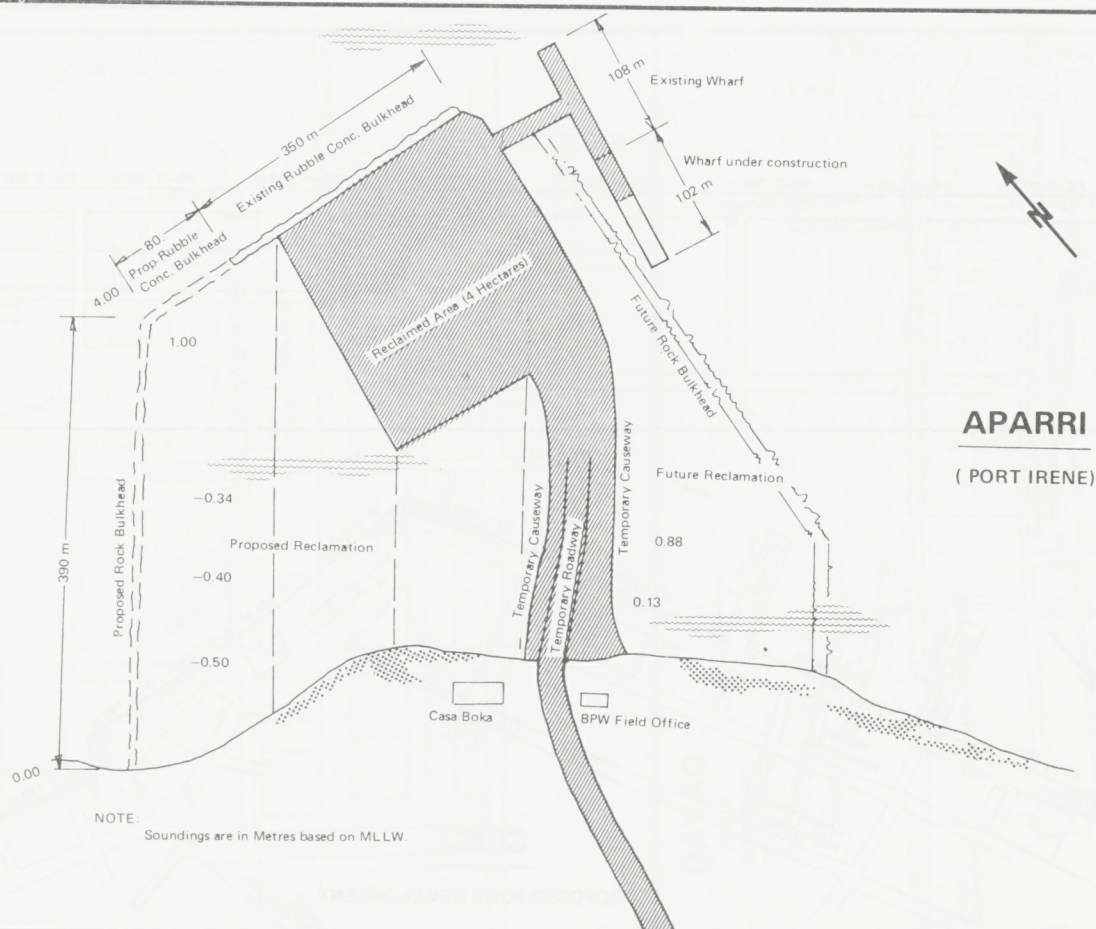


"Plan supplied by Ship's Master"



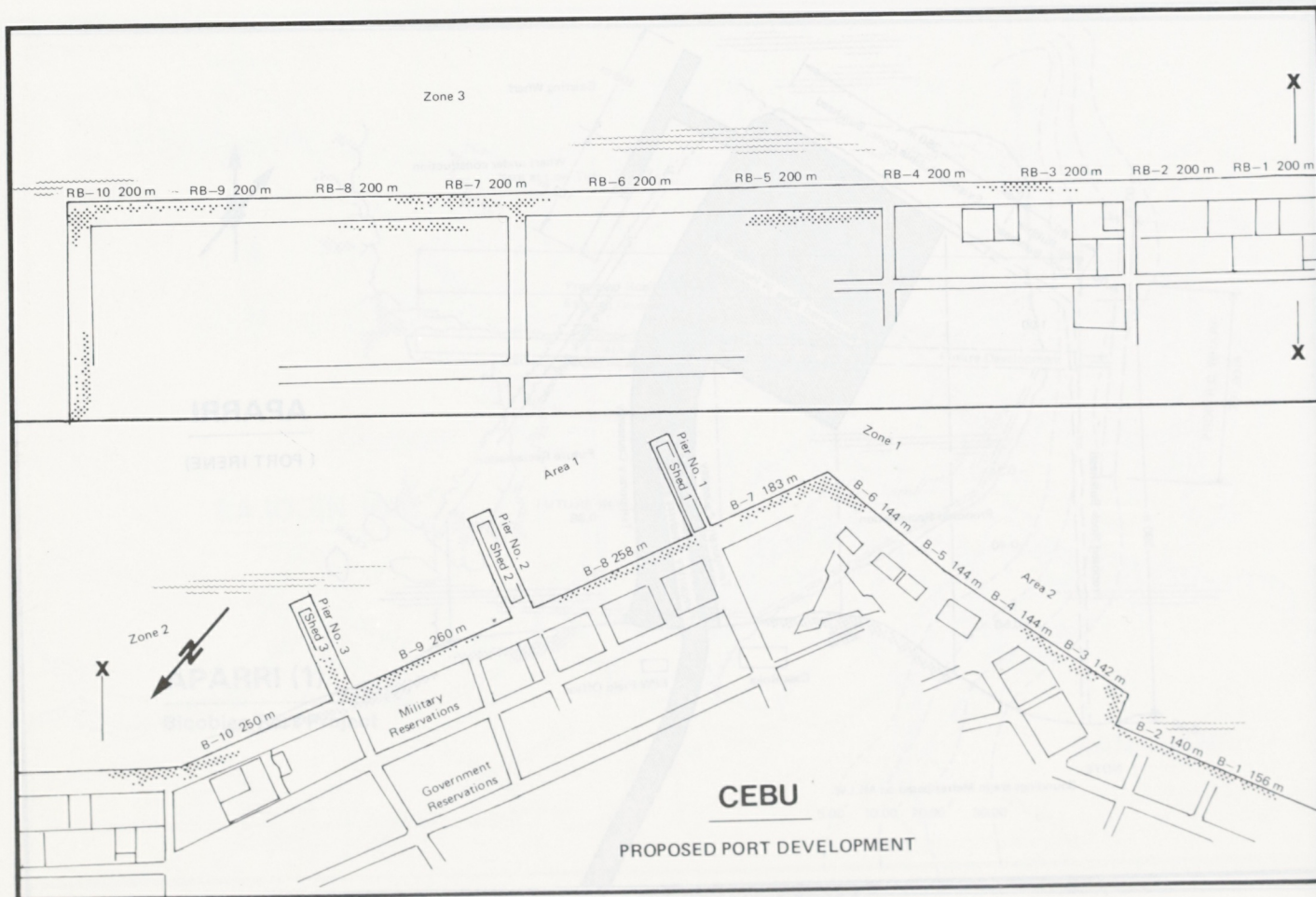
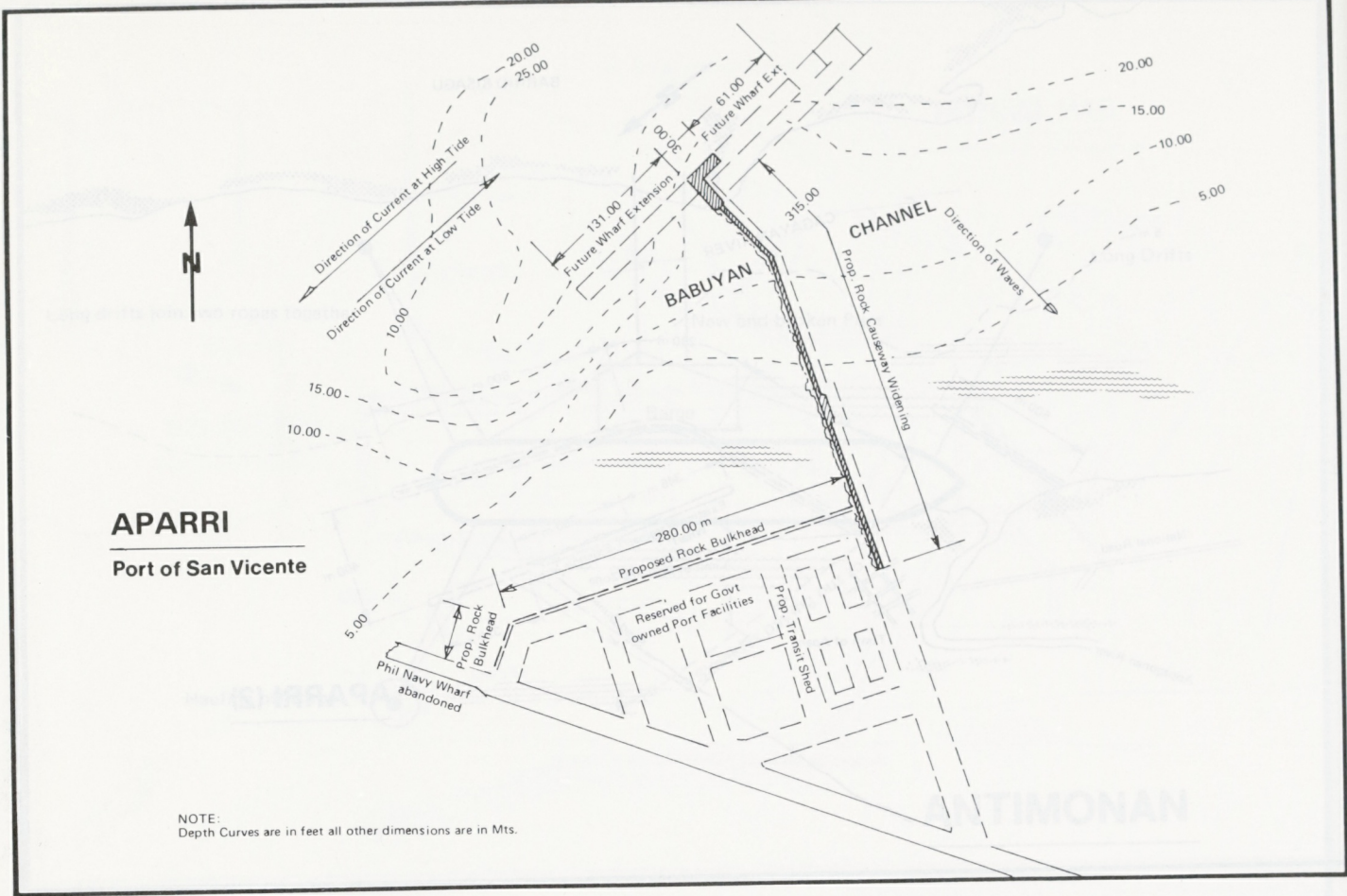


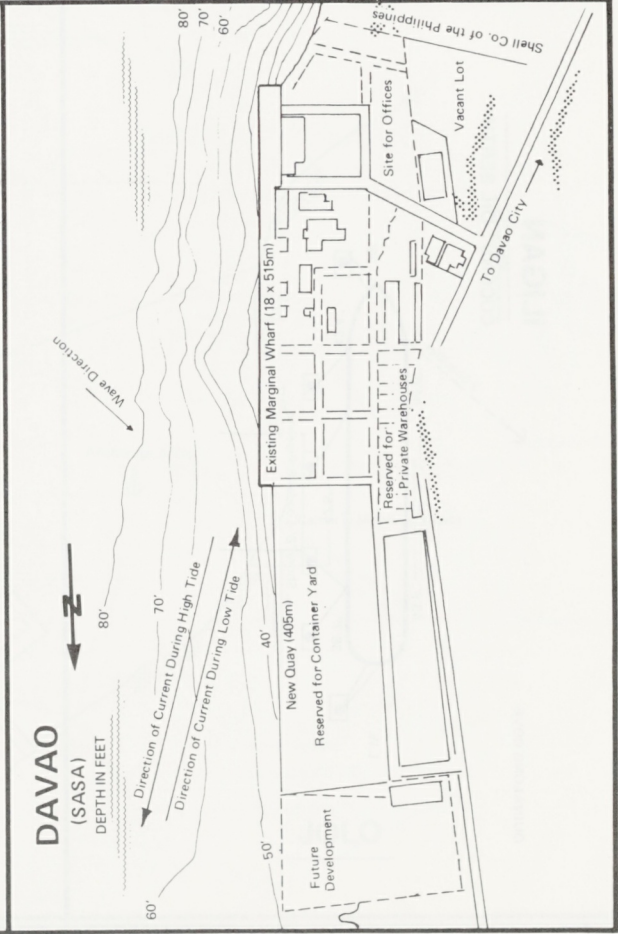
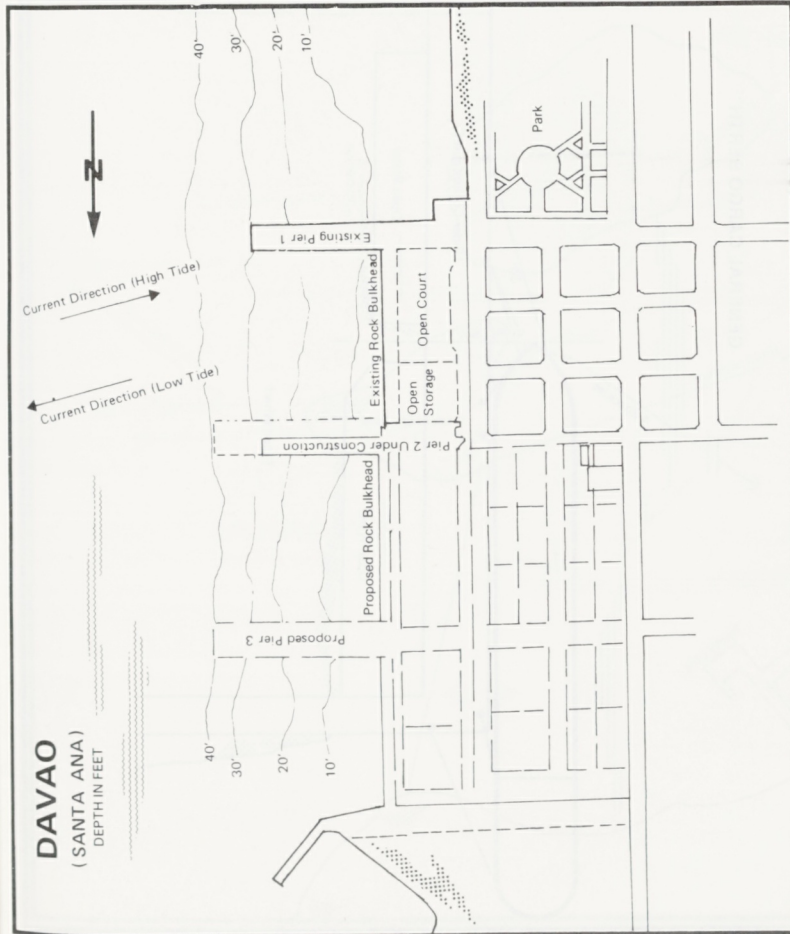
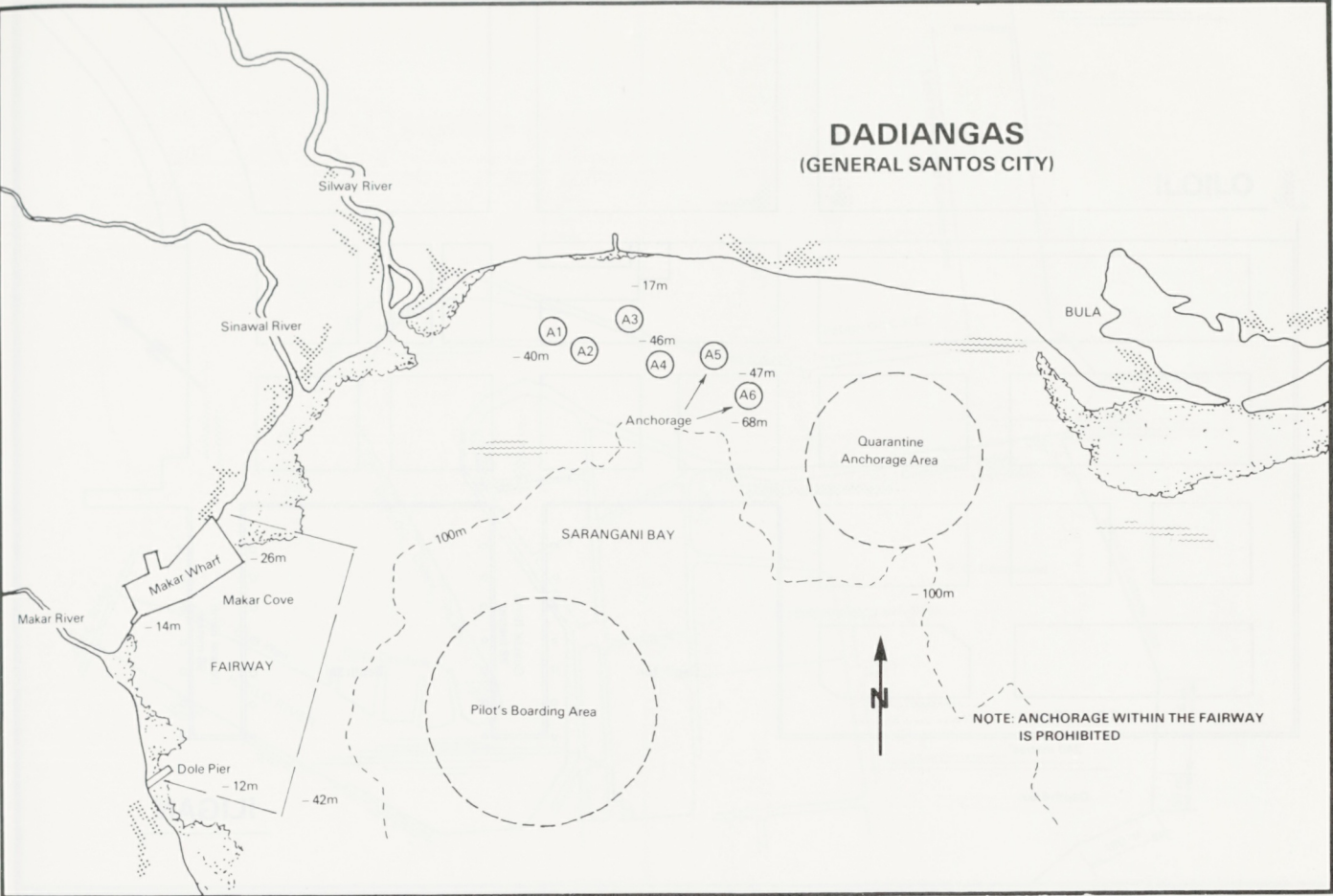
APARRI (2)

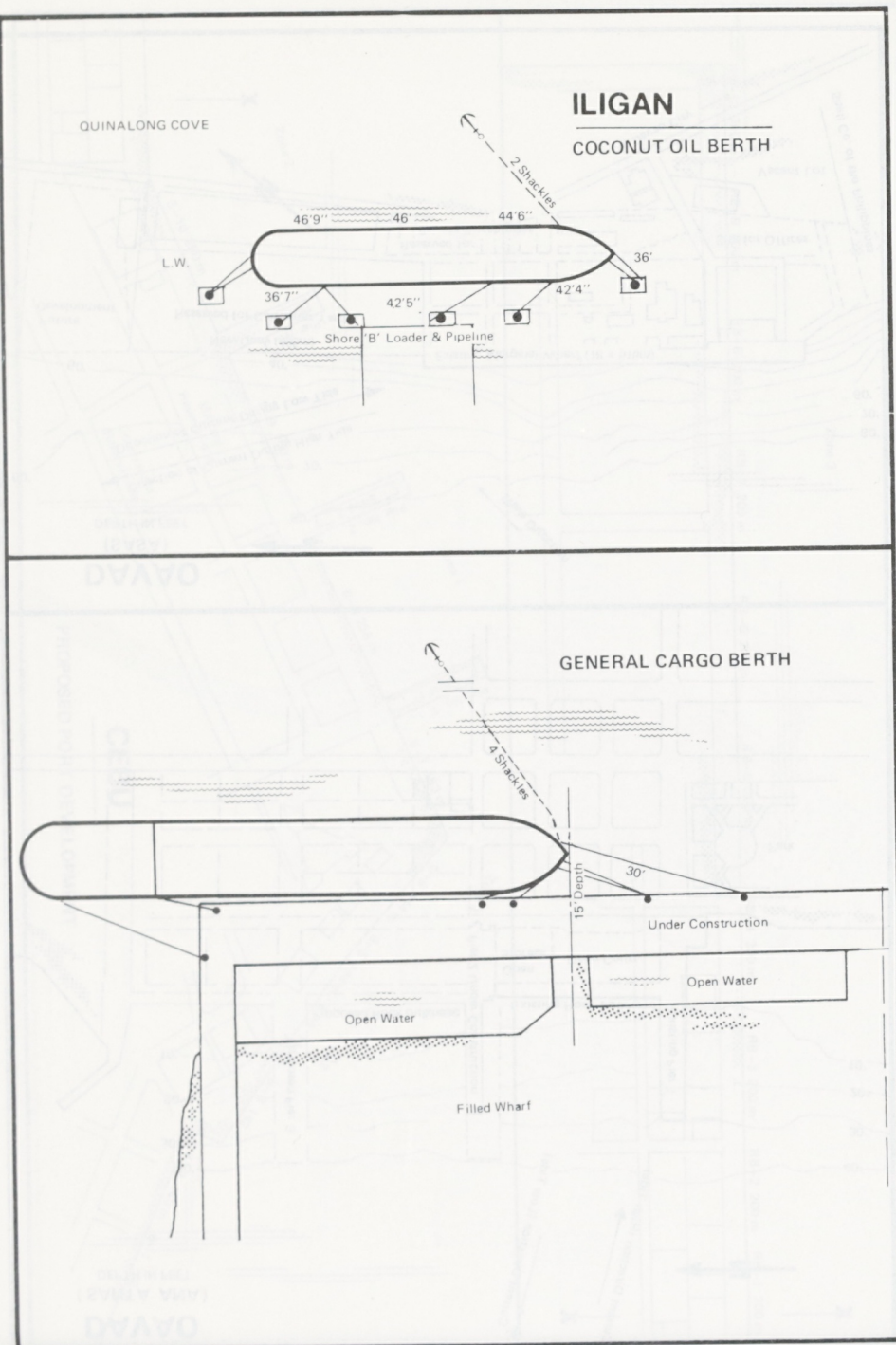
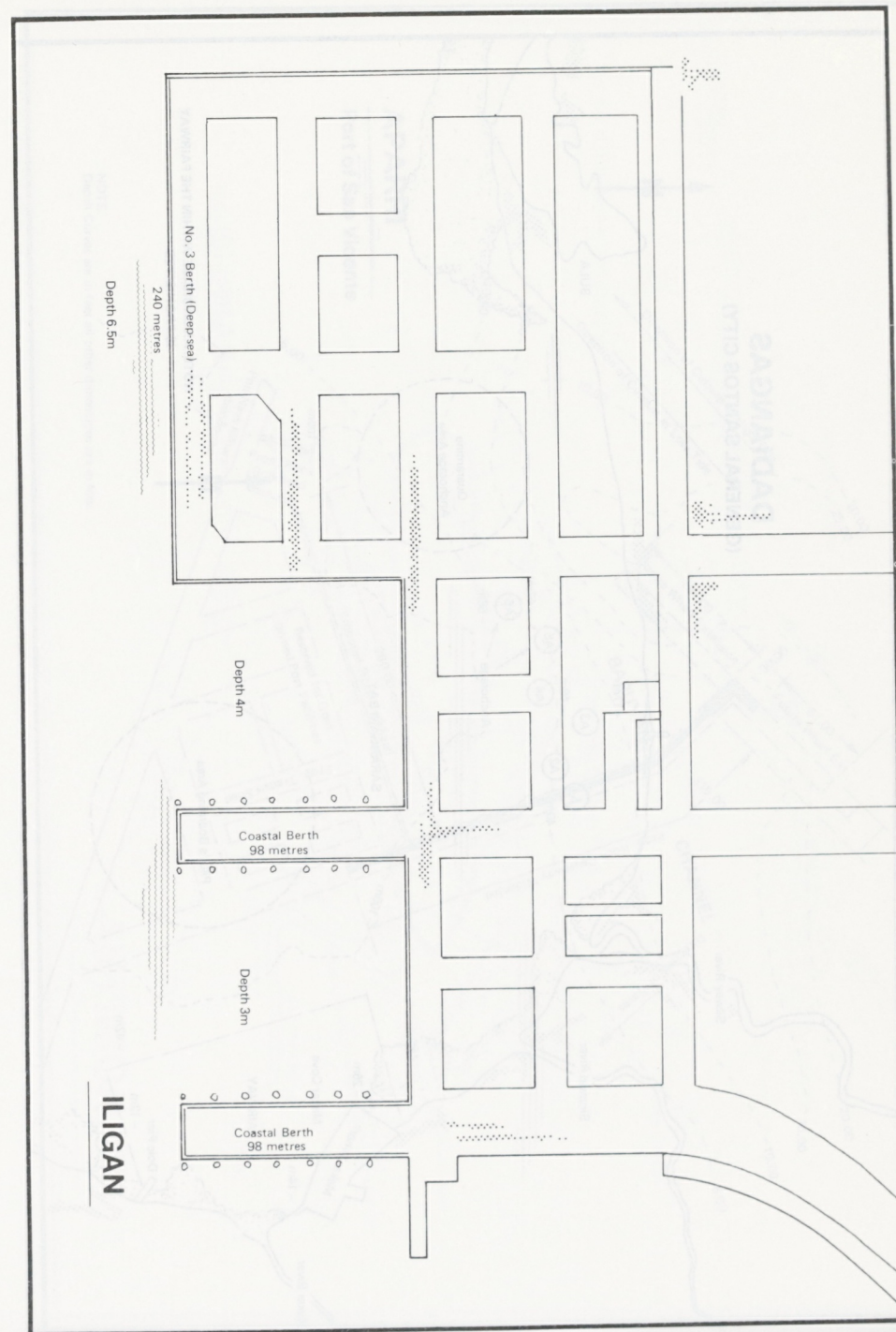


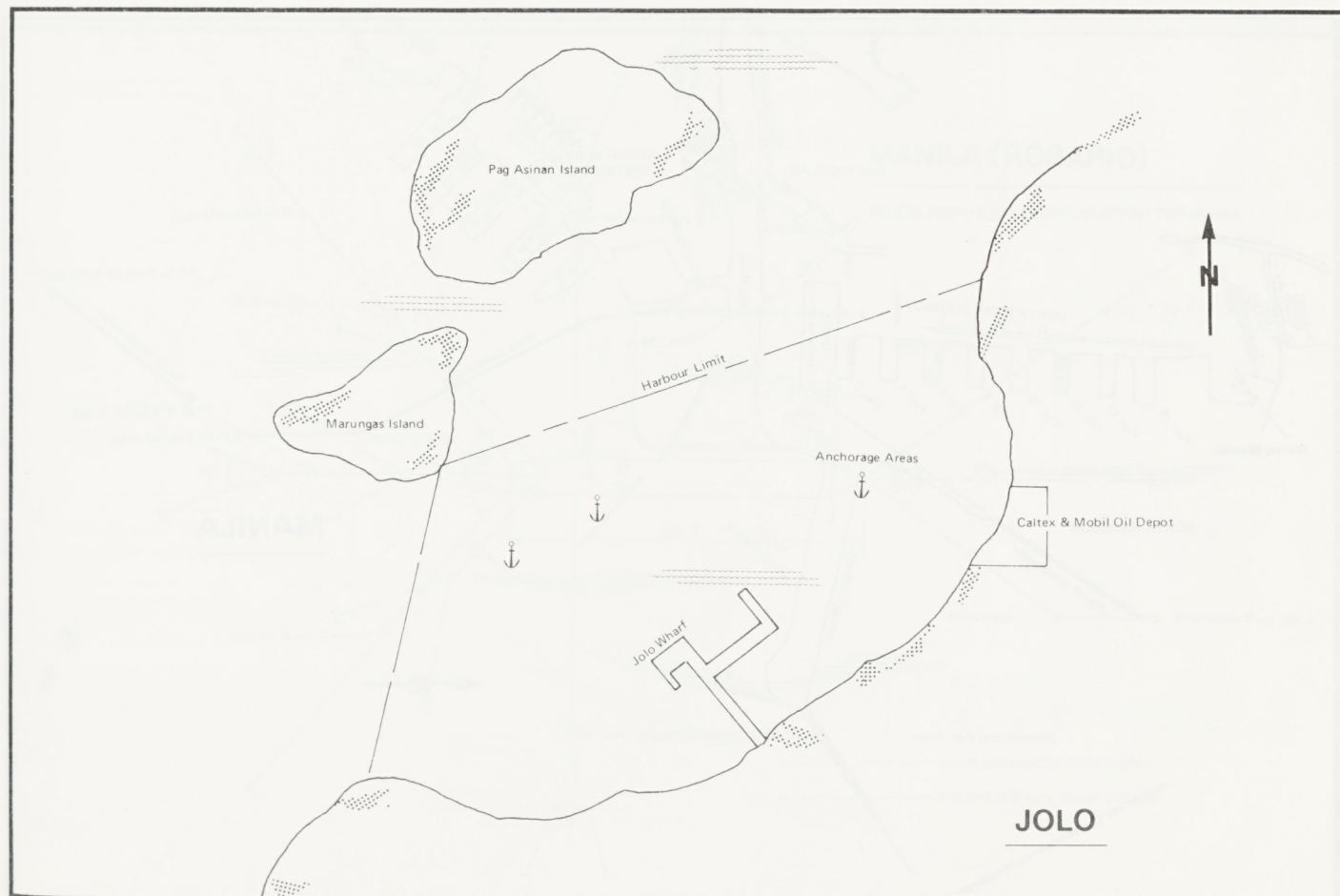
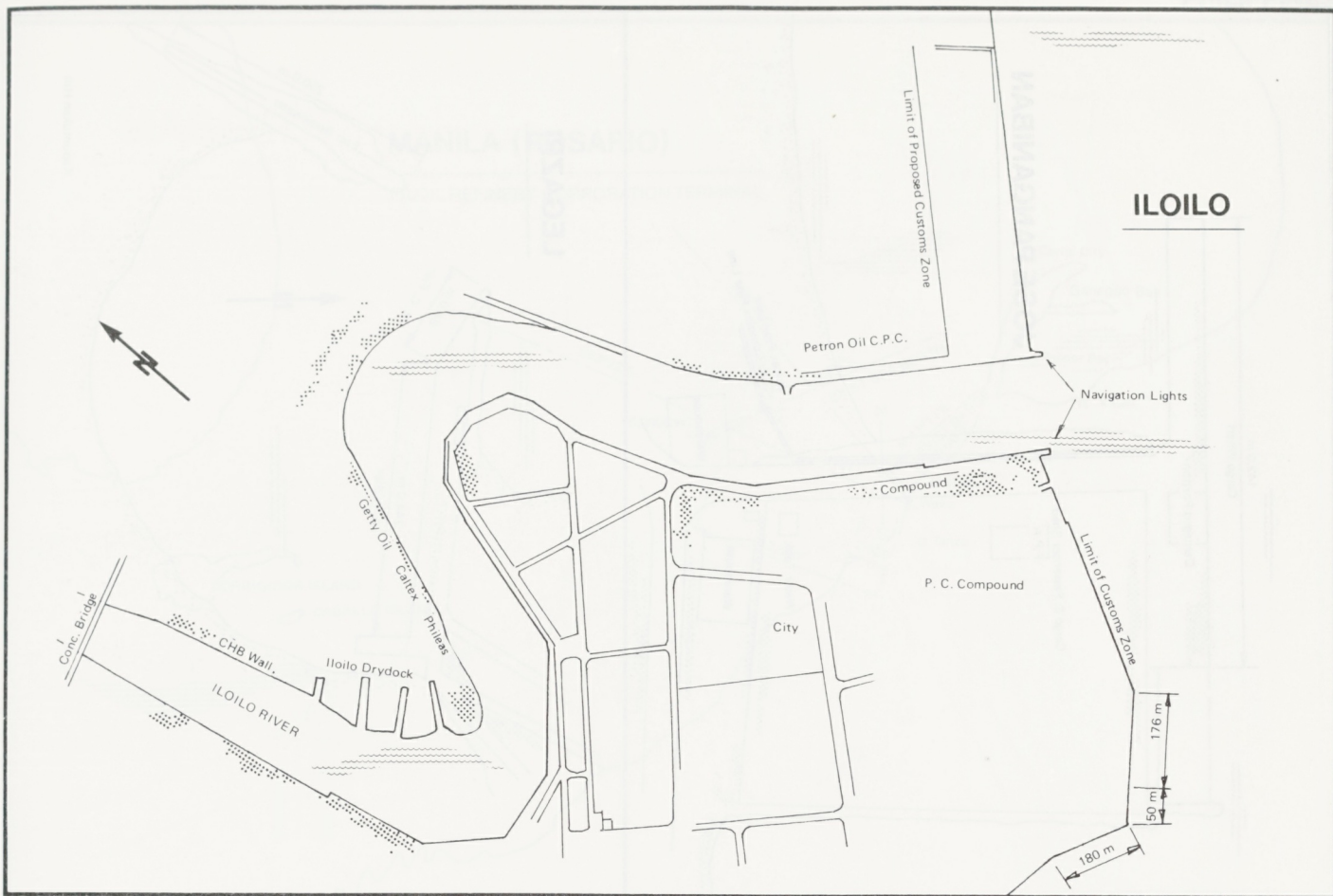
APARRI
(PORT IRENE)

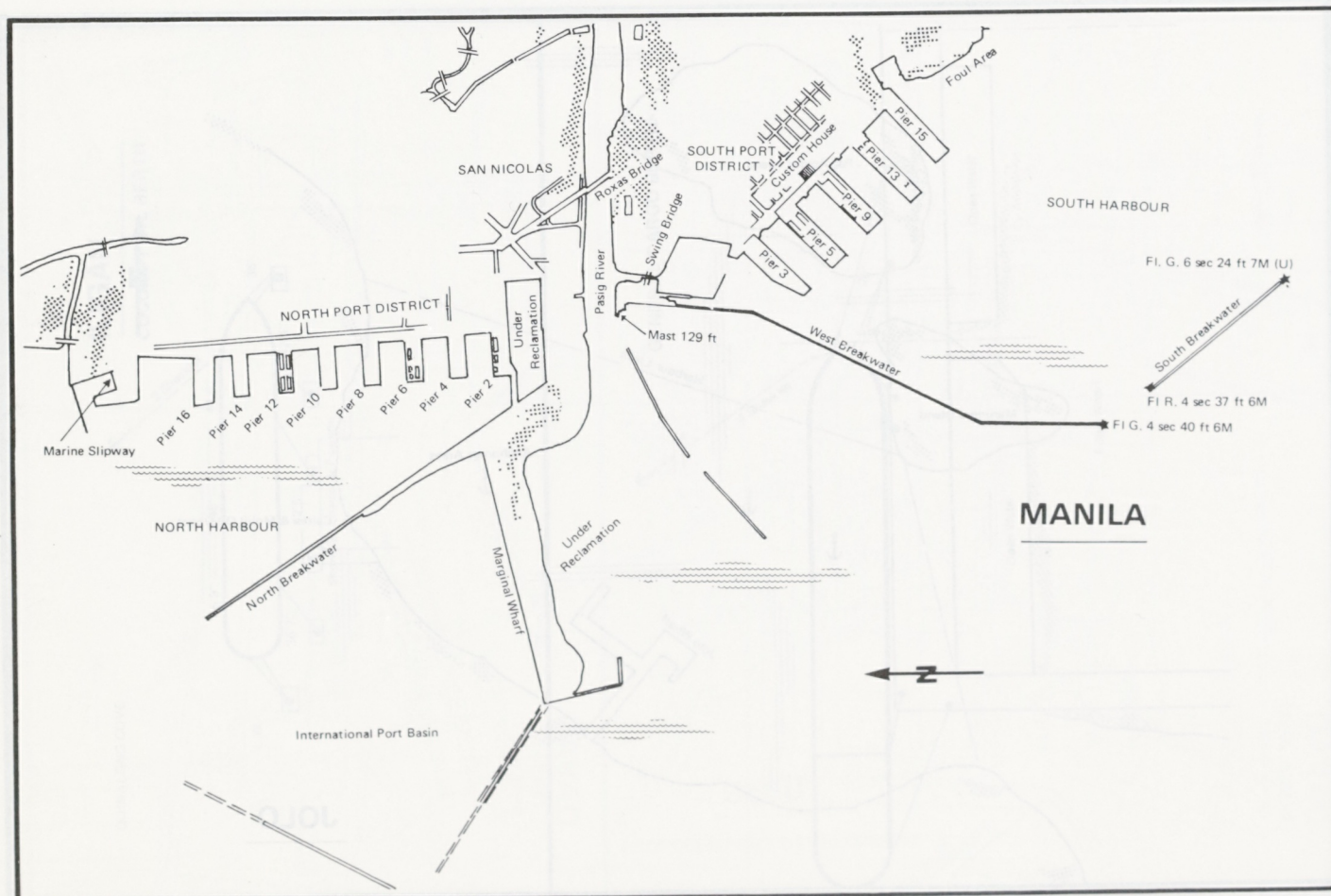
NOTE:
Soundings are in Metres based on MLLW.





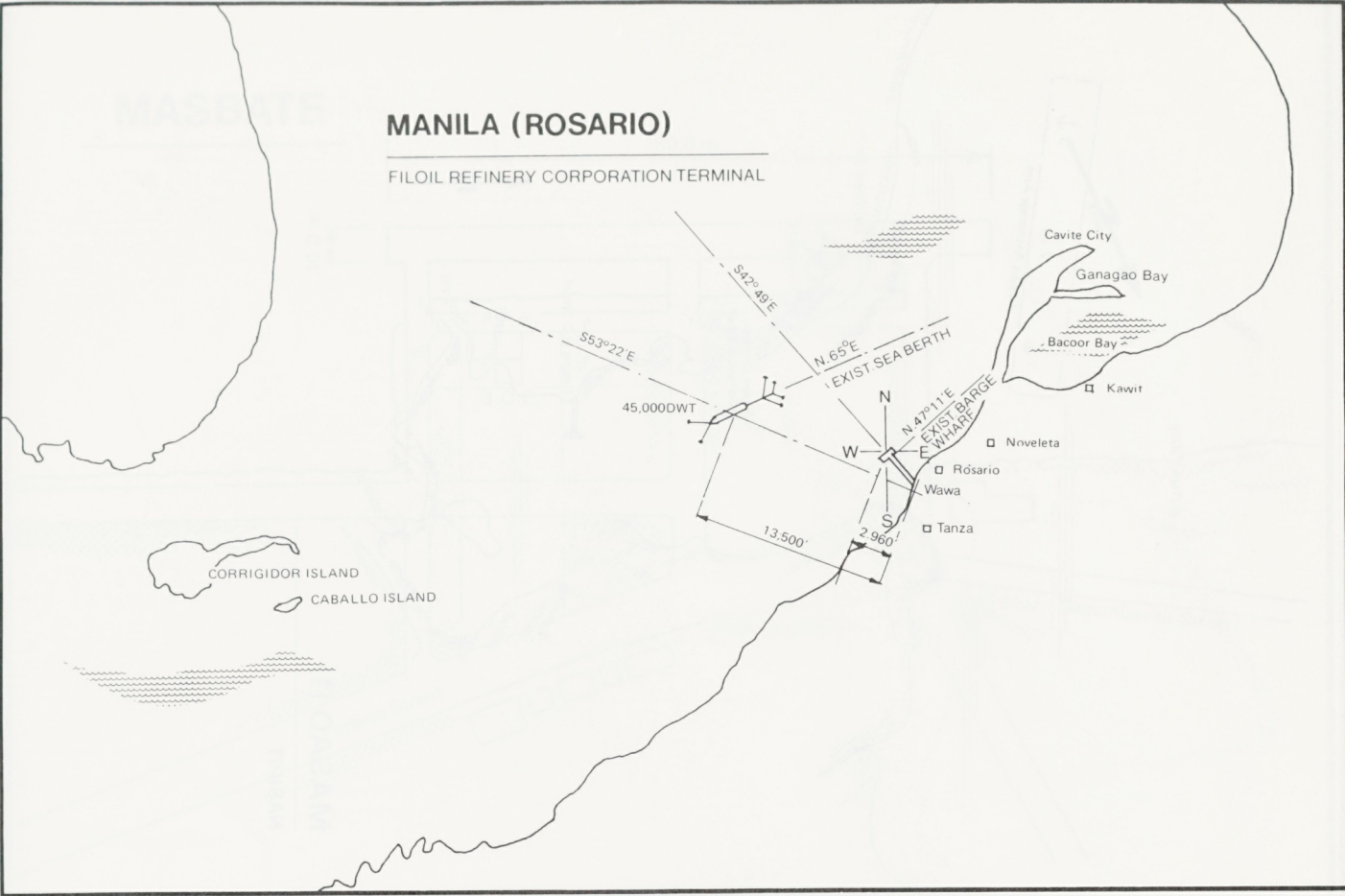






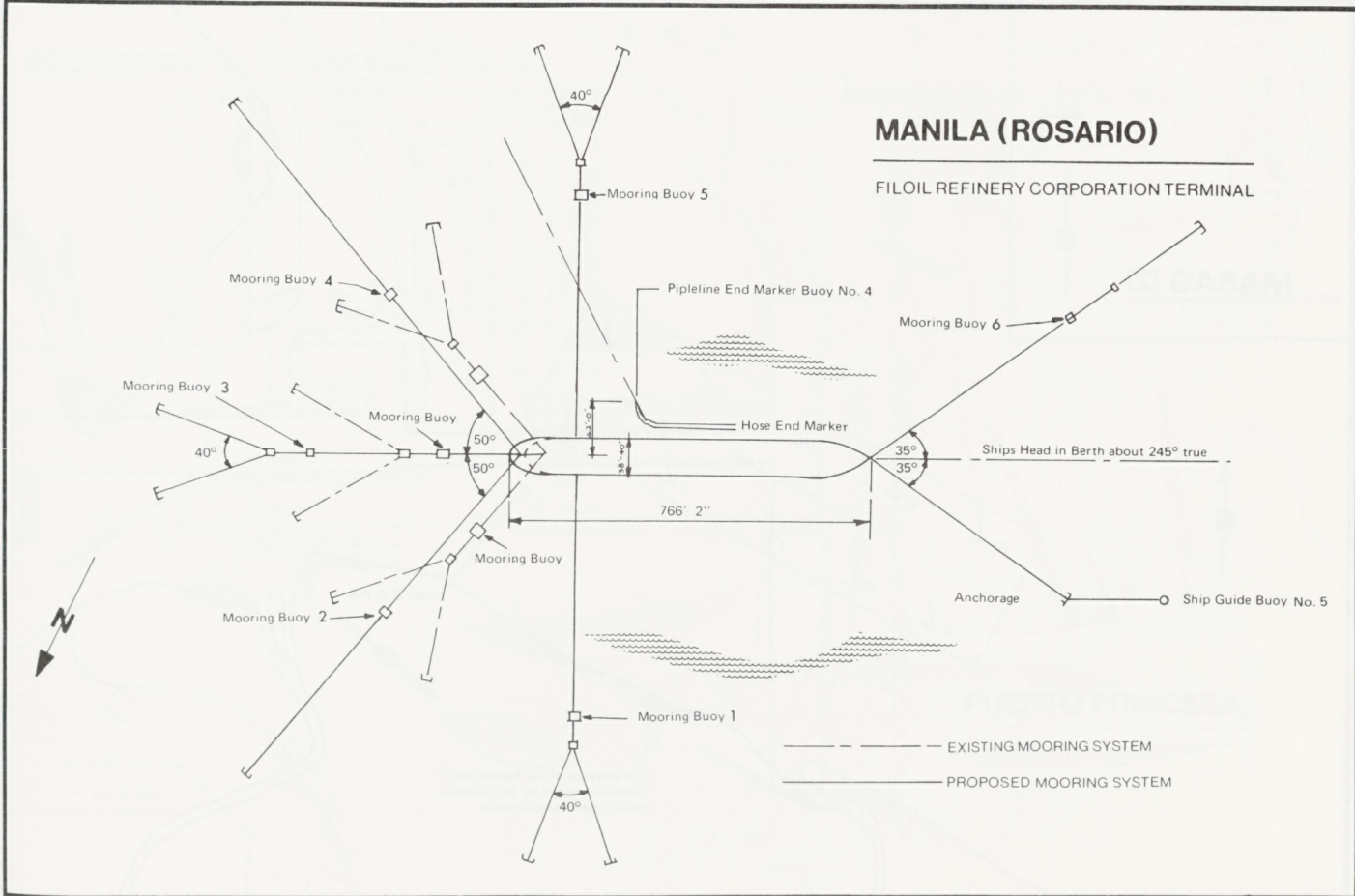
MANILA (ROSARIO)

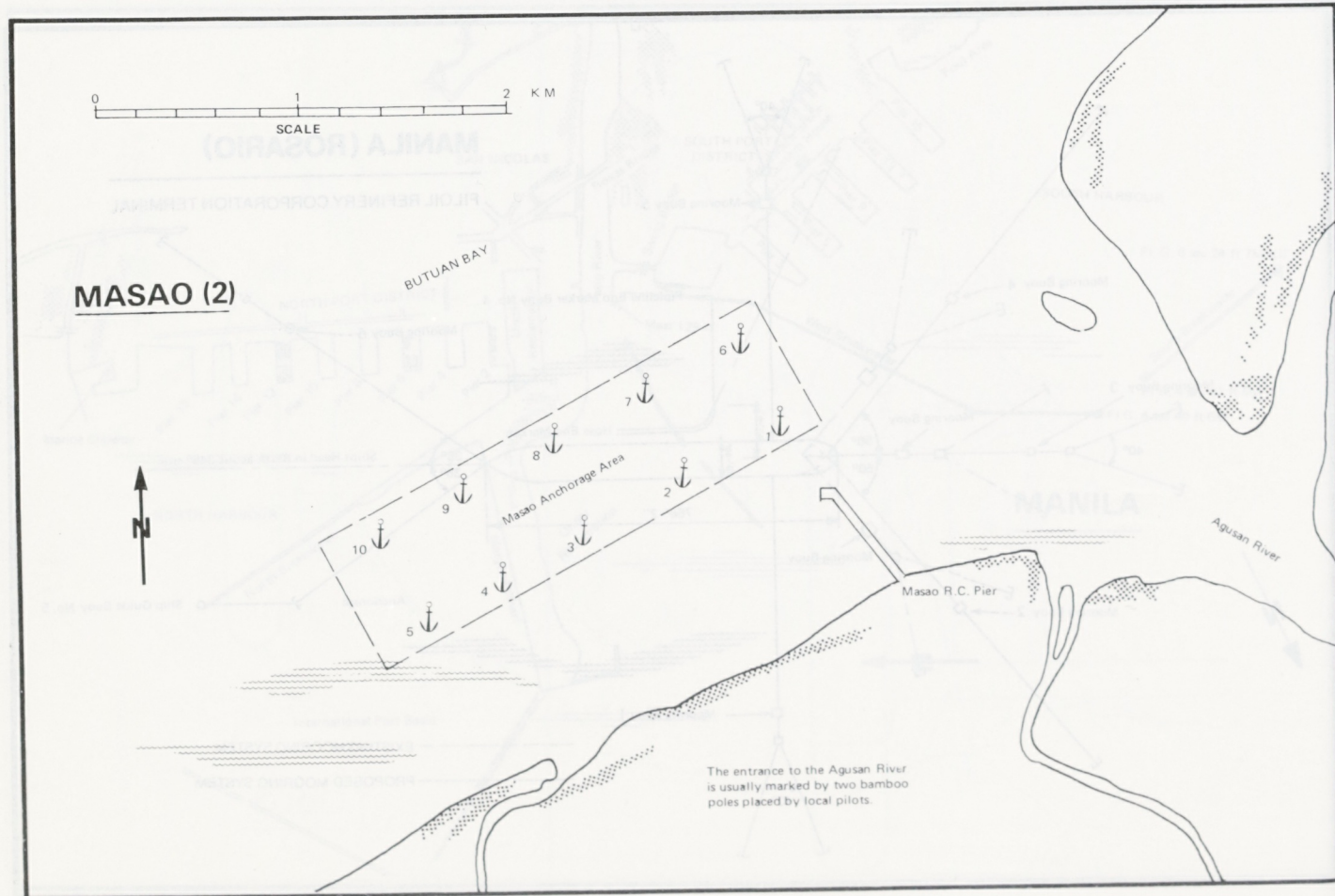
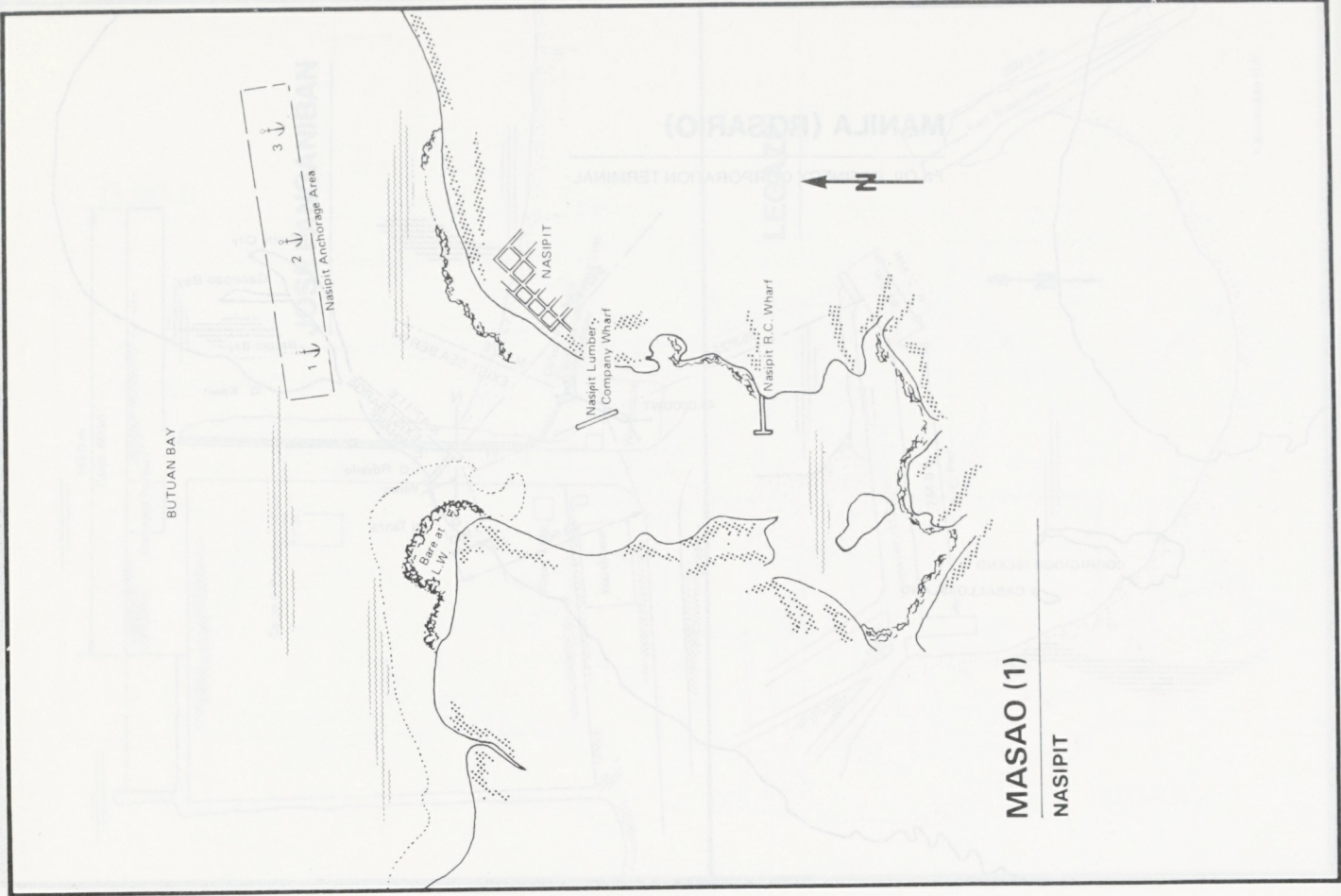
FILOIL REFINERY CORPORATION TERMINAL



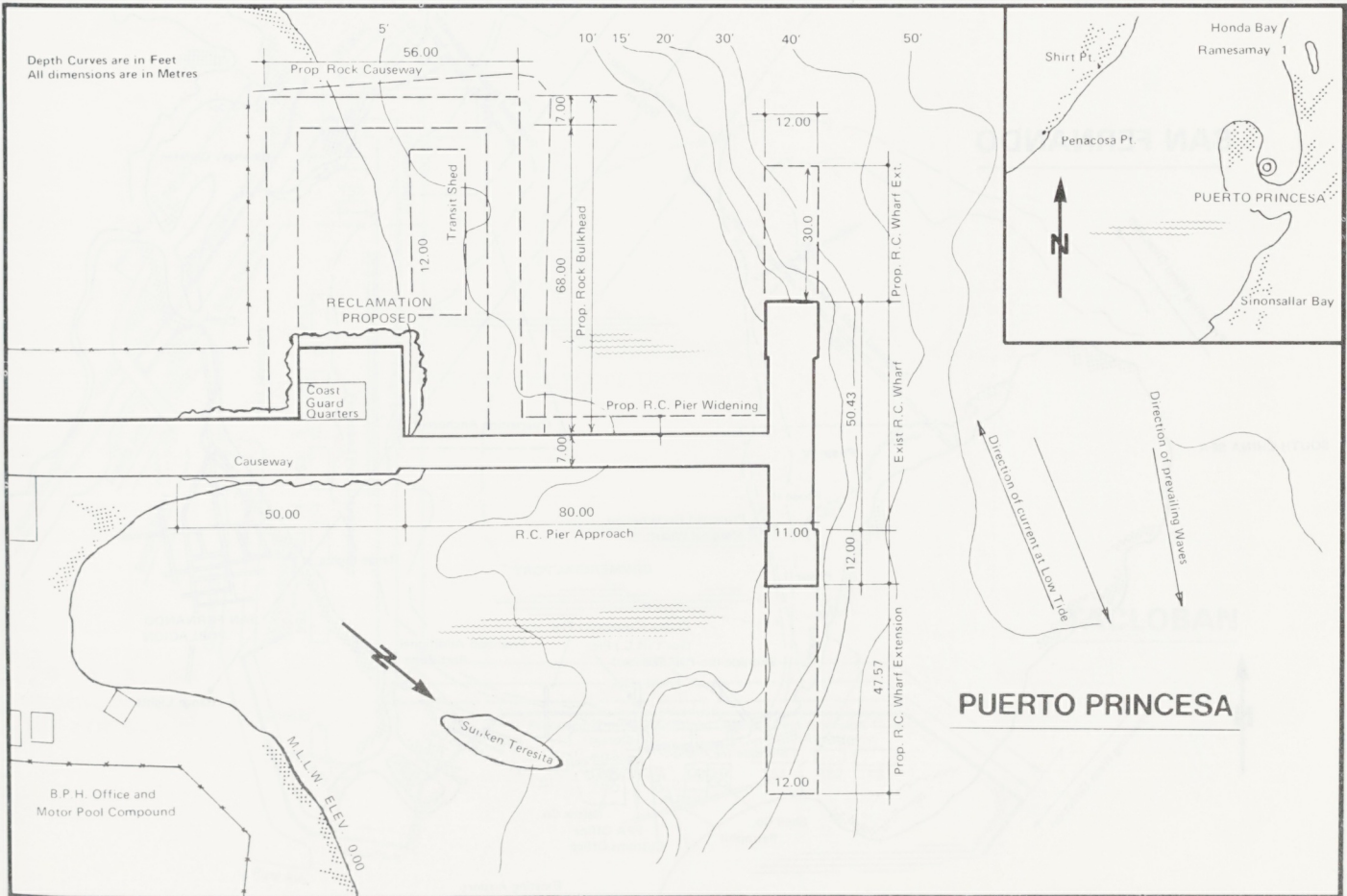
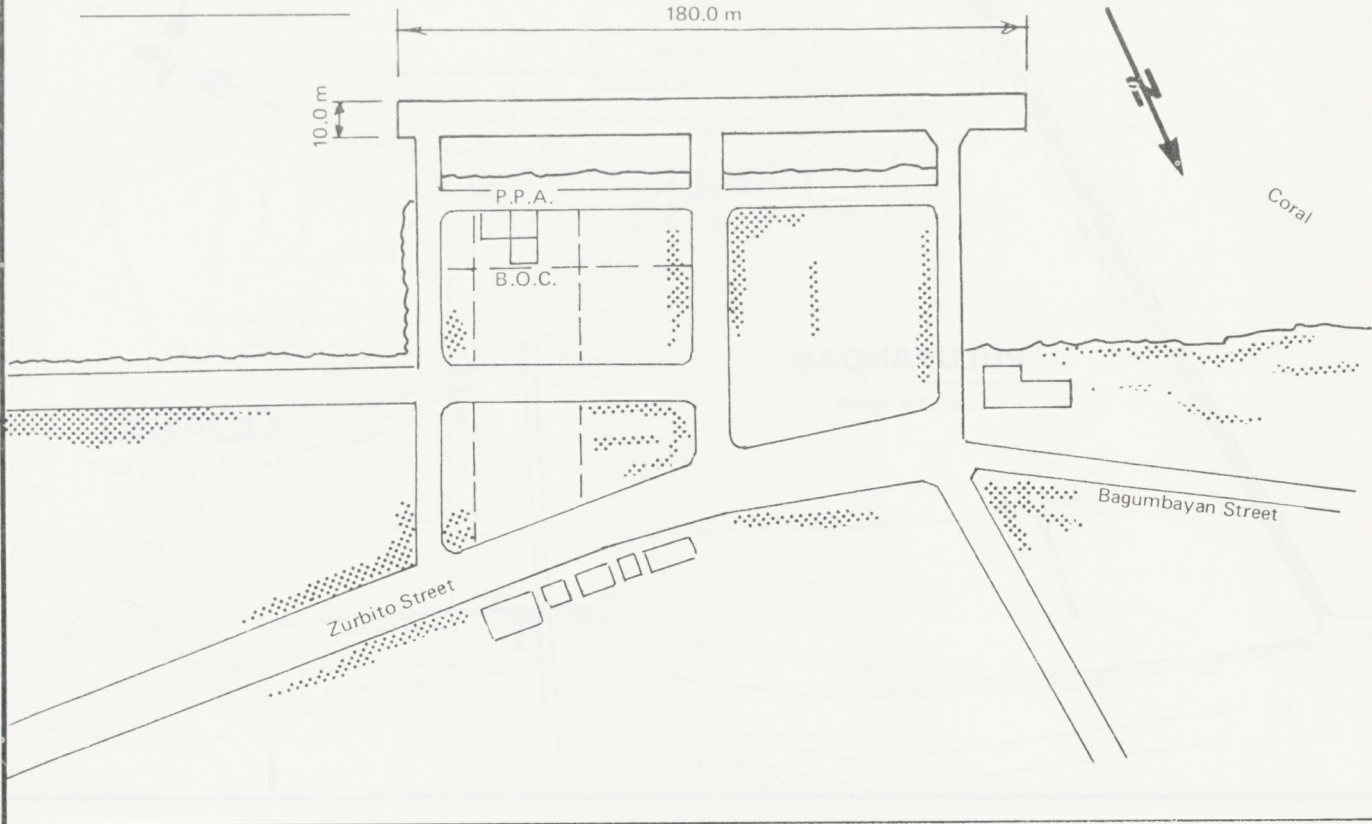
MANILA (ROSARIO)

FILOIL REFINERY CORPORATION TERMINAL

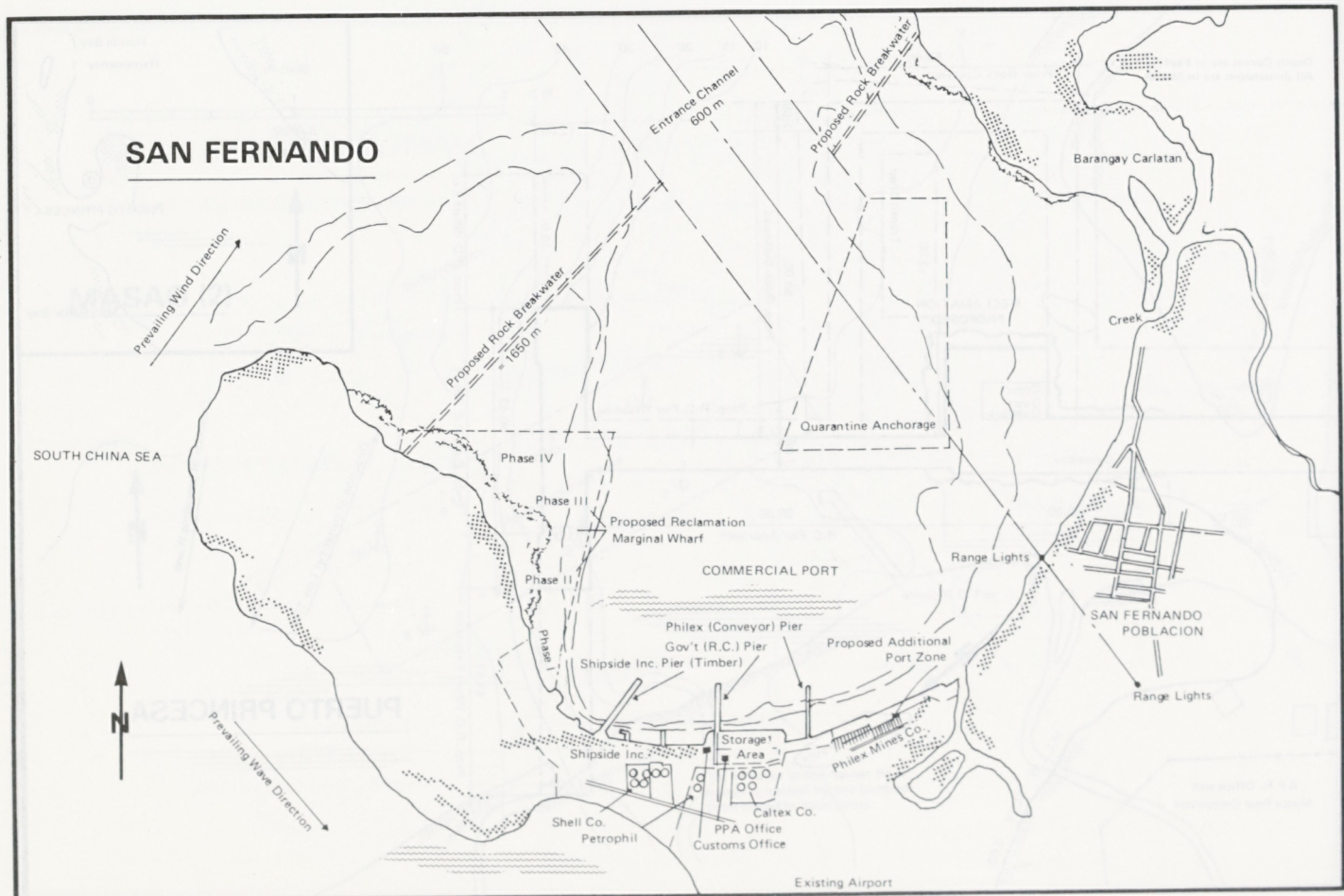
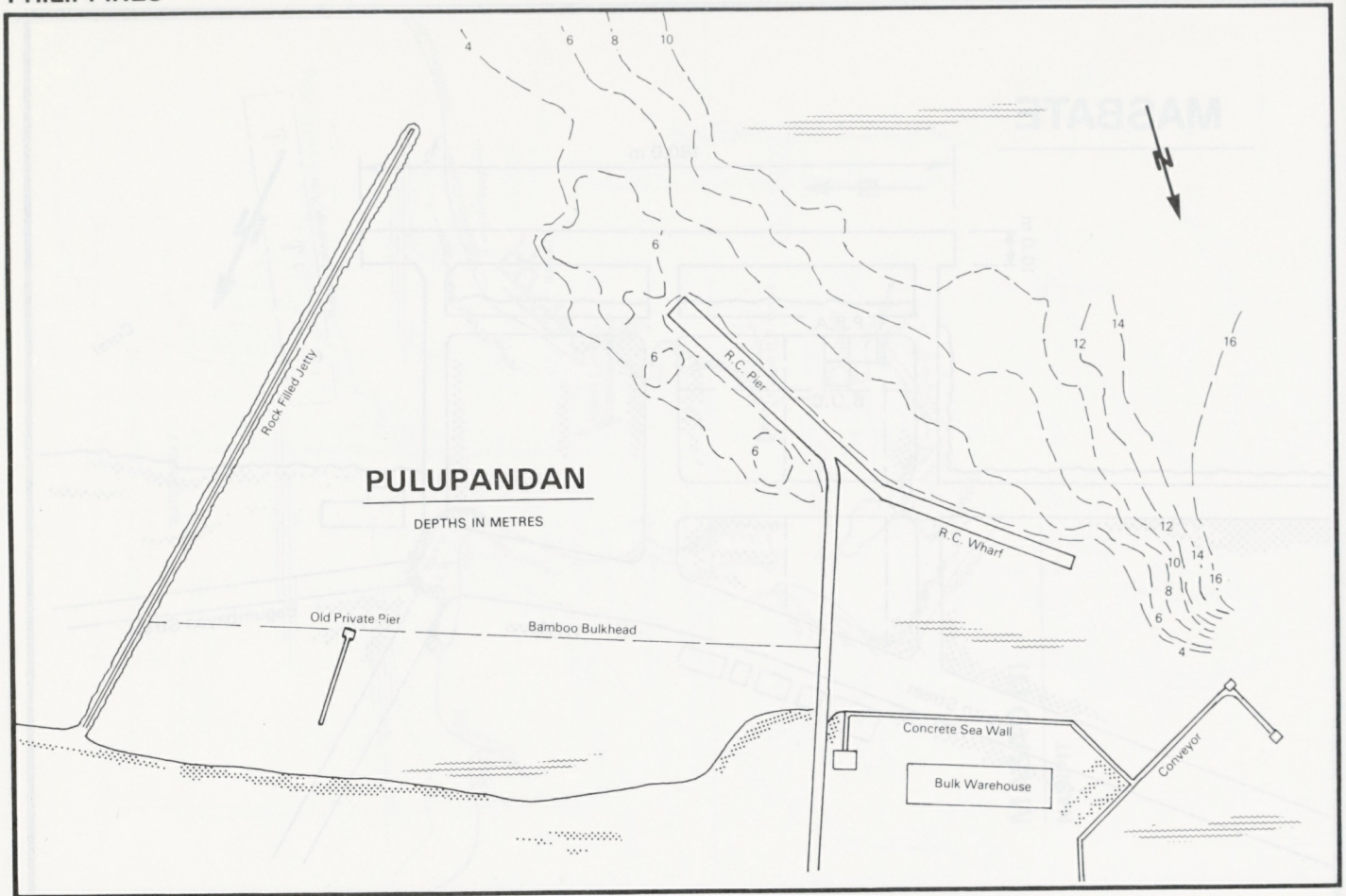




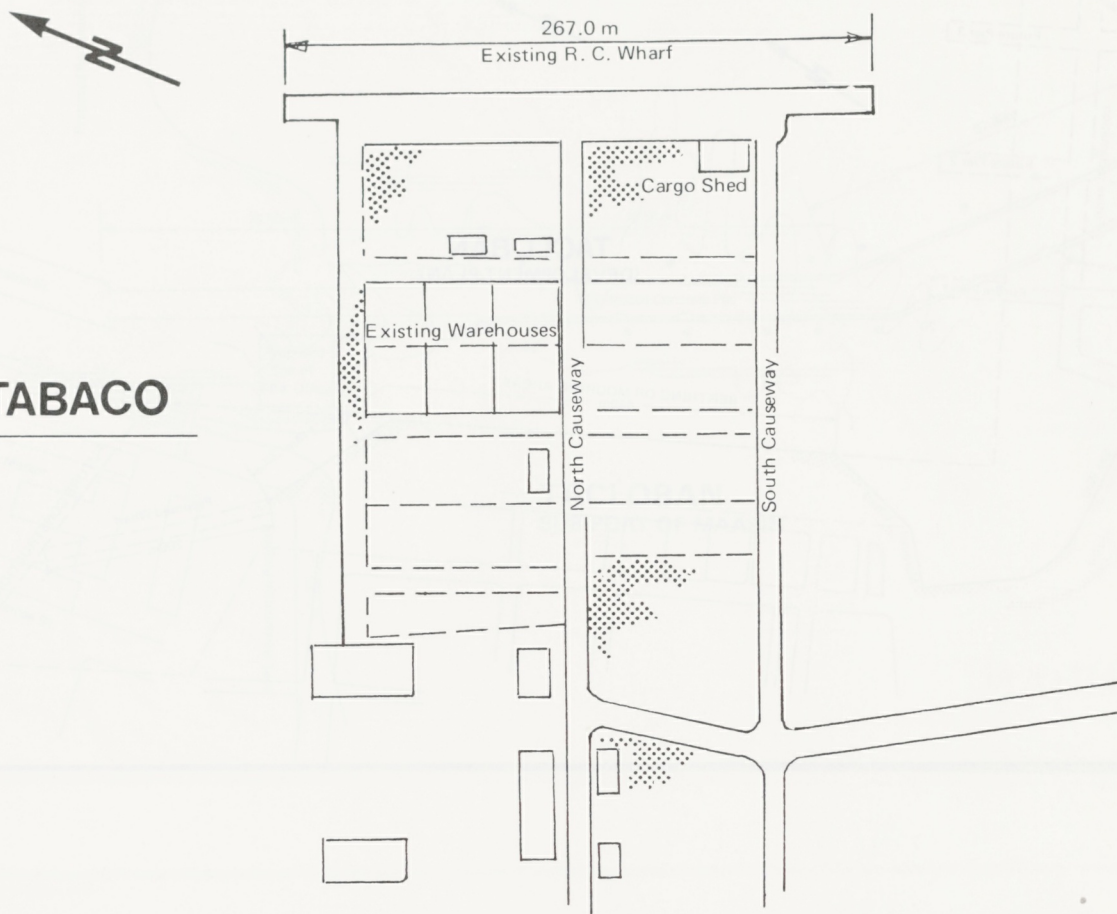
MASBATE



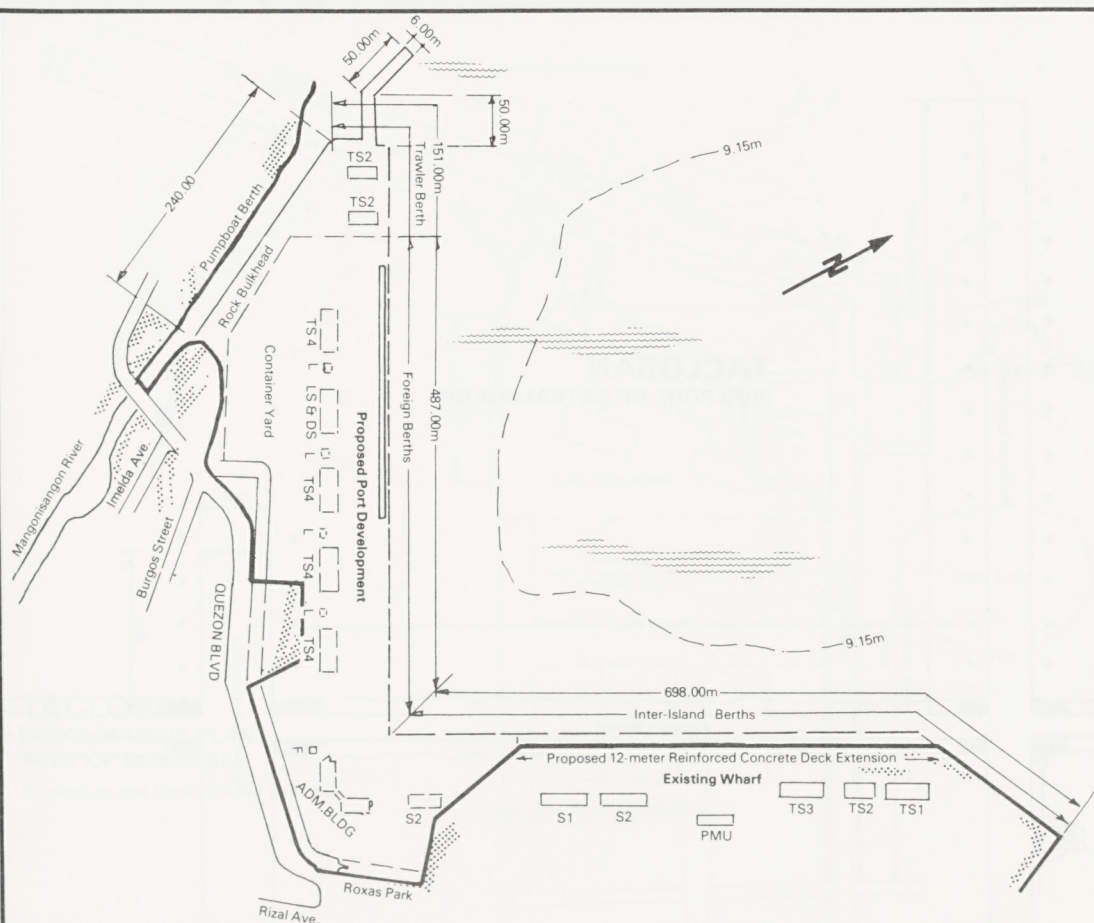
PUERTO PRINCESA

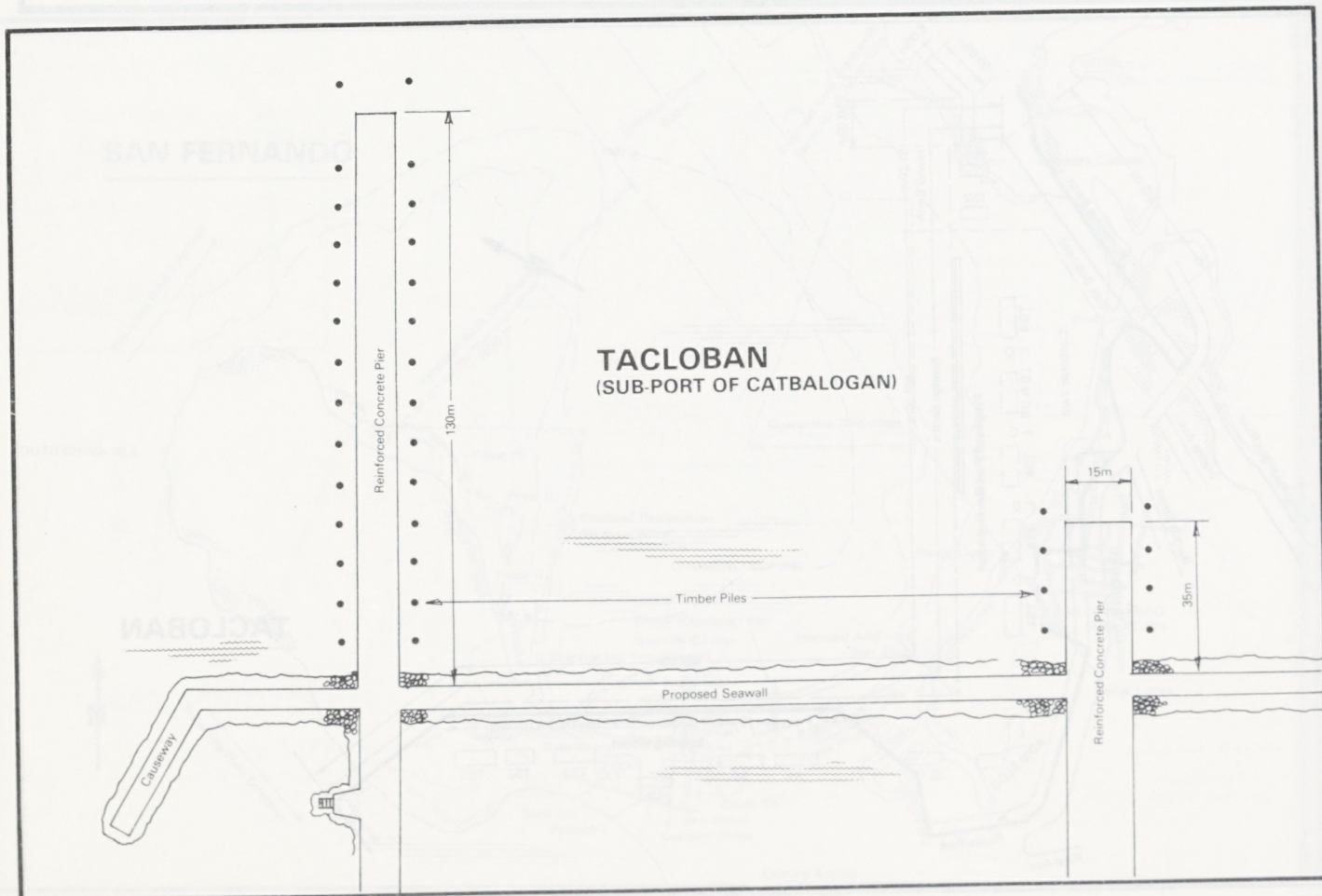
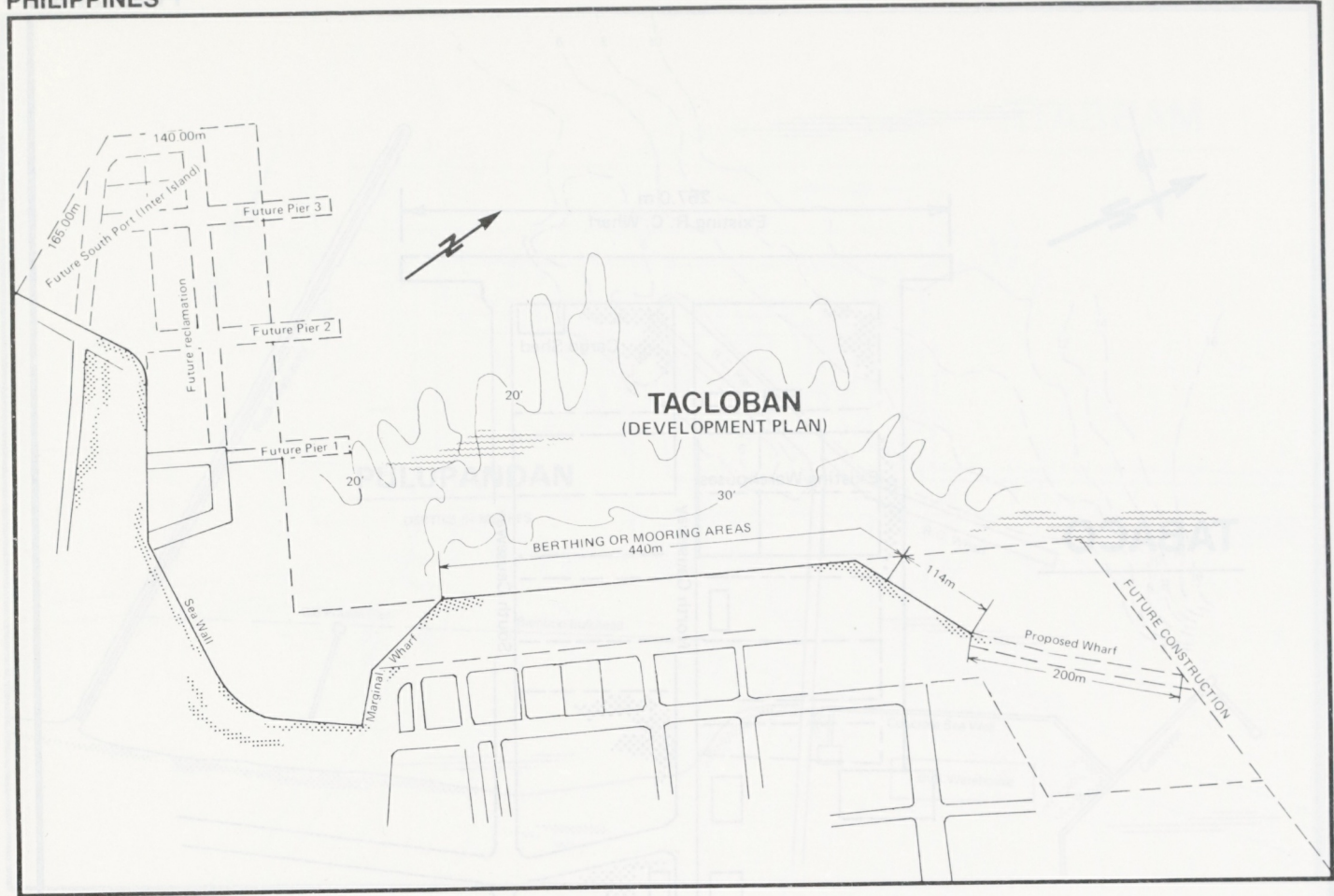


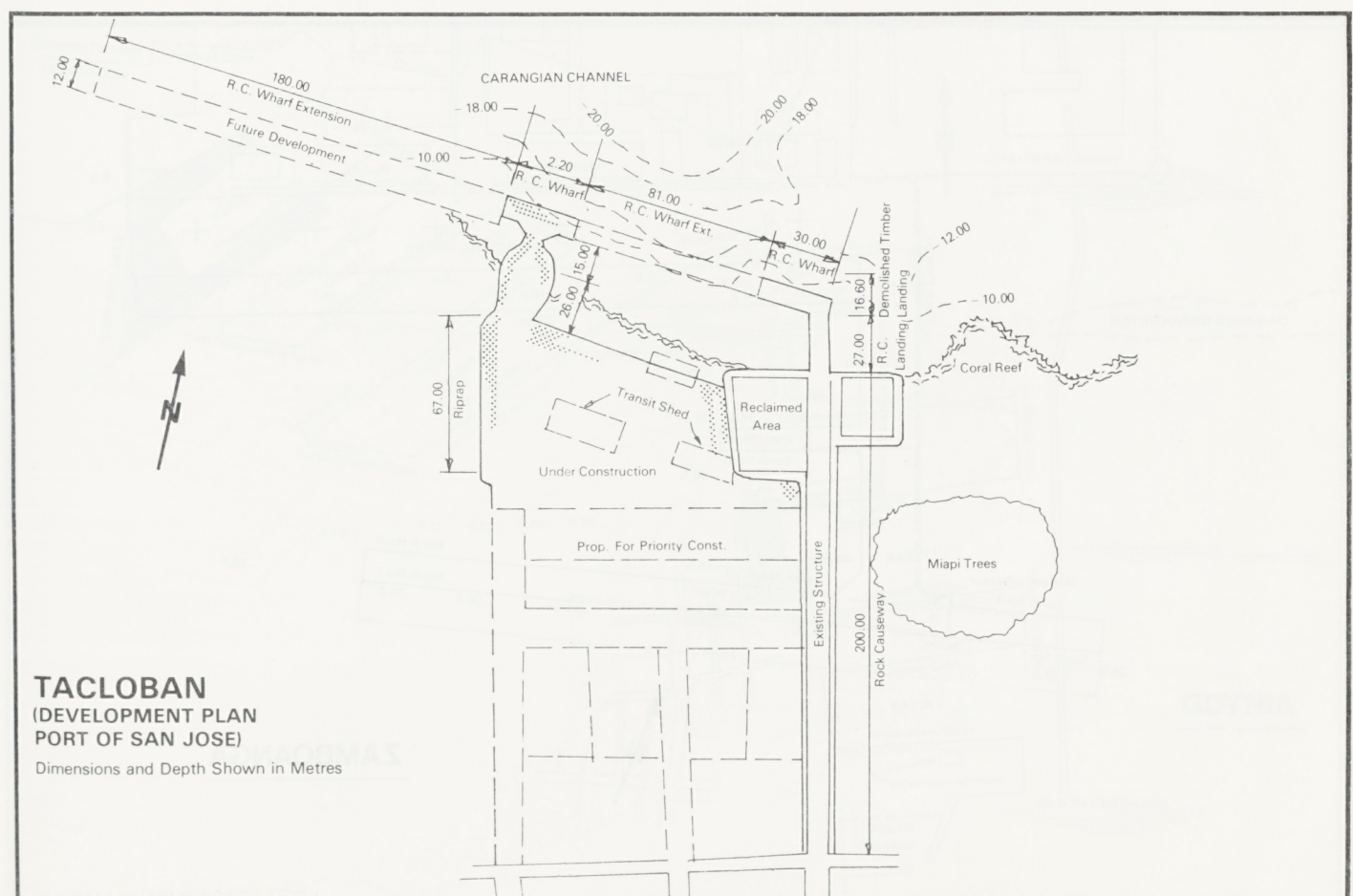
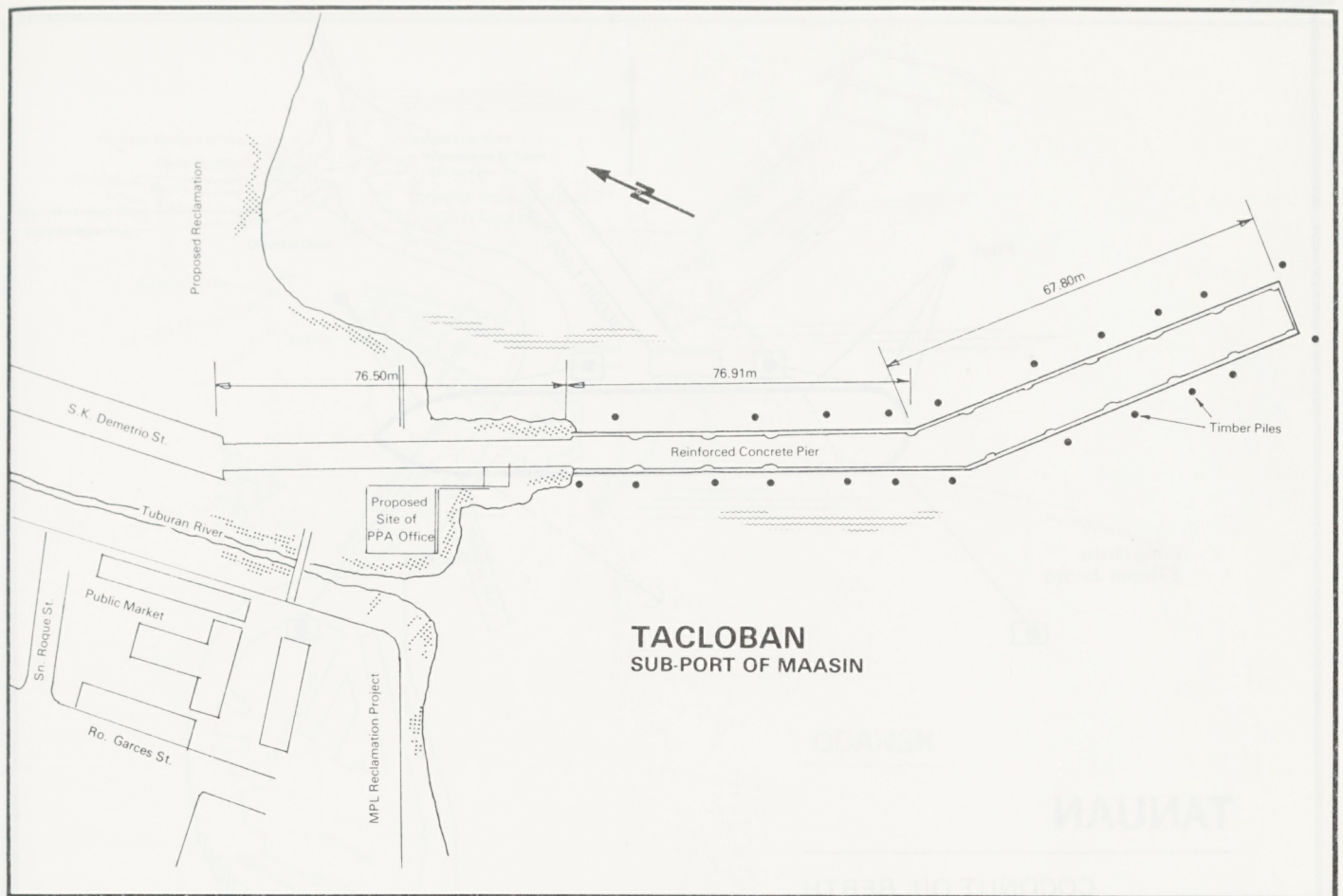
TABACO



TACLOBAN

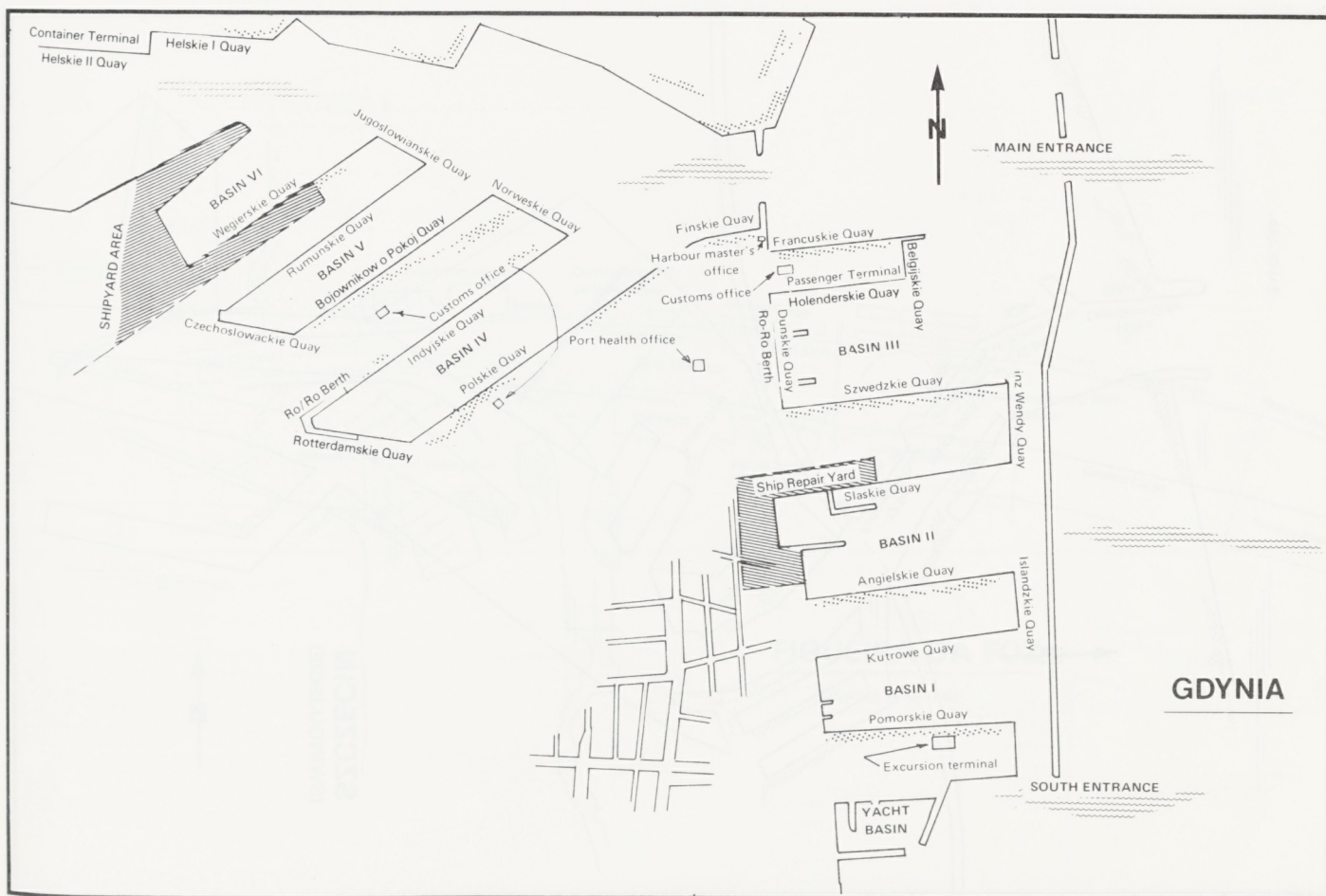
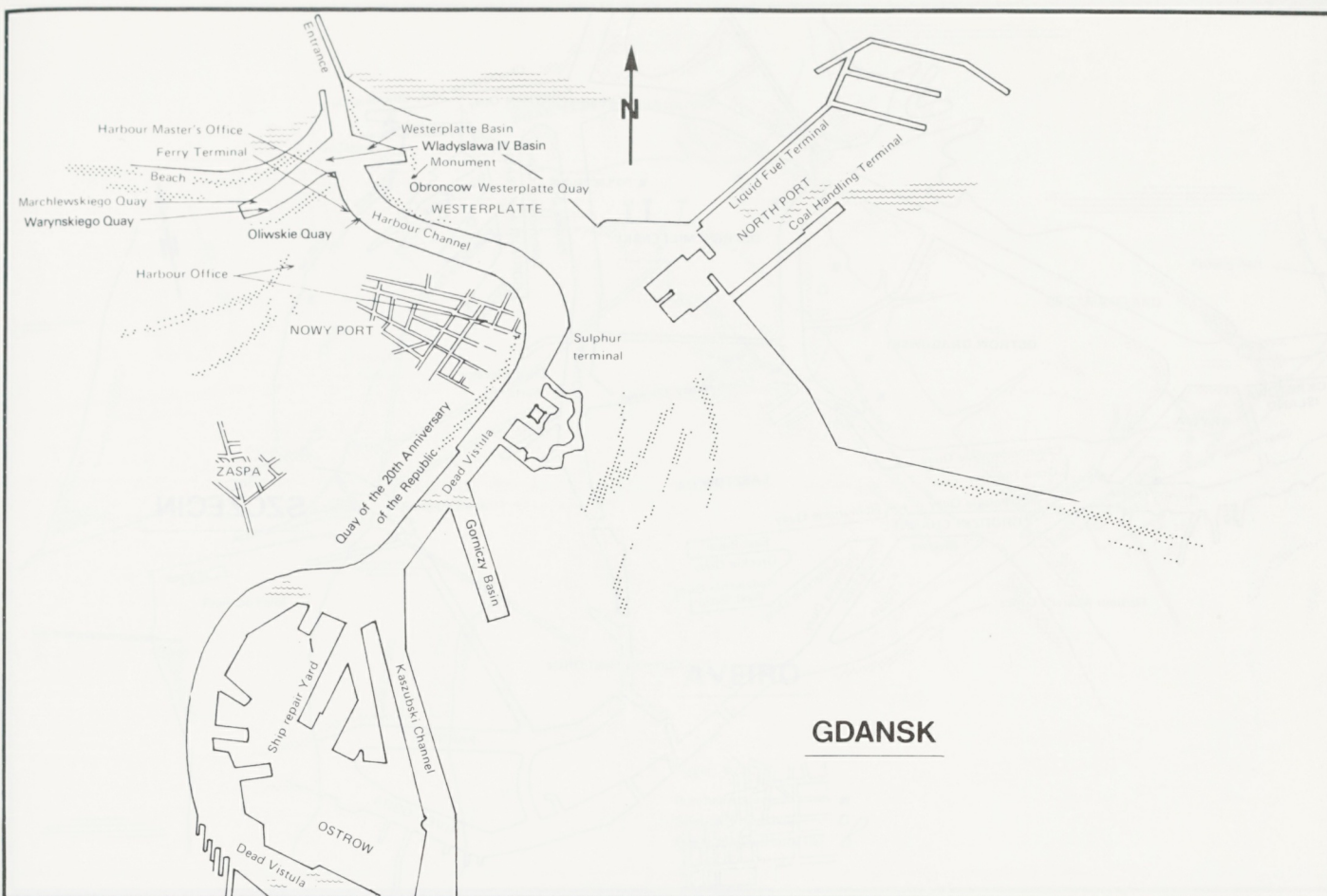




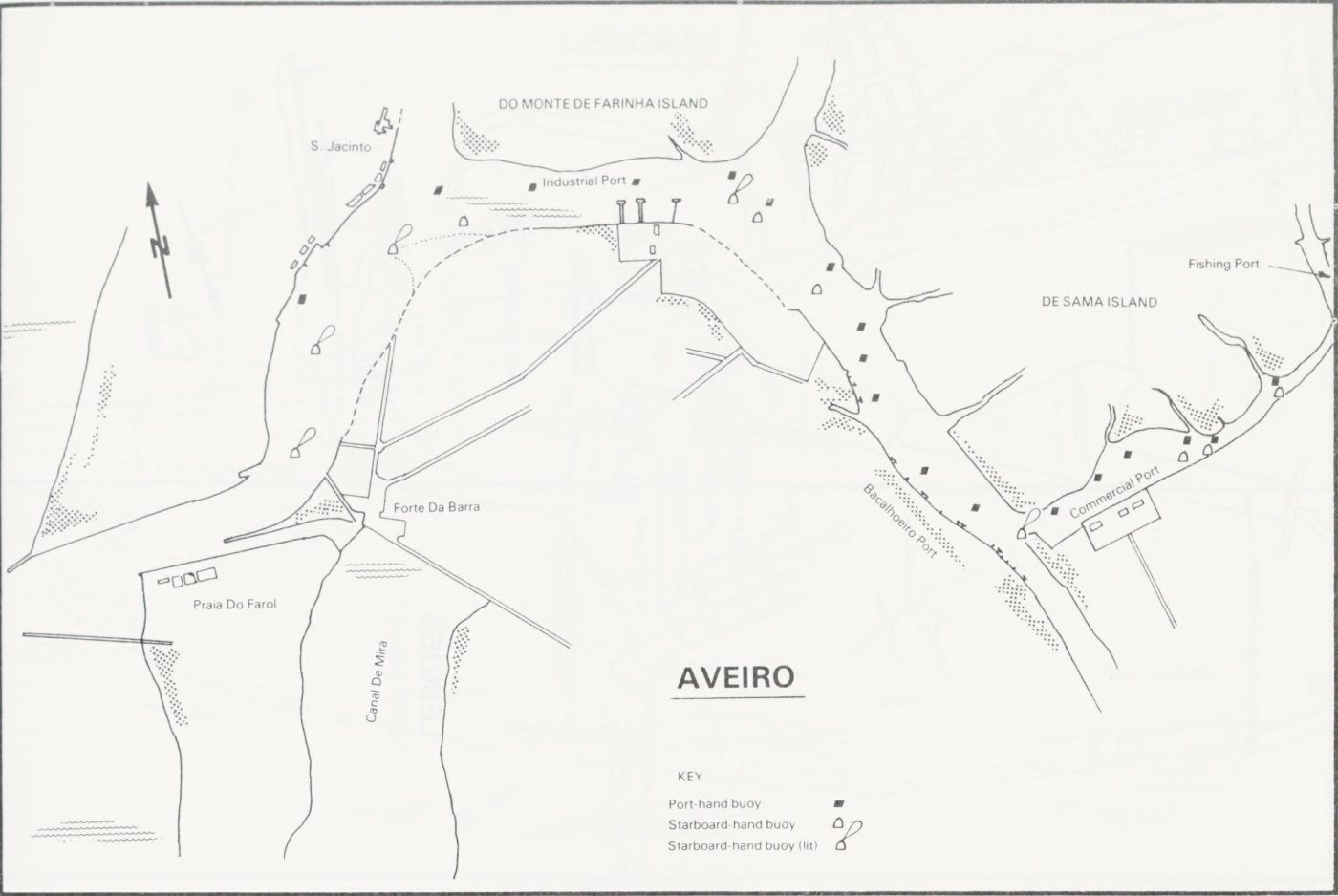


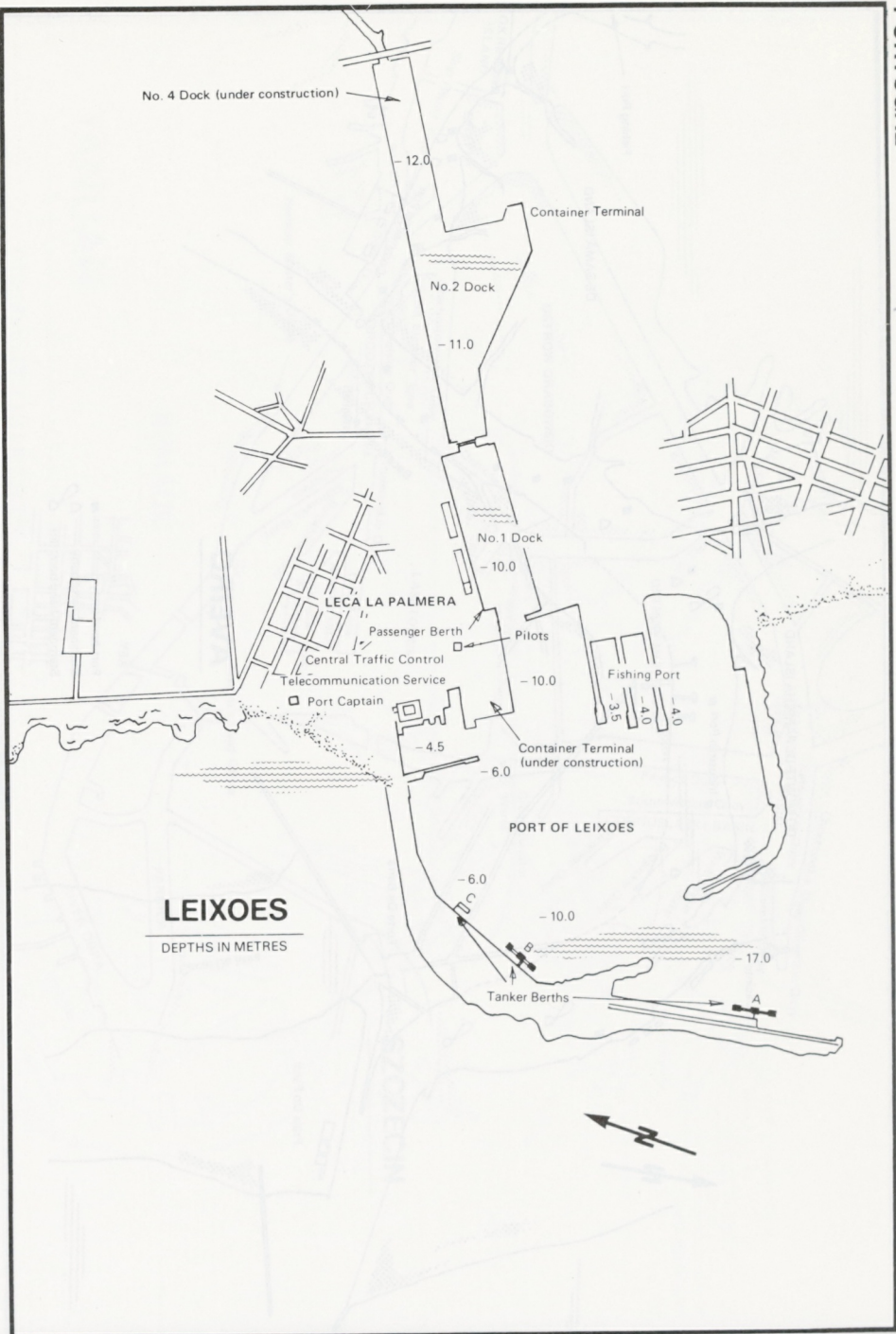
ZAMBOANGA

NOTE SOUNDINGS IN FEET AT M. L. W.

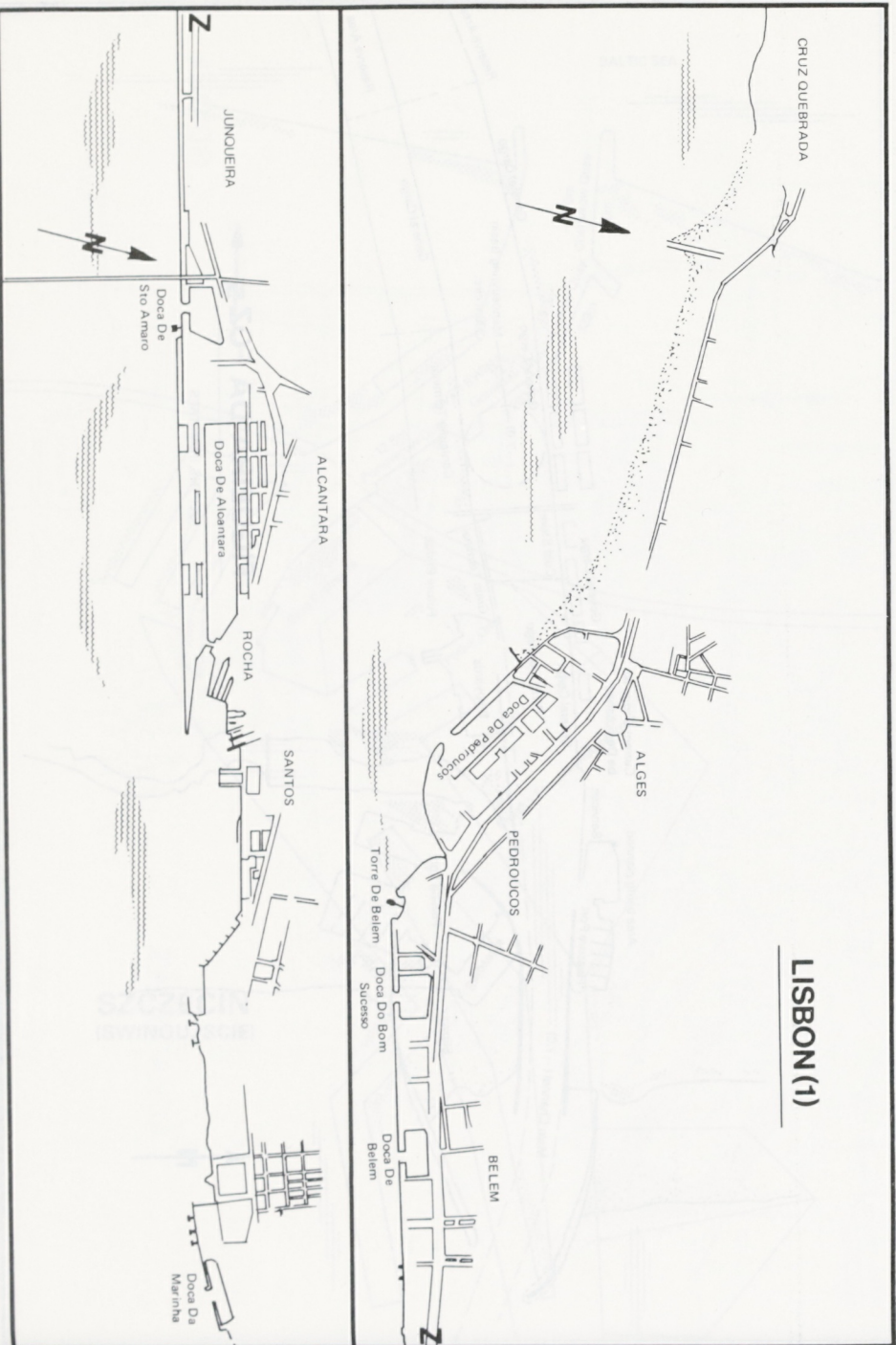


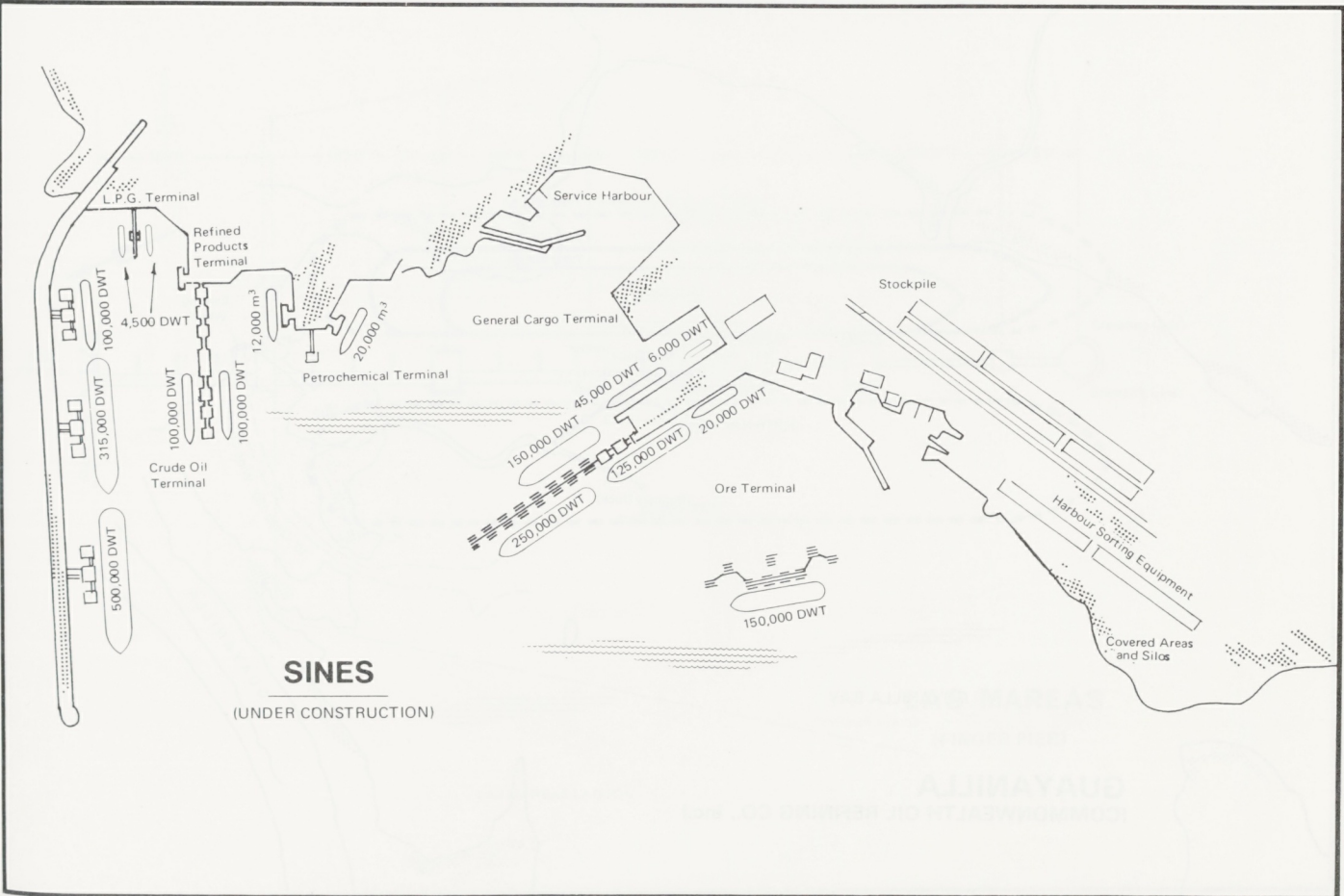
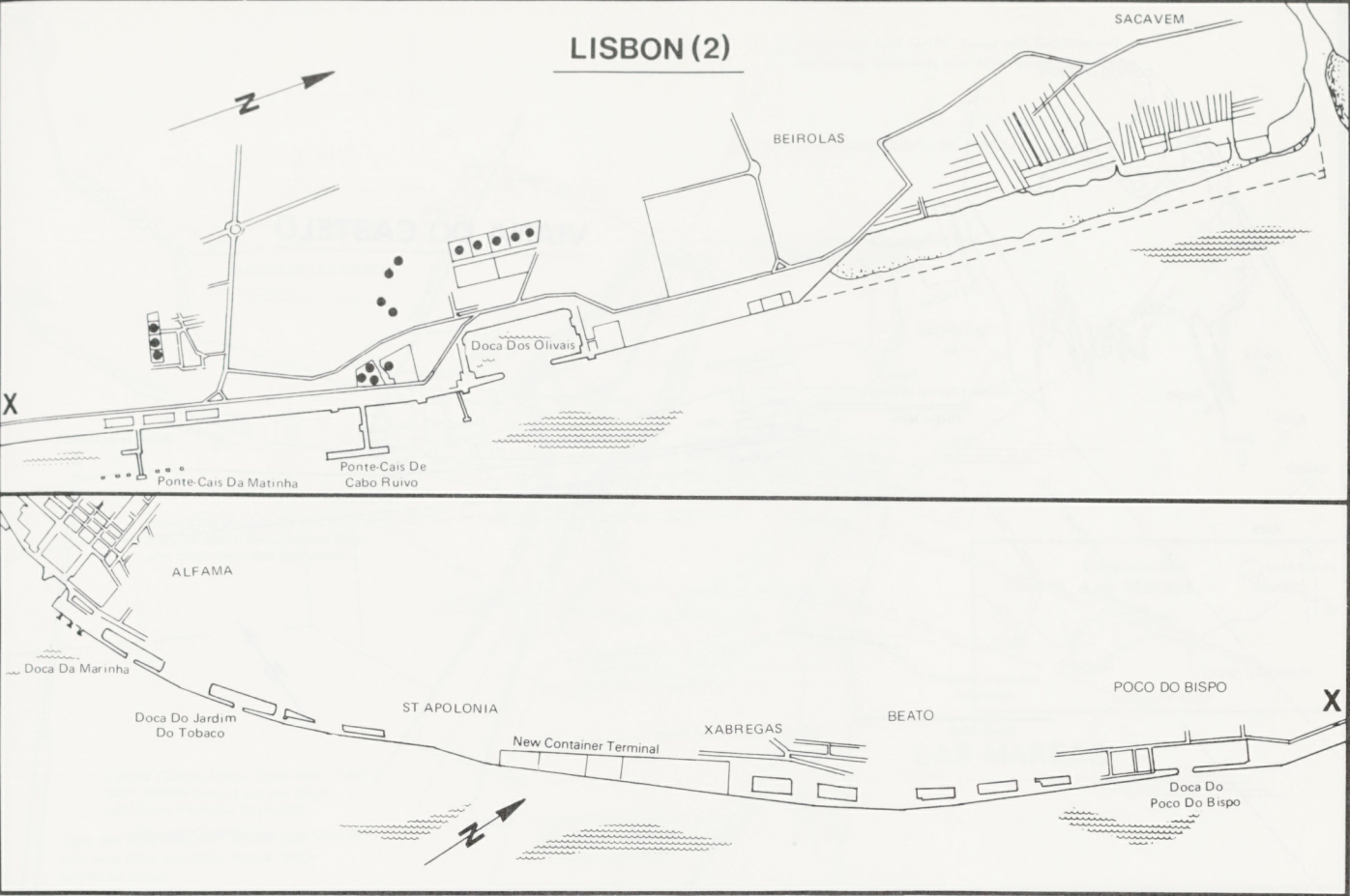


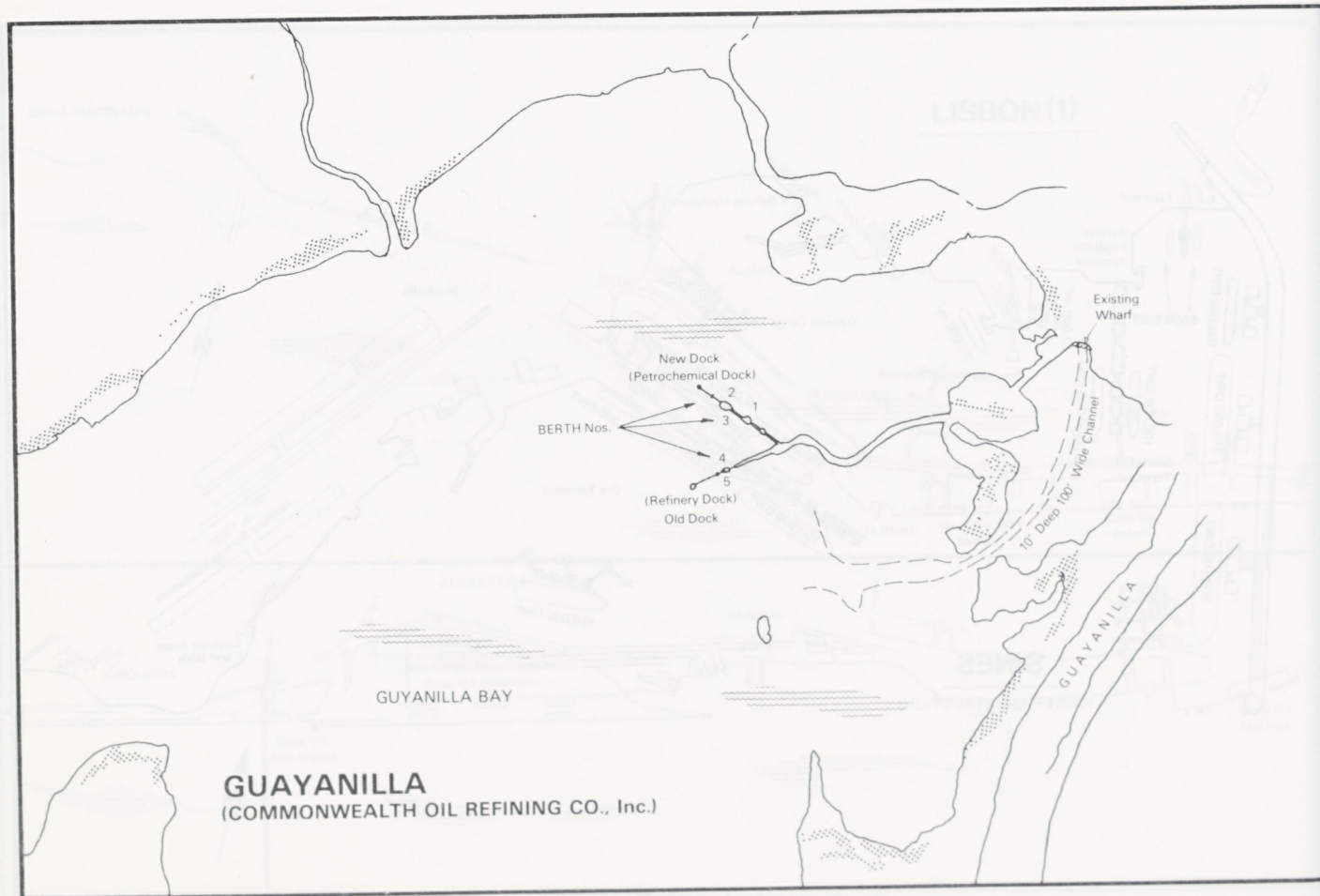
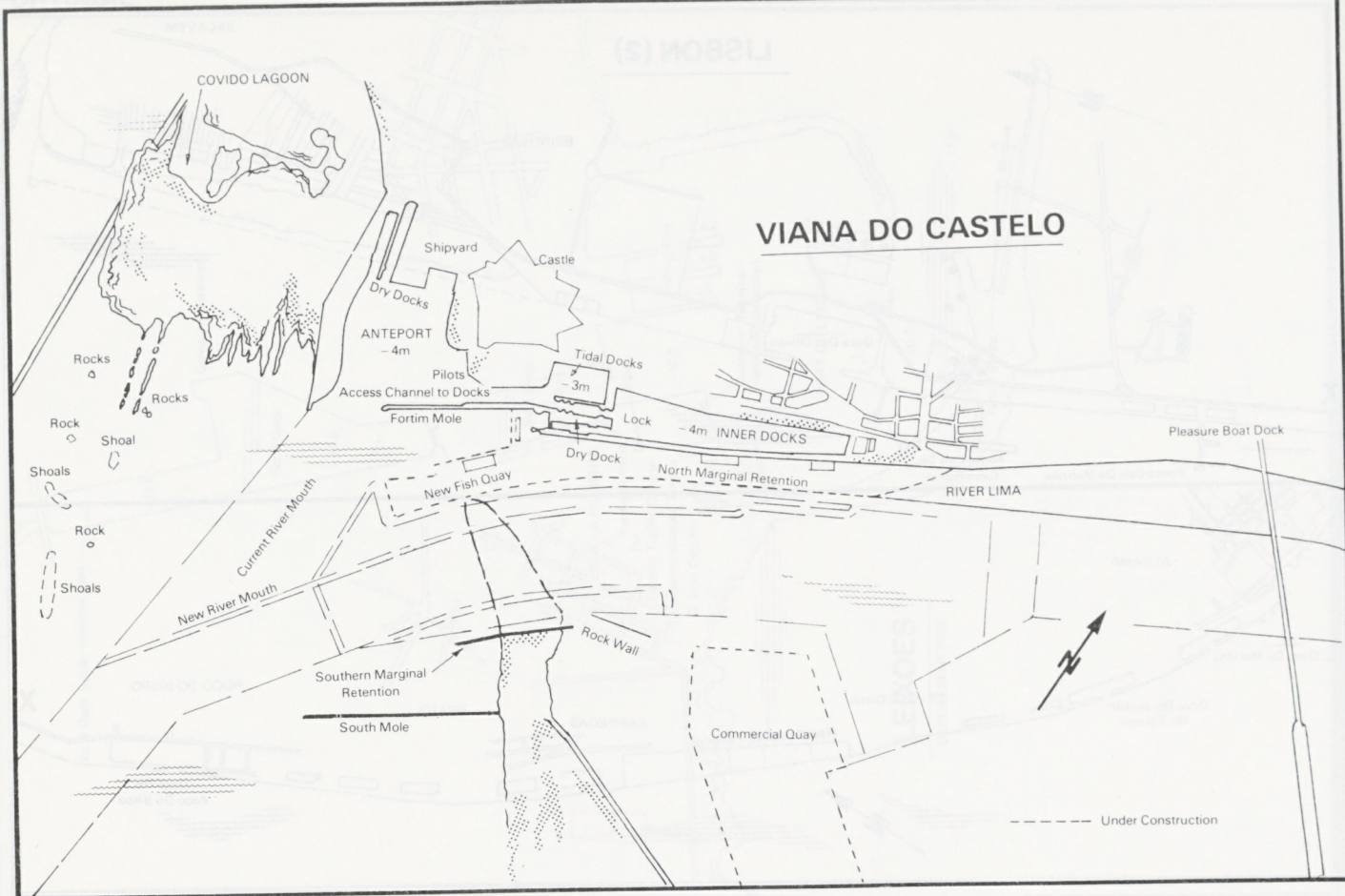


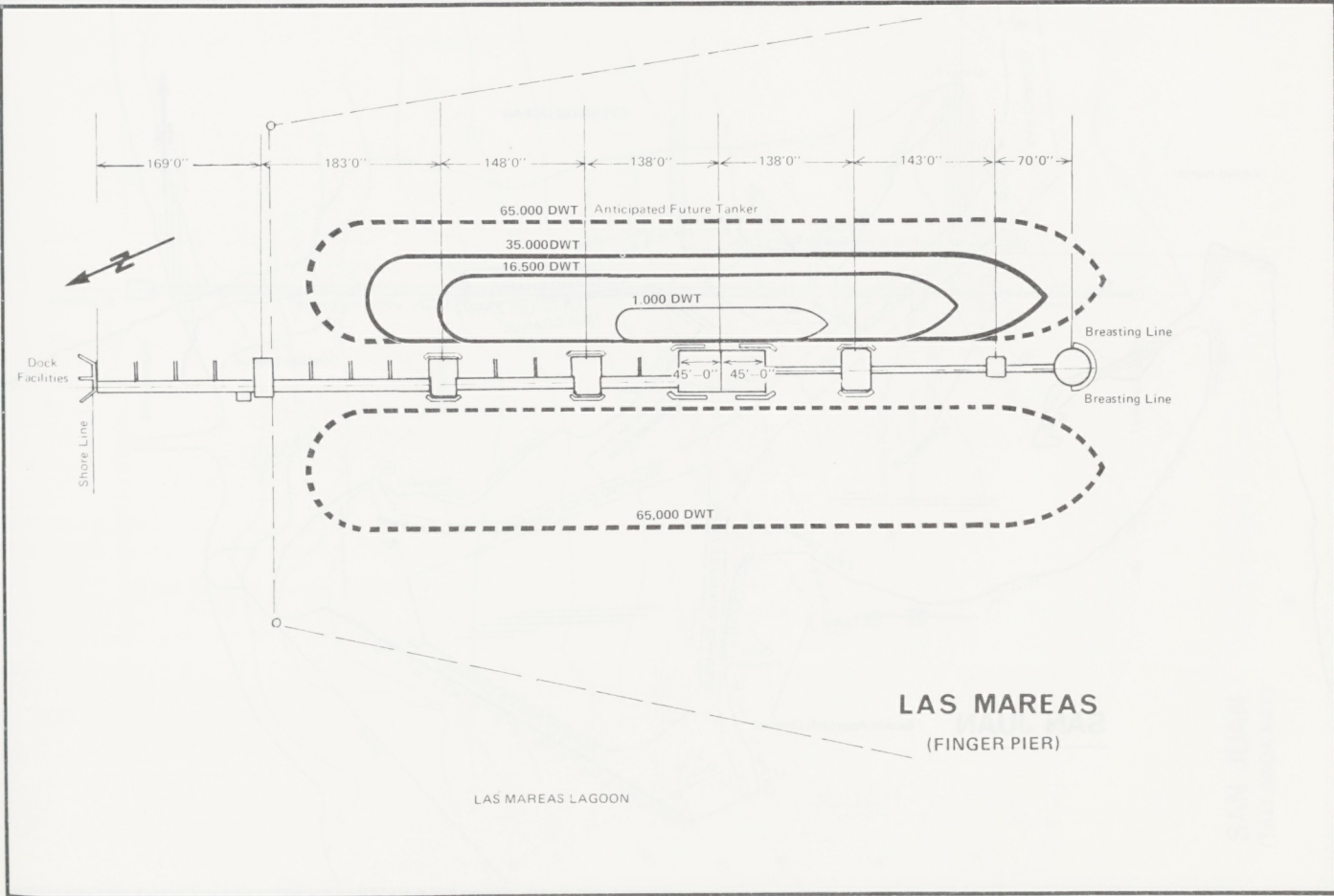
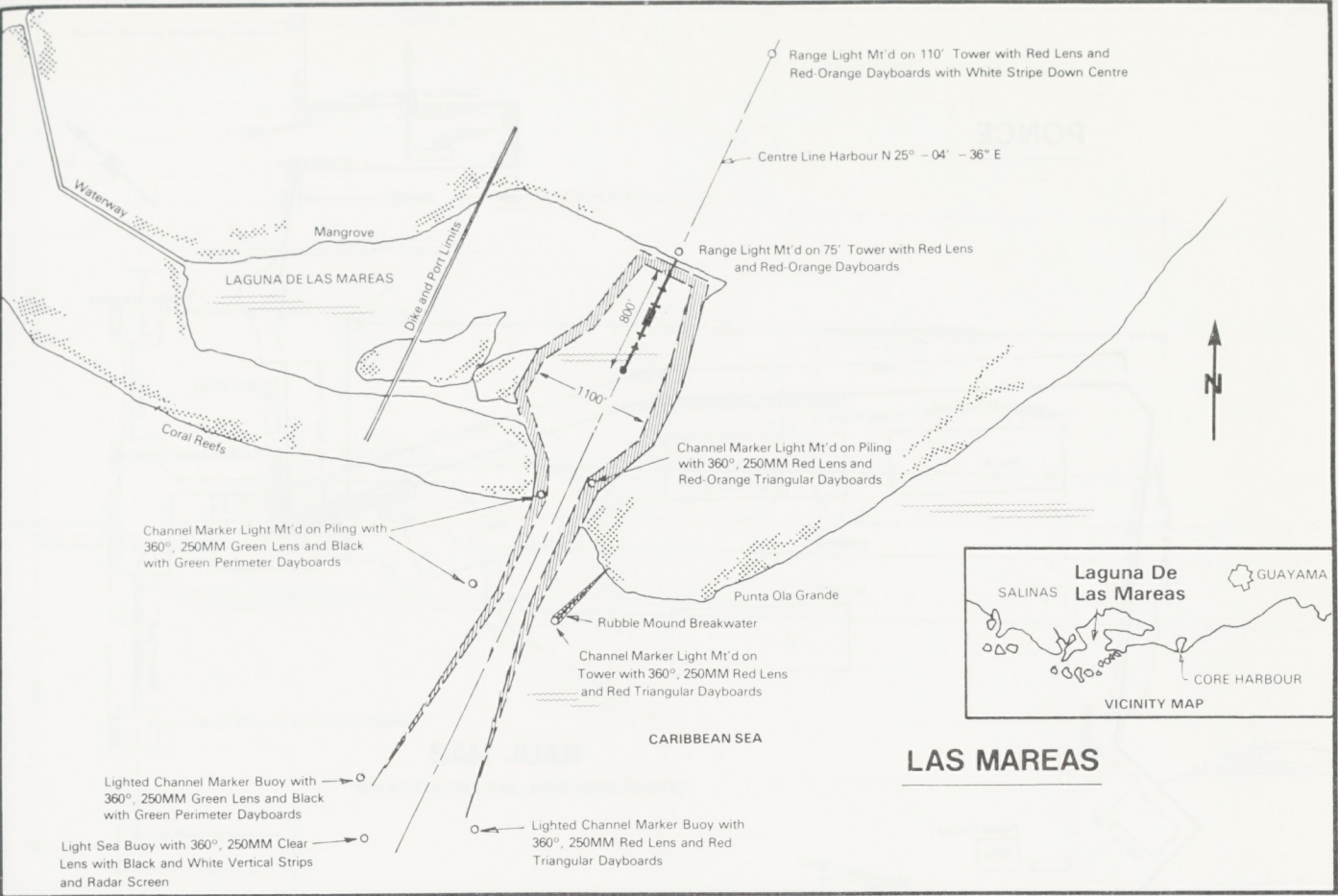


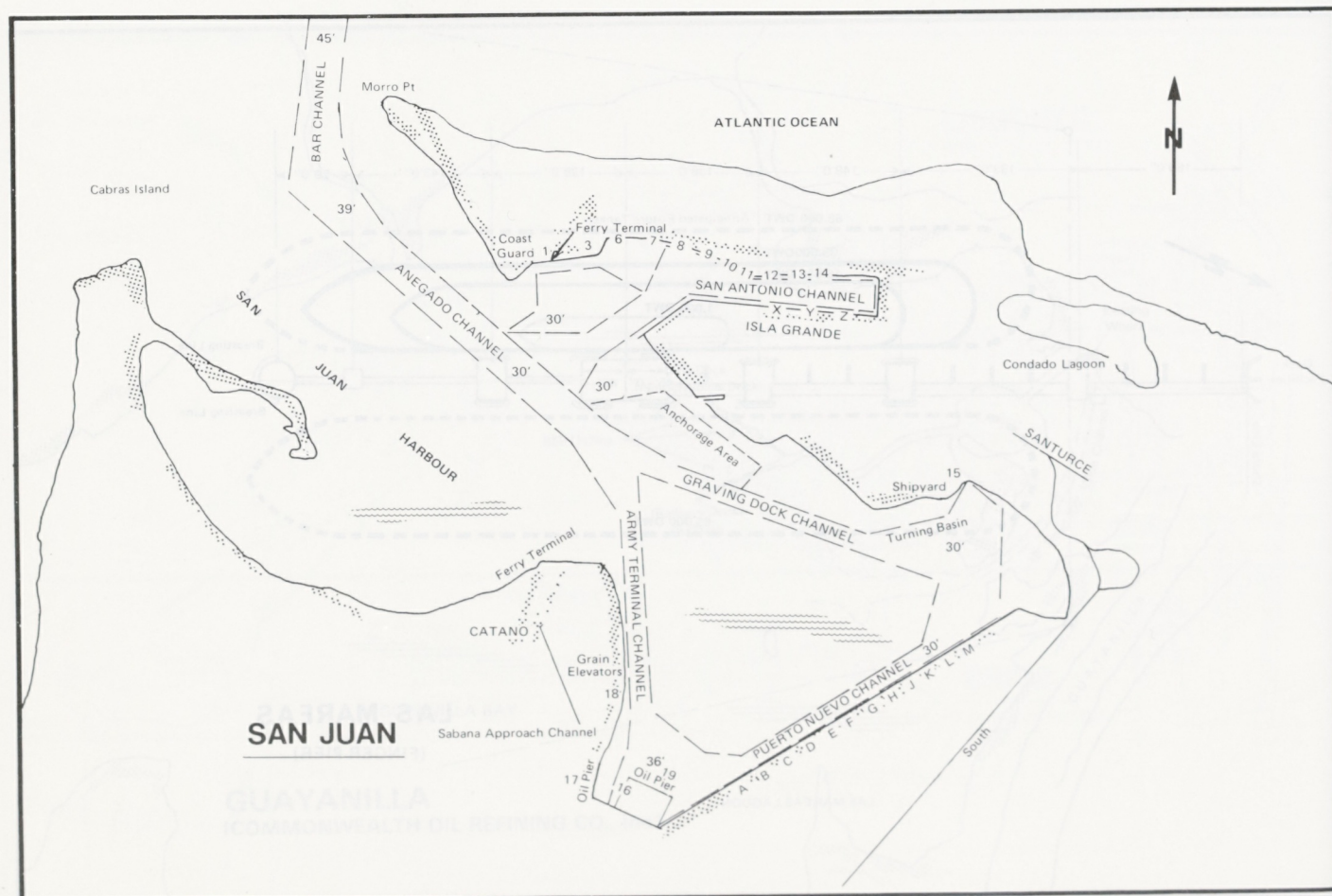
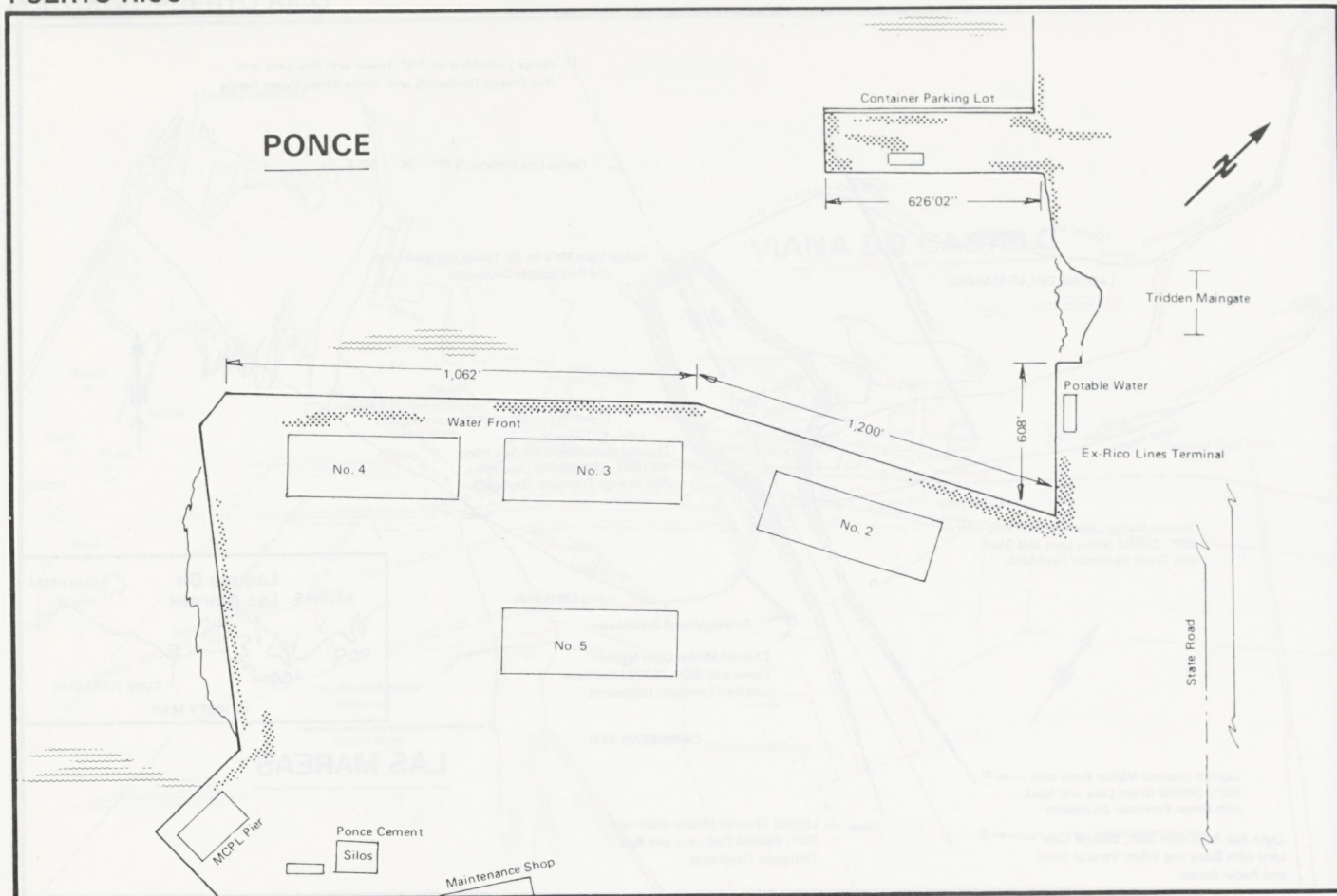
LISBON(1)

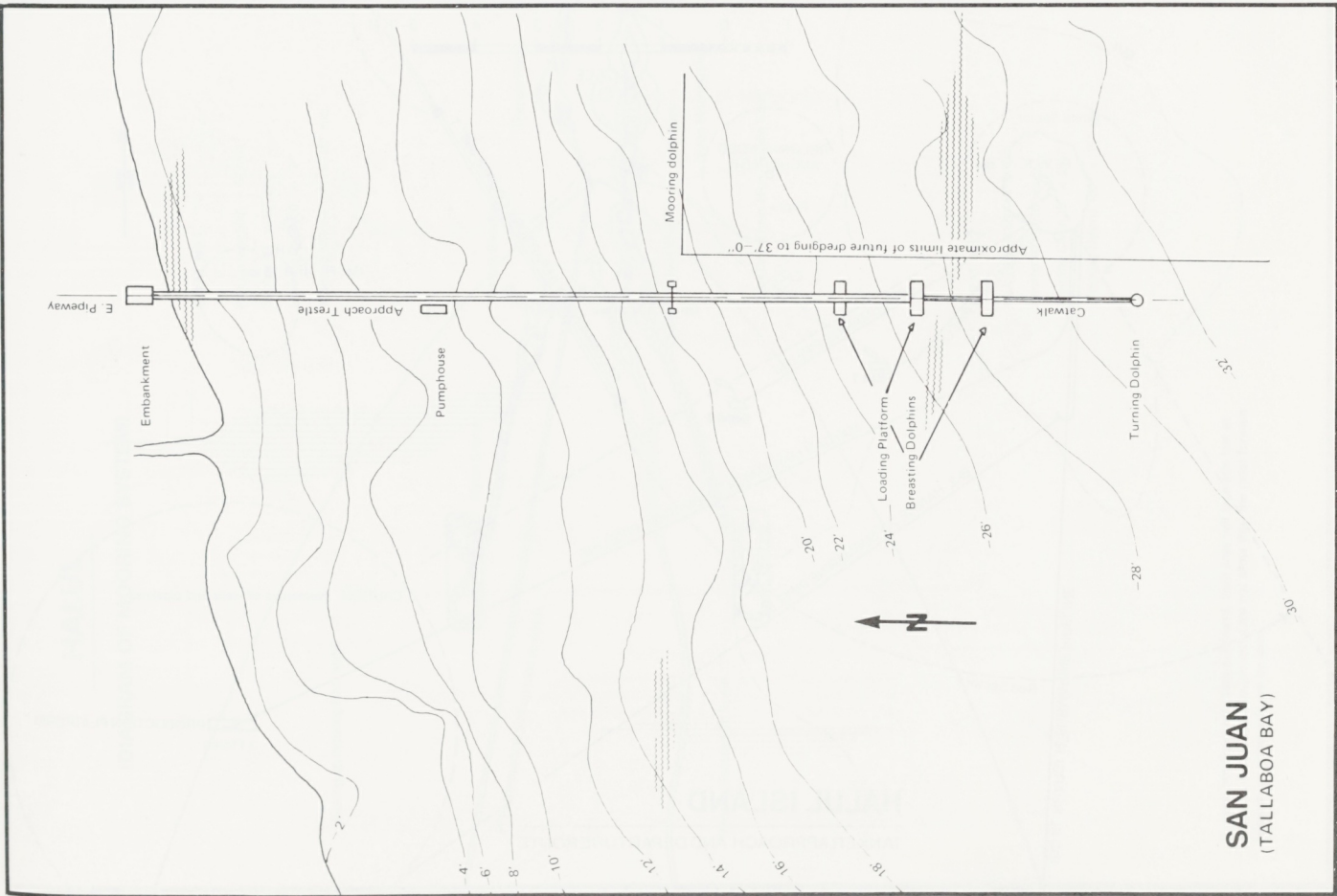
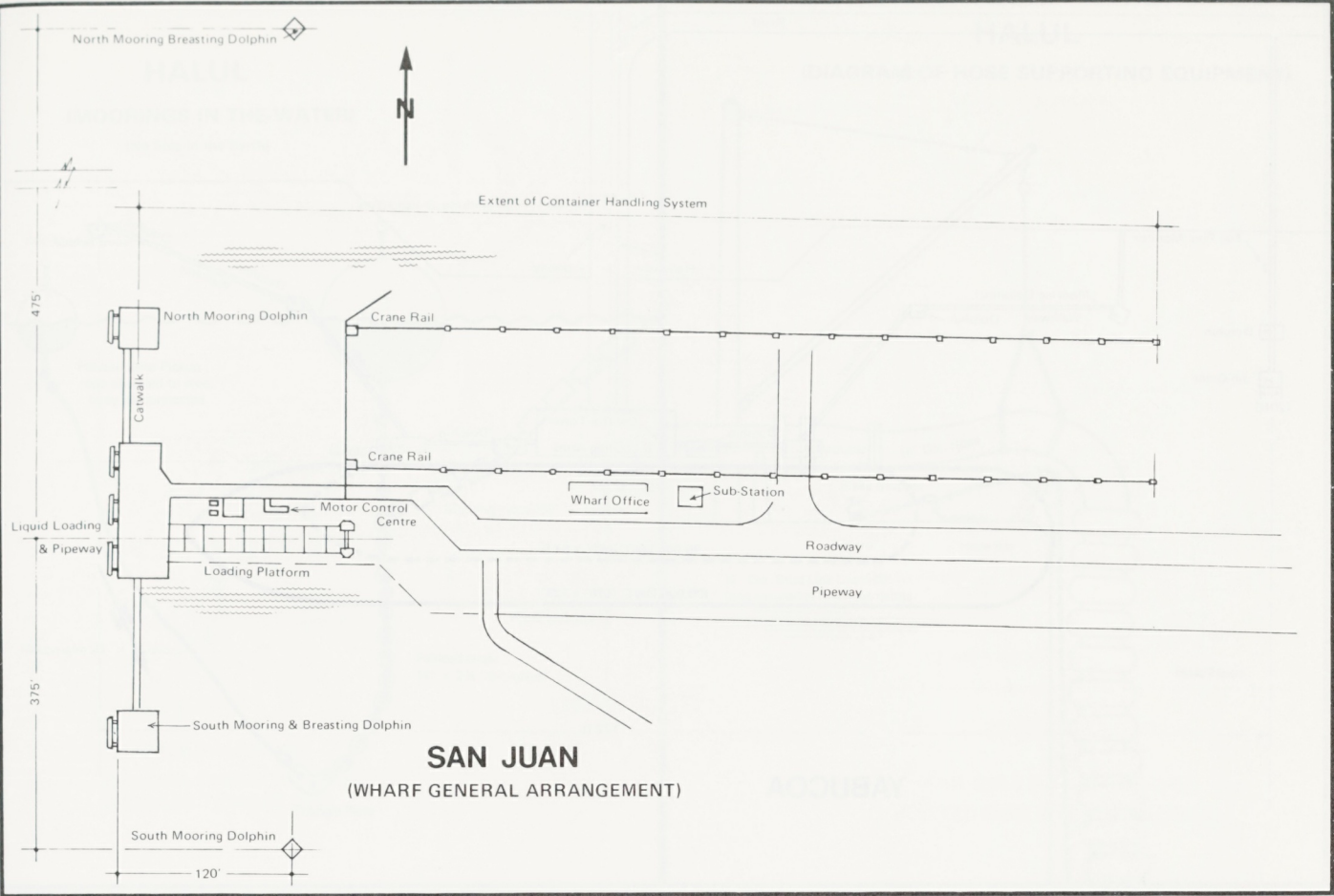


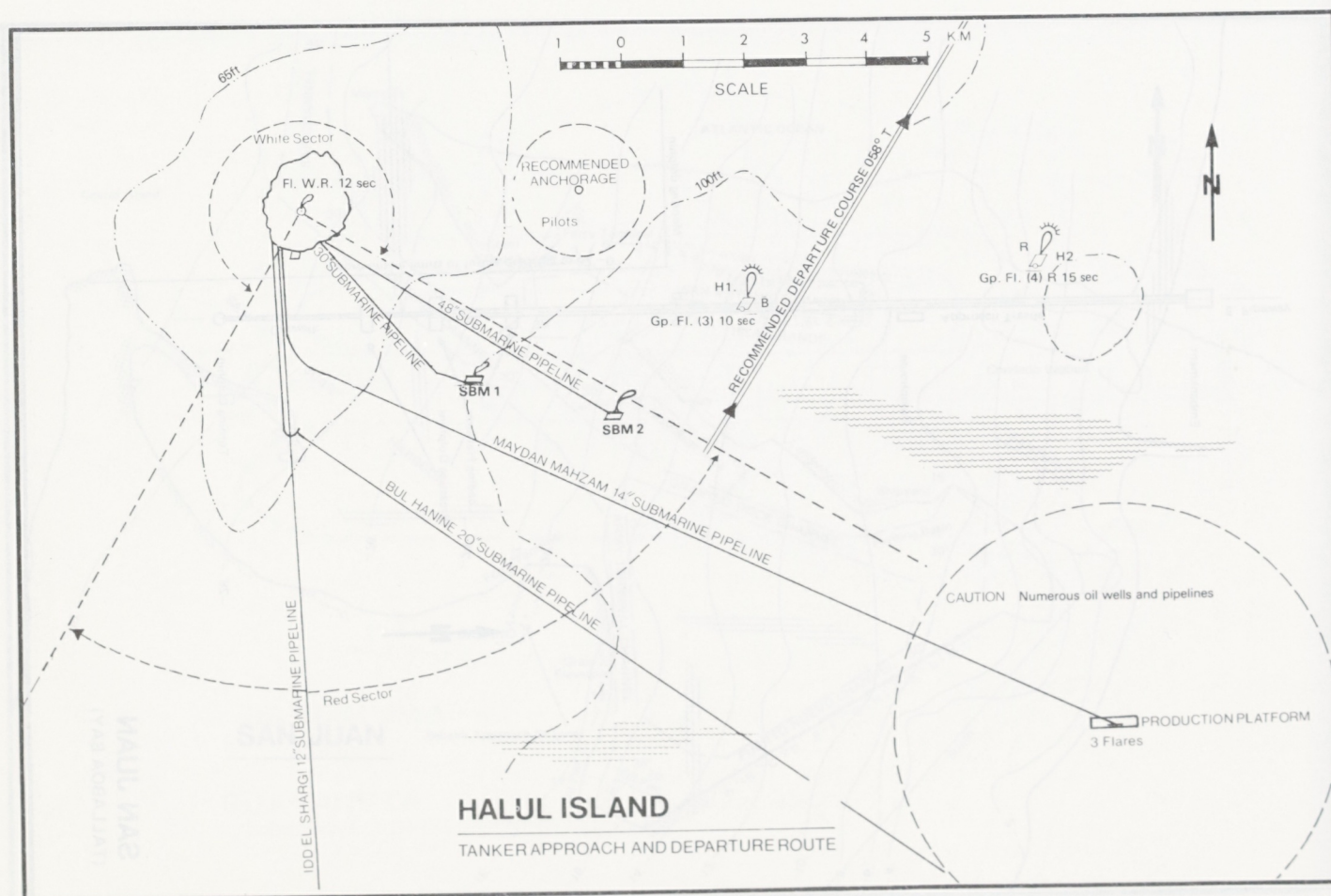
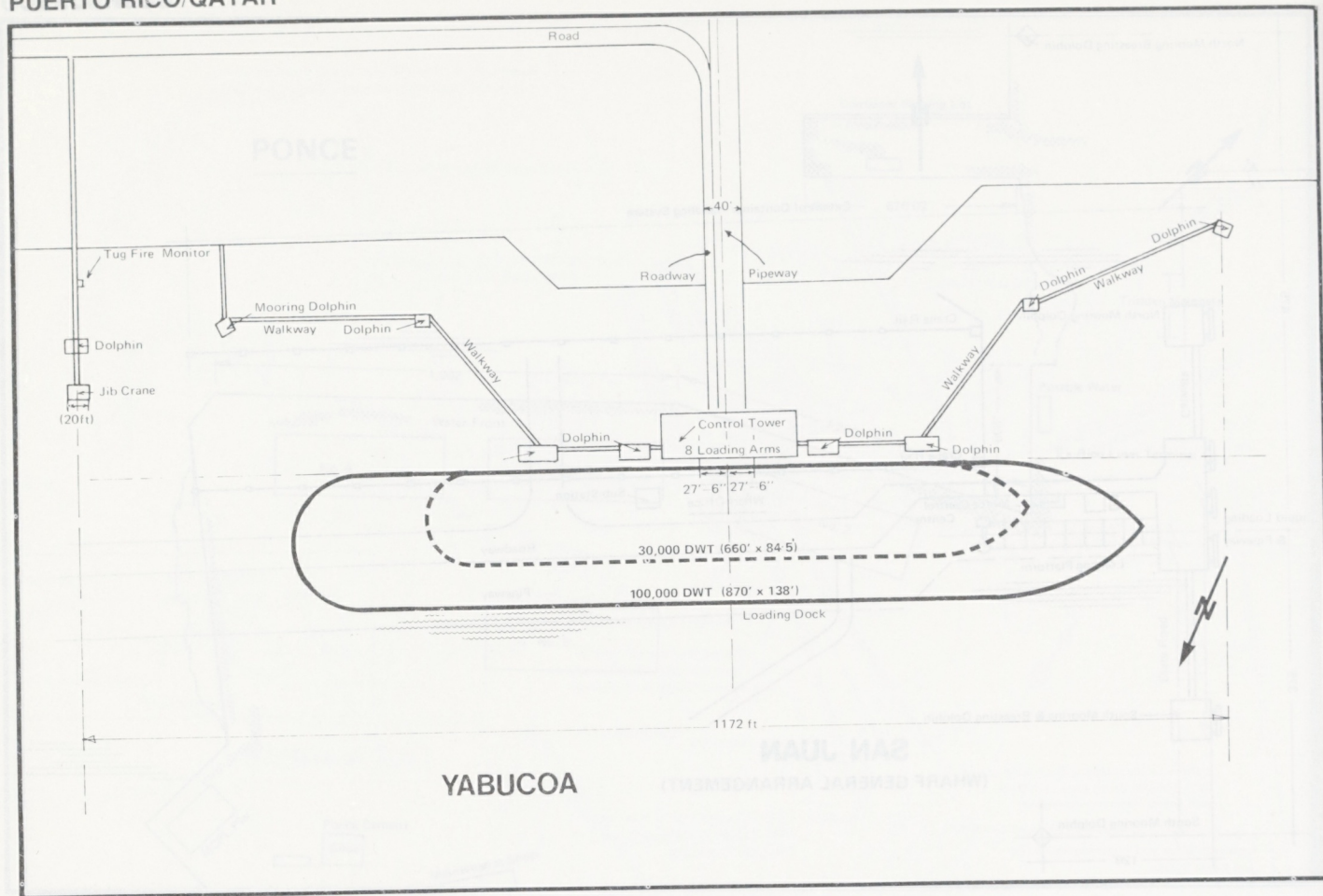






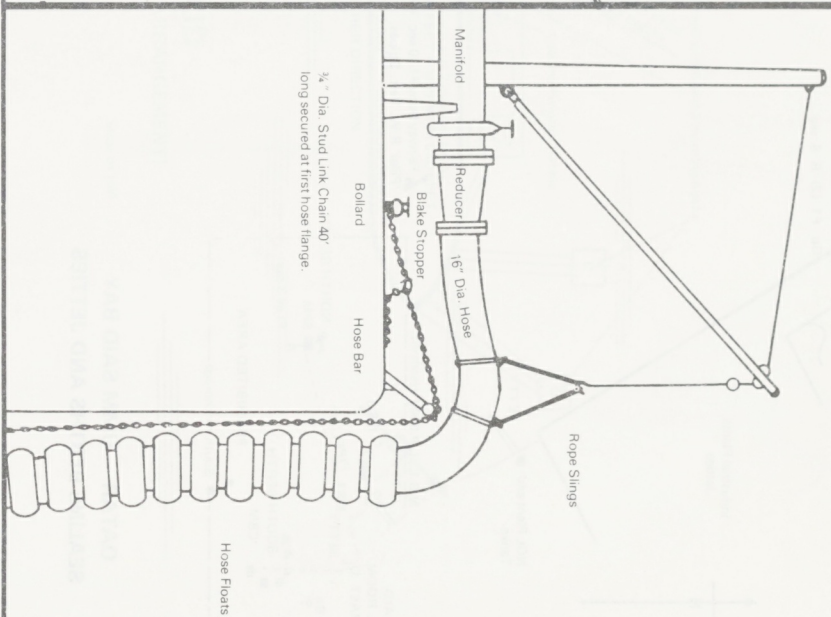






HALUL

(DIAGRAM OF HOSE SUPPORTING EQUIPMENT)



HALUL

(MOORINGS IN THE WATER)

(No Ship in the Berth)

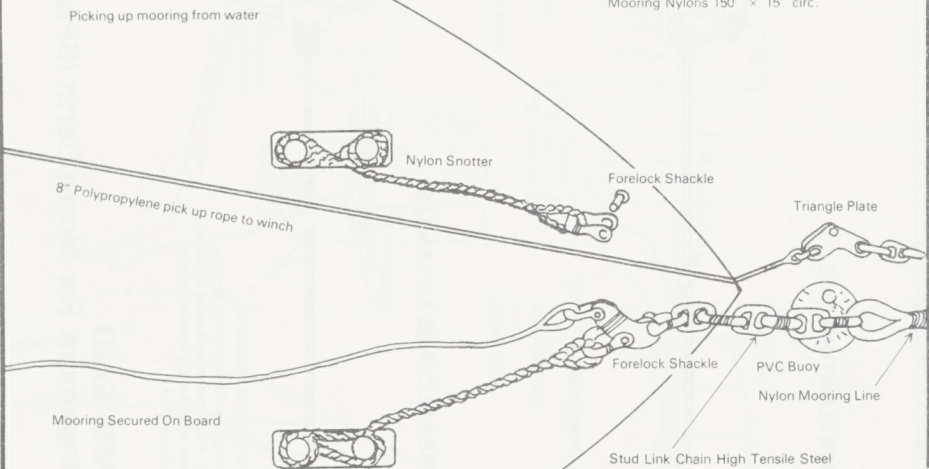


HALUL

(DIAGRAM OF MOORING SYSTEM)

S.B.M. No.1

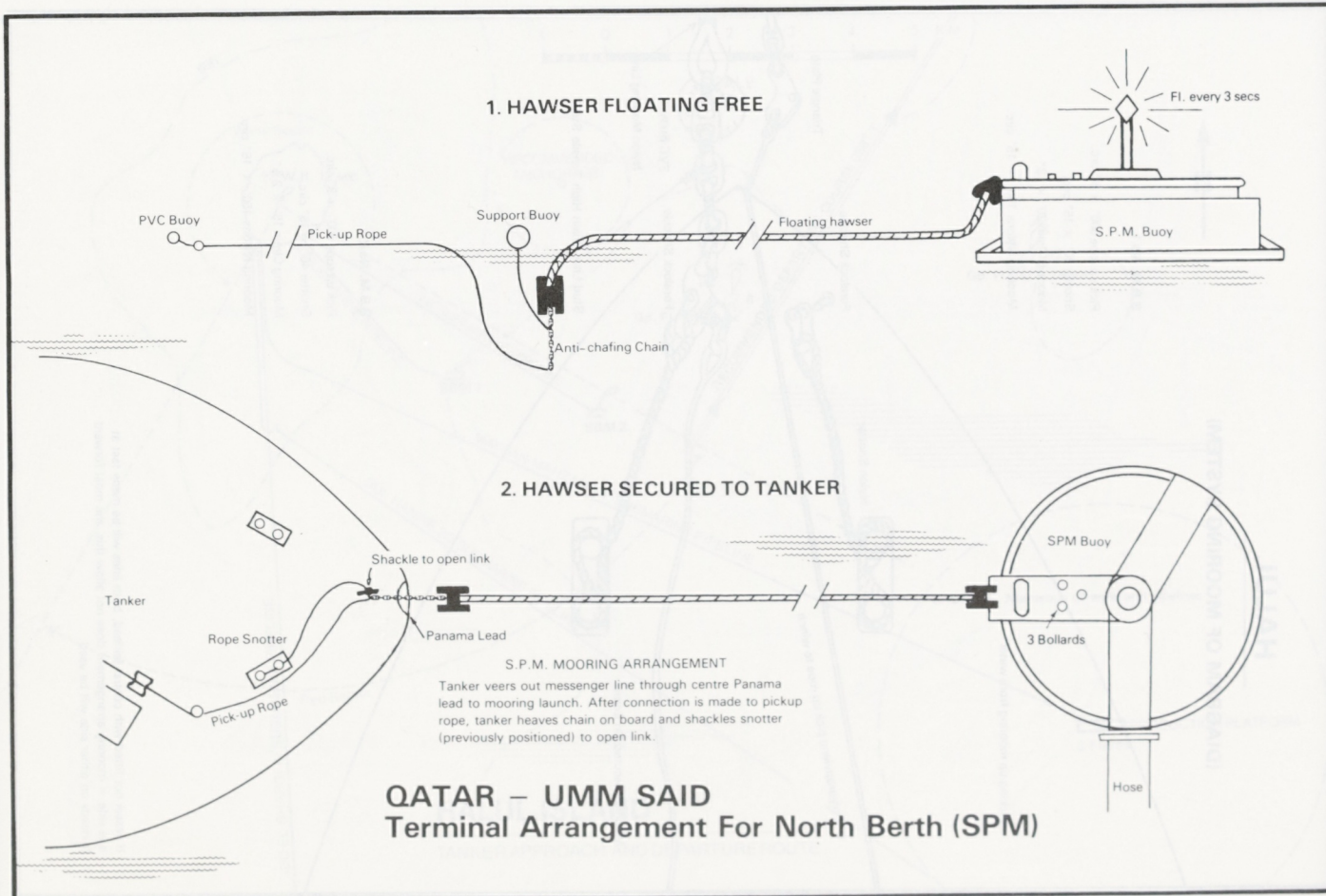
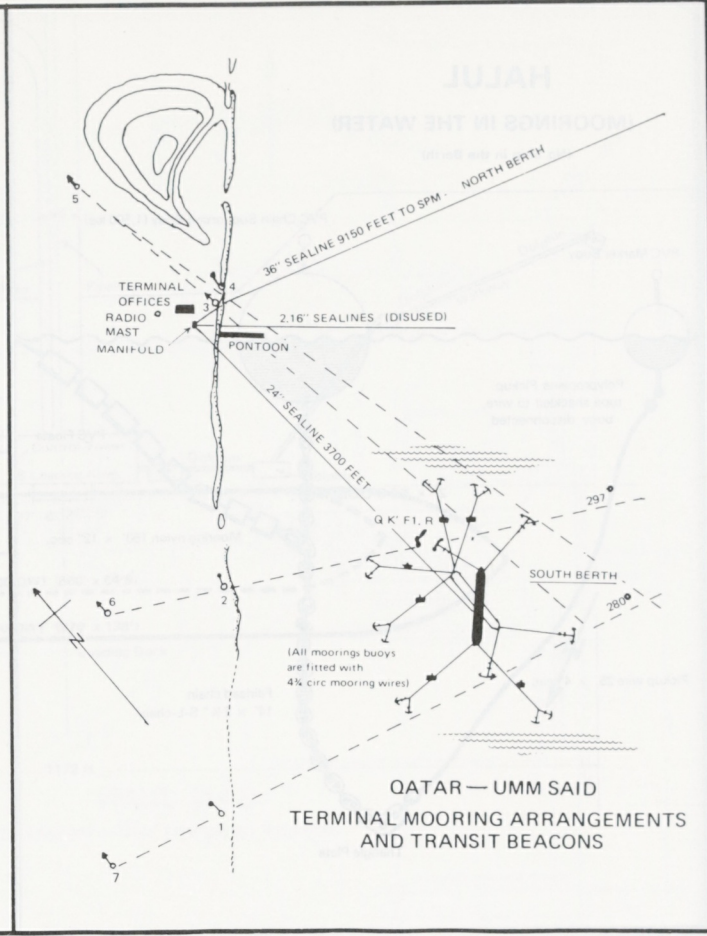
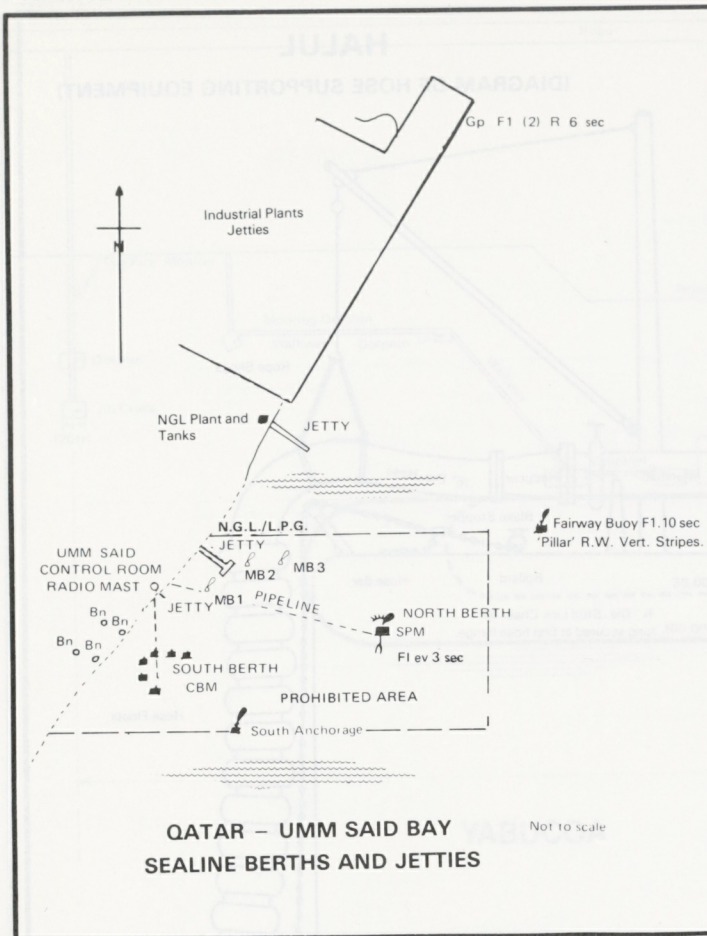
Pick up rope 500' × 8" circ.
 Snotter 40' × 15" circ.
 Mooring Chain 20' × 3"
 Mooring Nylons 150' × 15" circ.

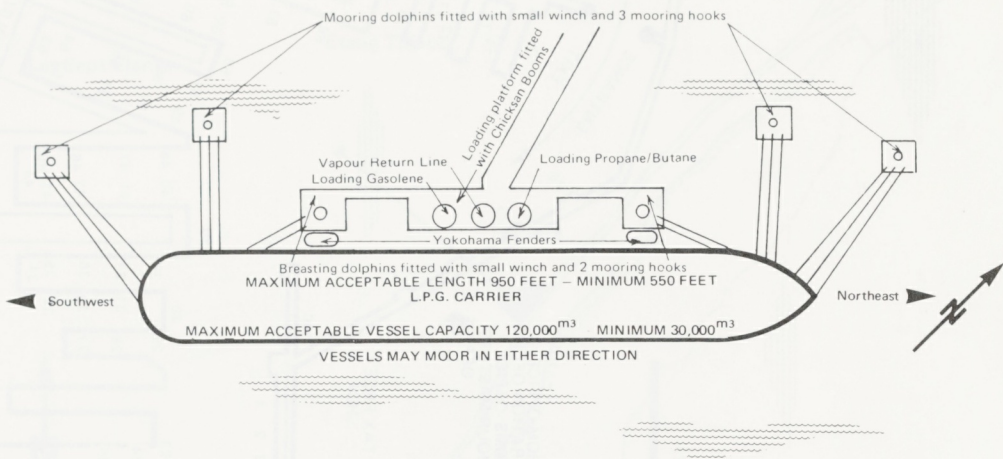


S.B.M. No.2

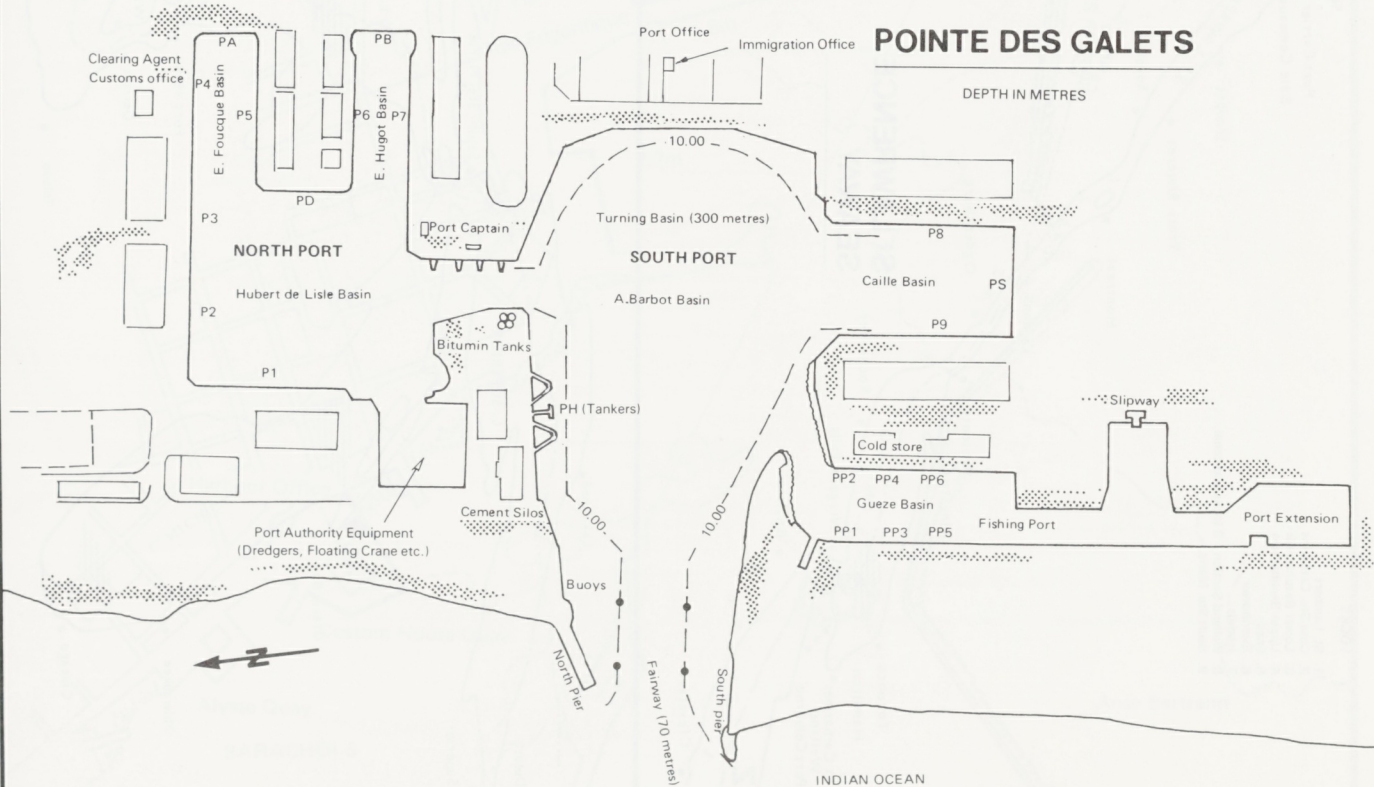
Pick up rope 500' × 8" circ.
 Snotter 40' × 15" circ.
 Mooring Chain 15' × 2 1/8"
 Mooring Nylons 150' × 15" circ.

If vessel not fitted with central fairlead, both lines will be made fast at one side, if mooring arrangement does not allow this, the most forward fairleads on either side will be used.

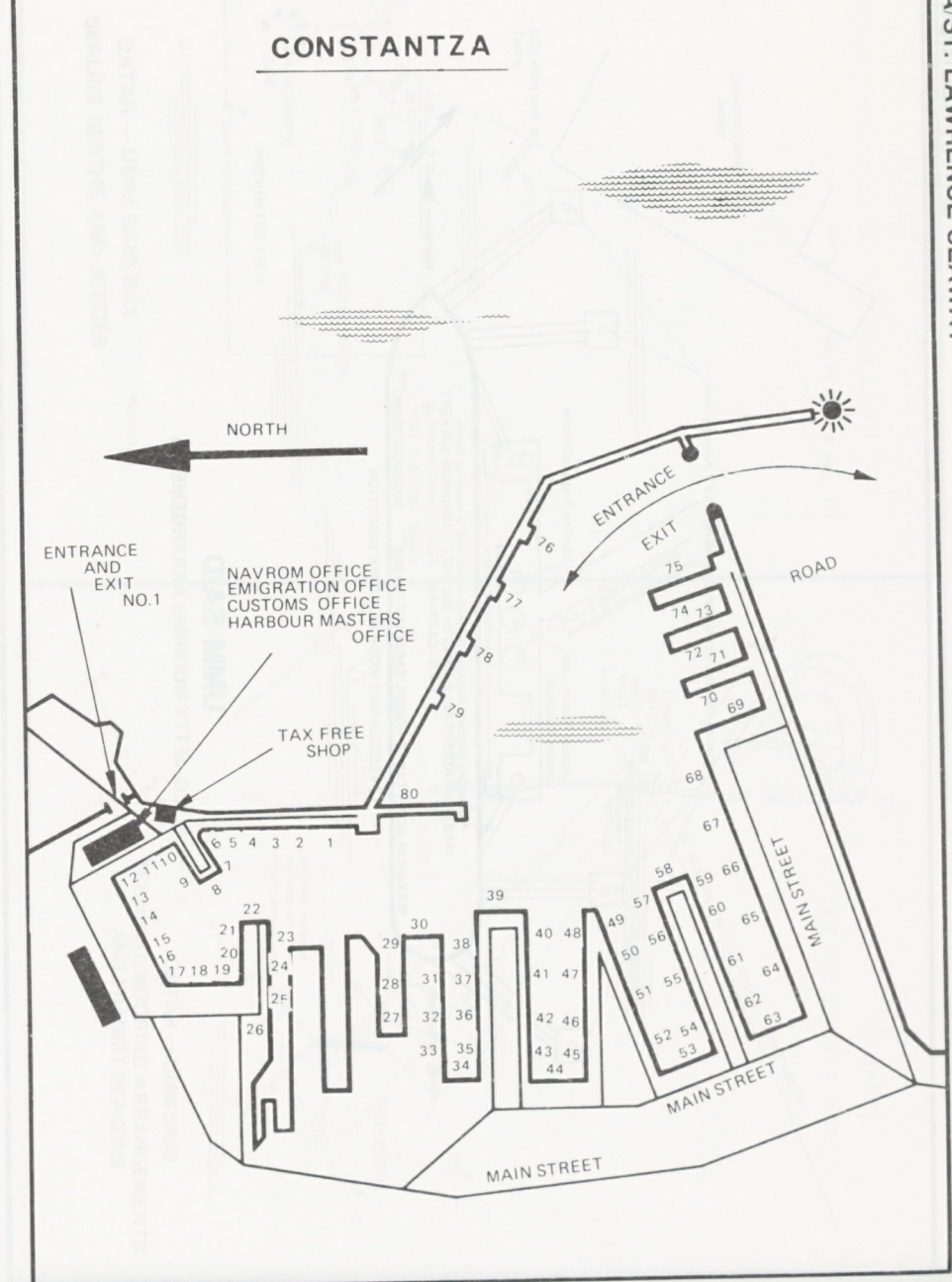




UMM SAID
(L.N.G. JETTY MOORING ARRANGEMENT)

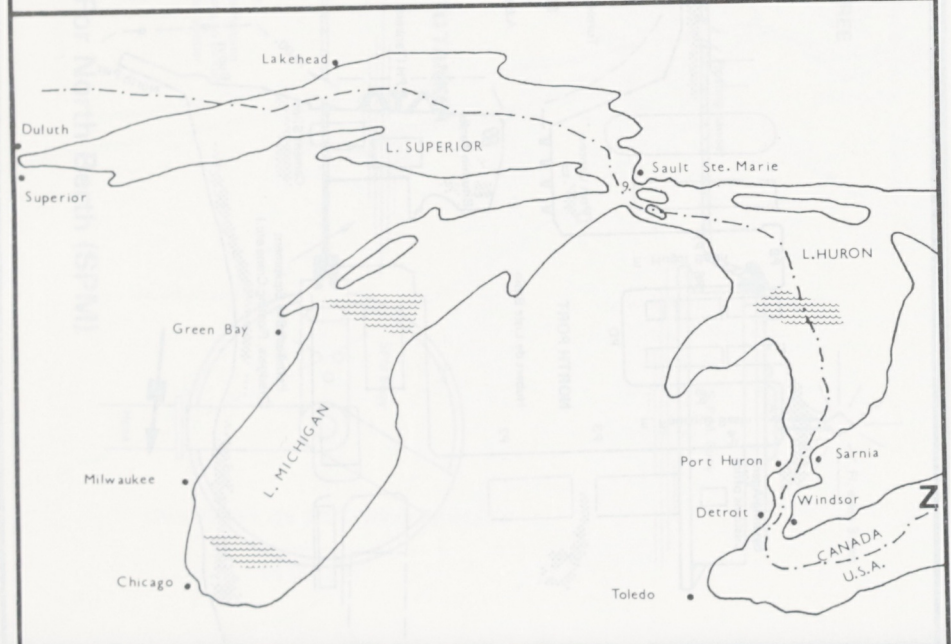
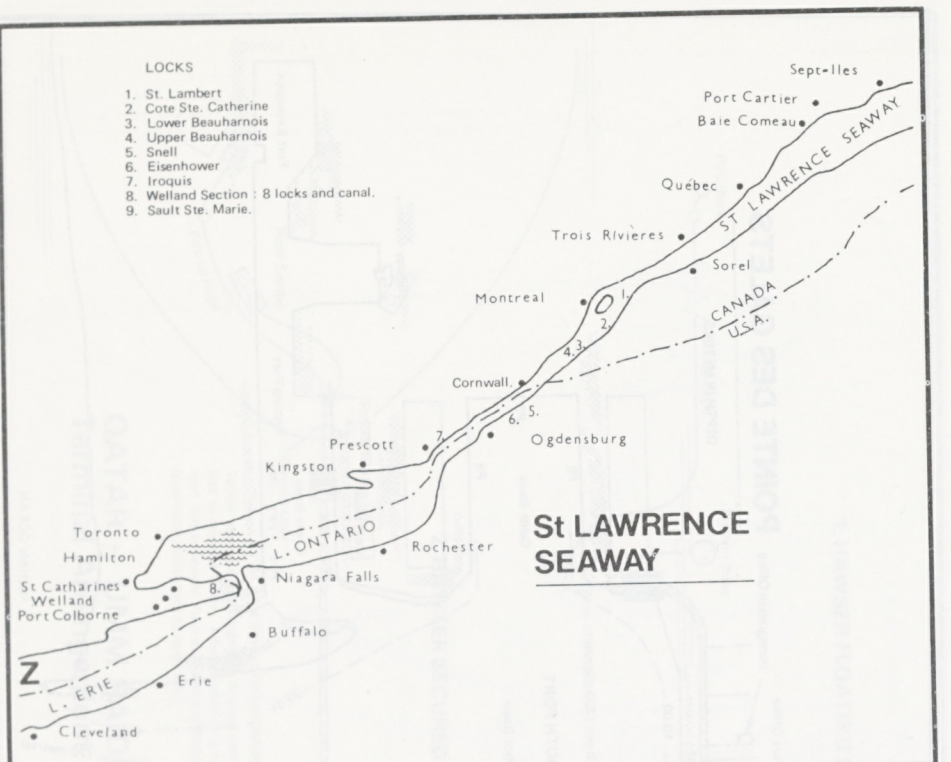


CONSTANTZA



LOCKS

1. St. Lambert
2. Cote Ste. Catherine
3. Lower Beauharnois
4. Upper Beauharnois
5. Snell
6. Eisenhower
7. Iroquois
8. Welland Section : 8 locks and canal.
9. Sault Ste. Marie.



SAINT-PIERRE

Les Sept Elangs

Etang Thélot

Factory



Commercial Mole

Nord-Est

Ro/Ro Terminal

Anse à Rodrigue

Fish Factory

Mole Frigorifique

Harbour Office

Custom House Quay

Alyse Quay

BARACHOIS

209° T

Digue du Sud-Est

Anse Bertrand

8.5m

8.5m

8.3m

6m

7m

7m

5.5m

2.7m

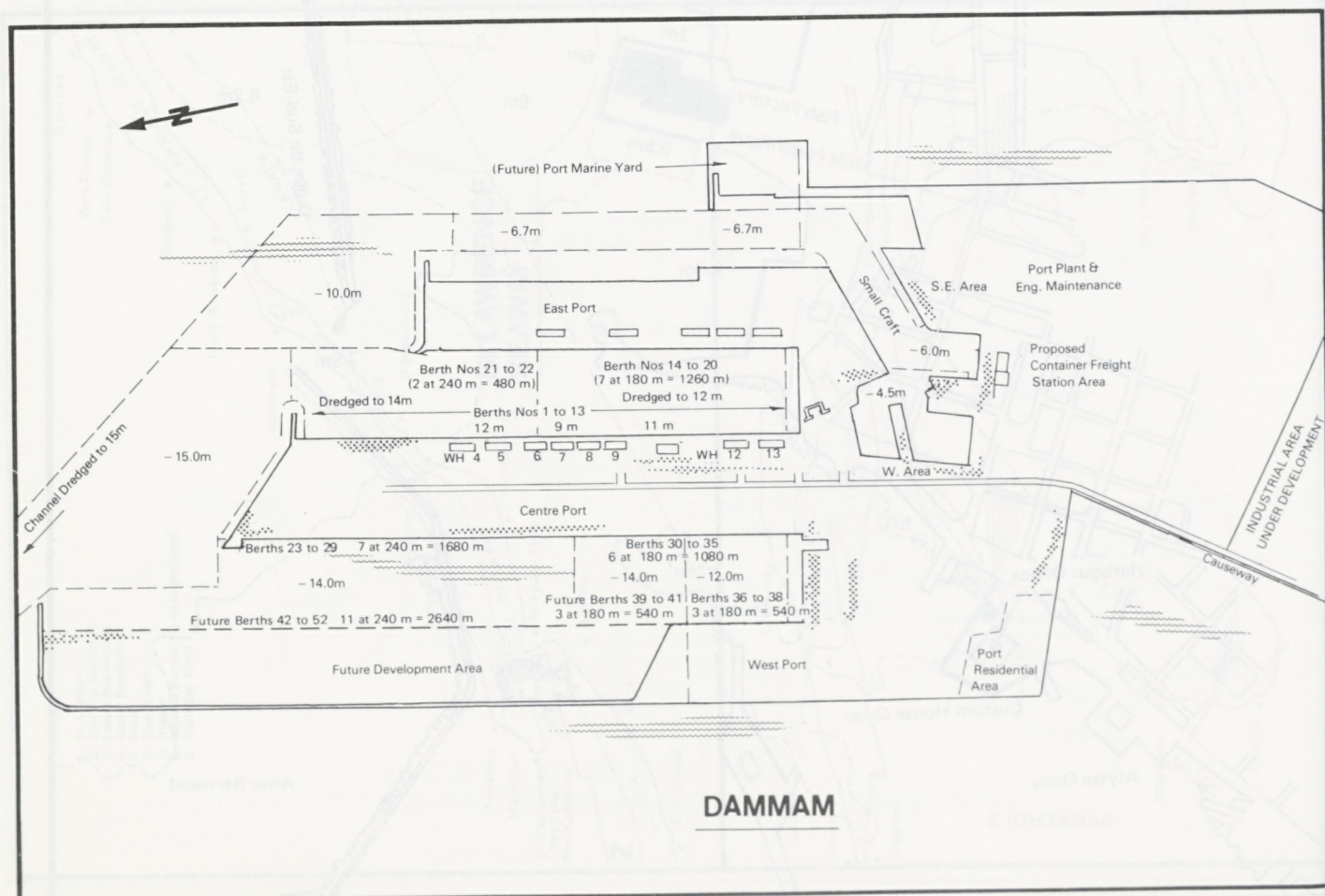
6m

6m

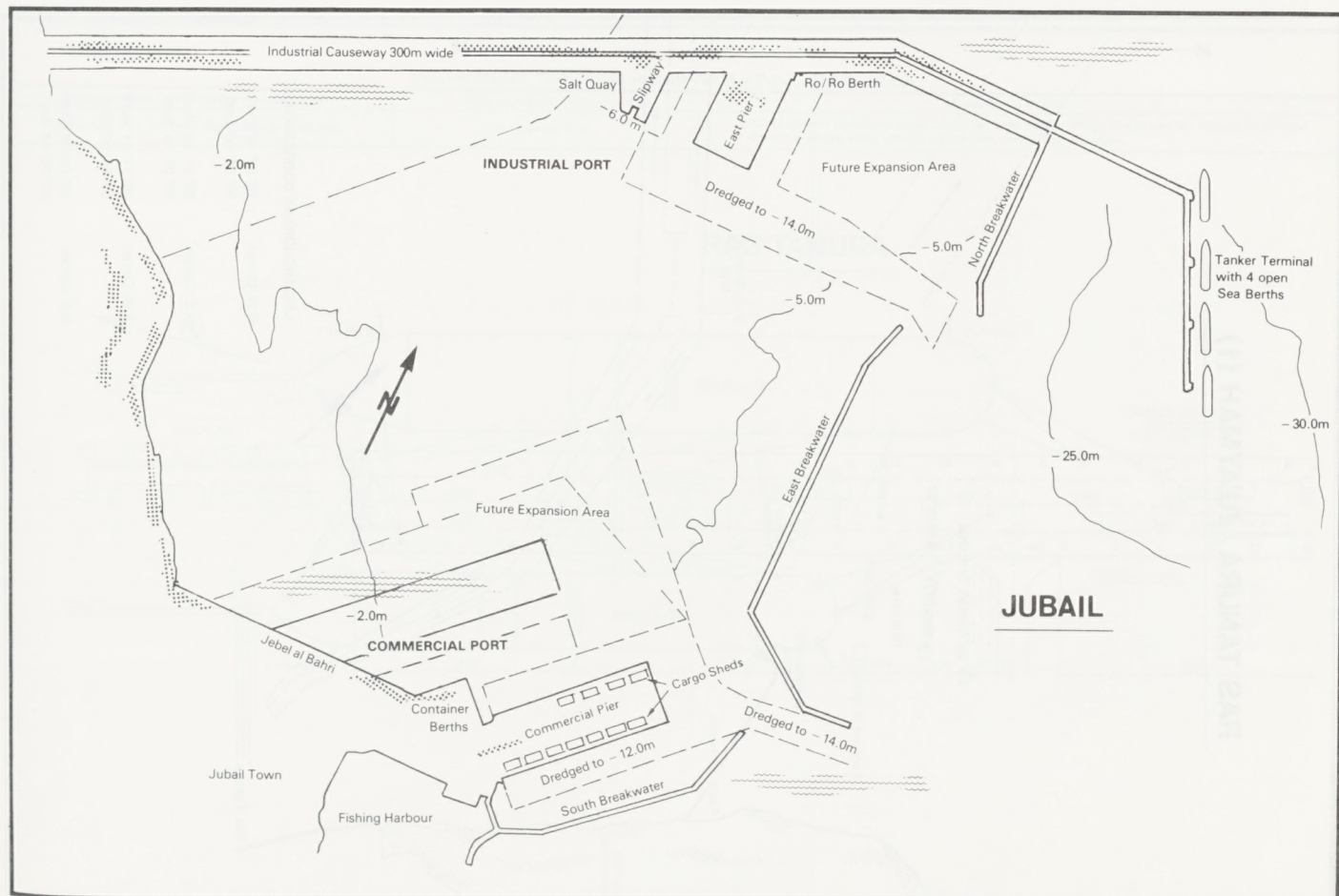
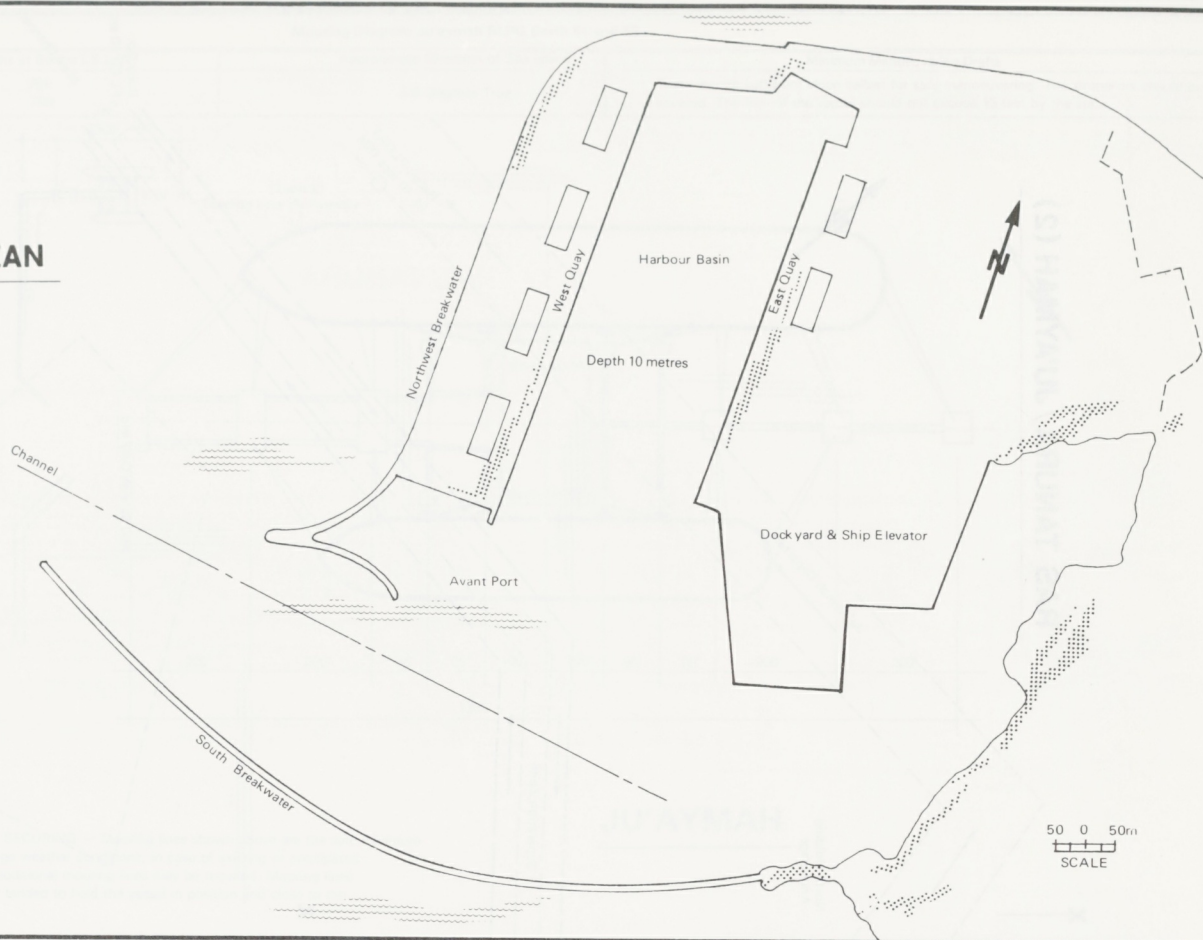
7m

8.2m

7.9m

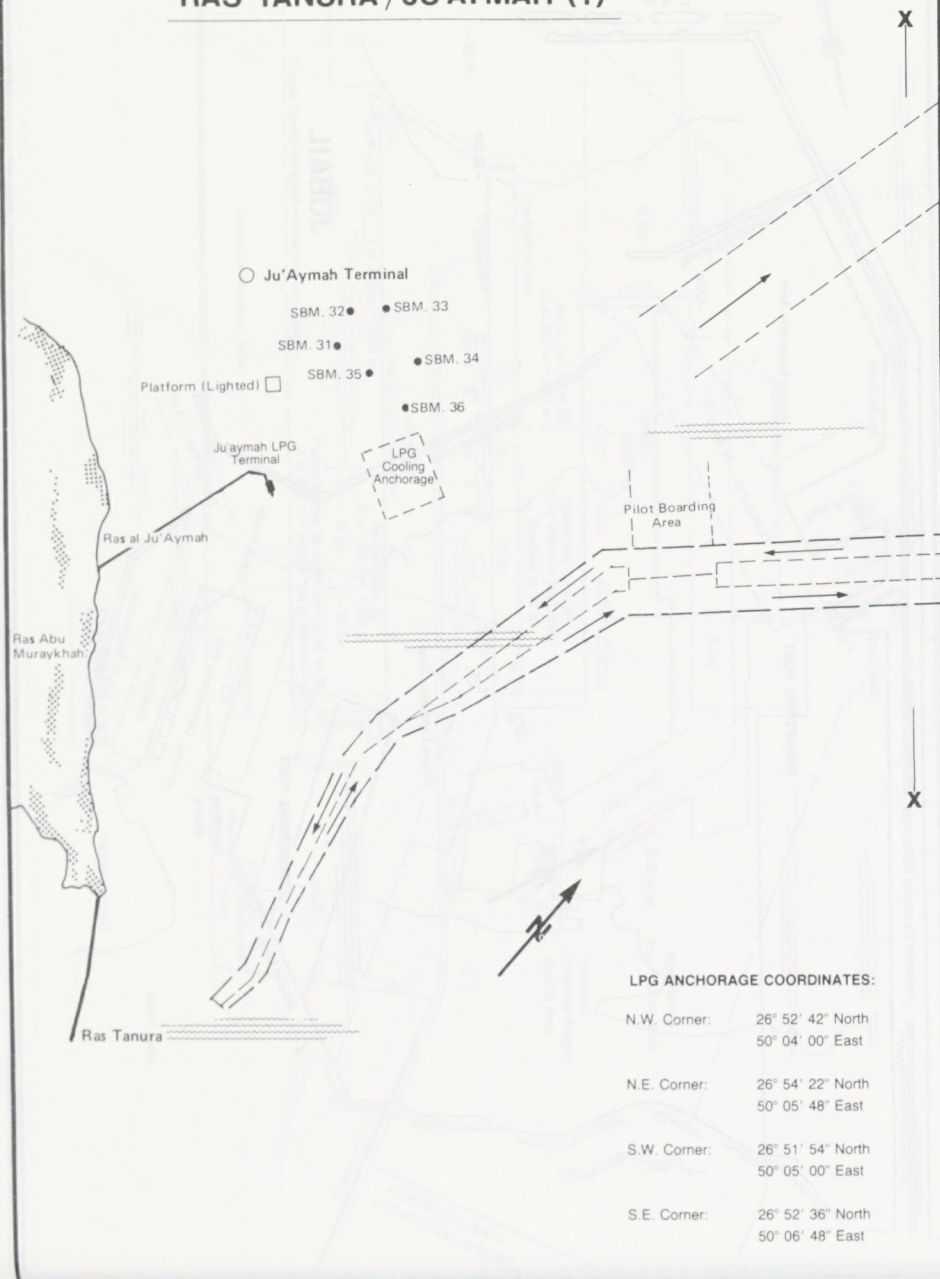


JIZAN

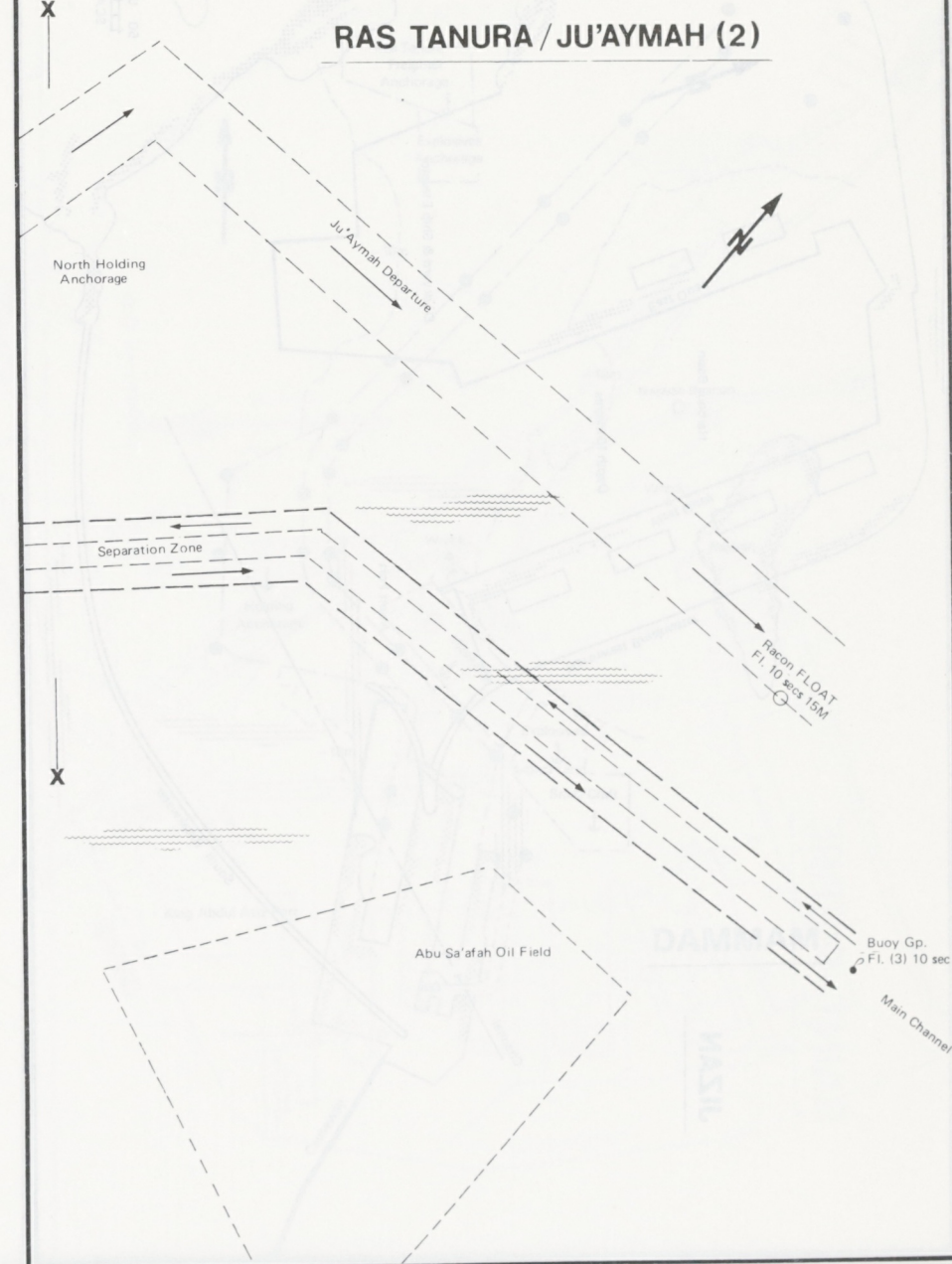


JUBAIL

RAS TANURA / JU'AYMAH (1)

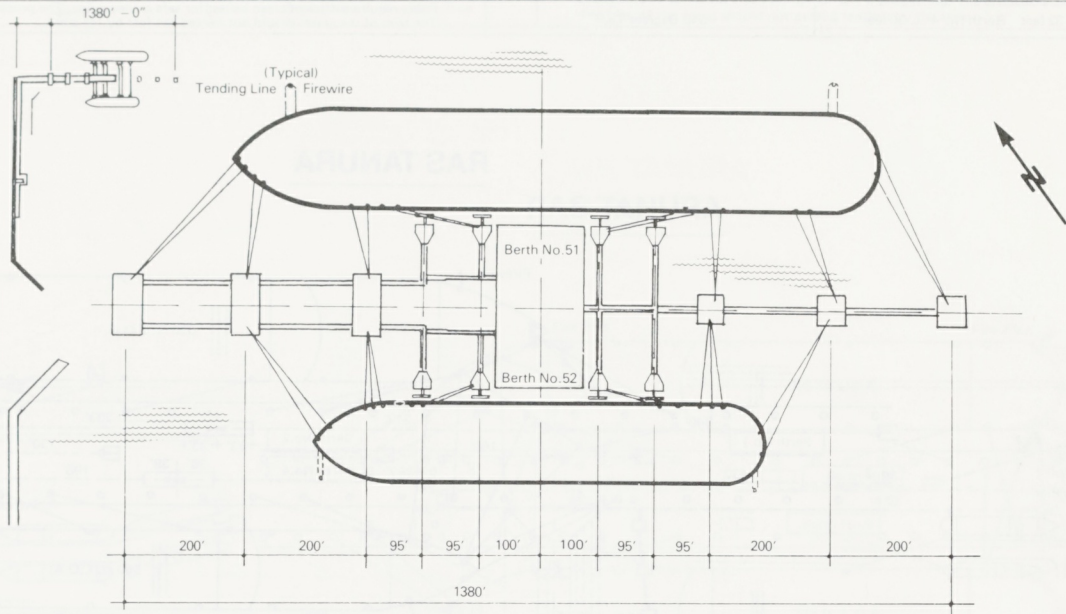


RAS TANURA / JU'AYMAH (2)



Mooring Diagram Ju'aymah RLPG Berth 51 and 52

Approx. Min Depths at Berths I.S.L.W.		Approximate Direction of Sea Island	Minimum Manoeuvring Drafts
Berth No.51	78ft	335 Degrees True	Pilots require sufficient clean ballast for safe manoeuvring. The propellers should be covered. The trim of the vessel should not exceed 15 feet by the stern.
Berth No.52	78ft		



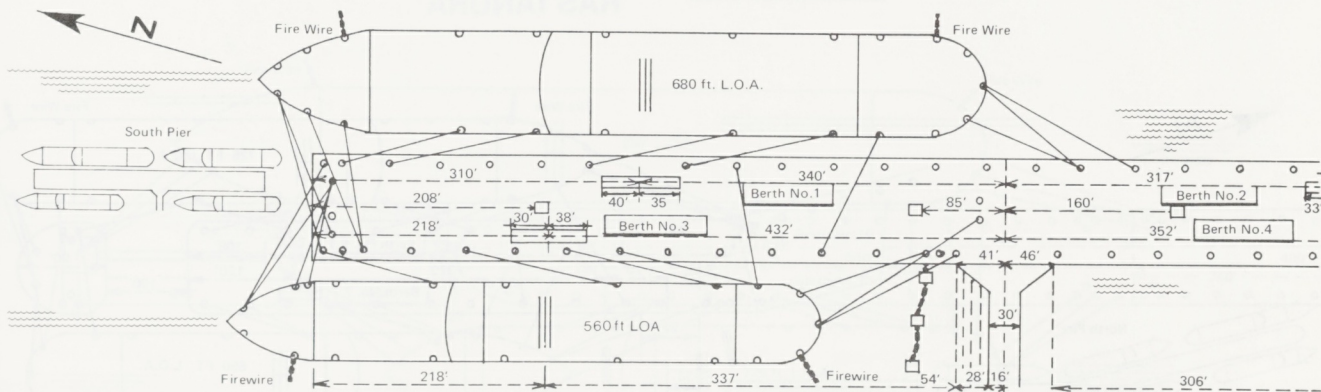
NOTE :
BERTHING AND SECURING – Mooring lines shown above are the safe minimum number for average weather conditions; in case of existing or anticipated severe weather, additional mooring lines may be required. Mooring lines must be carefully tended to hold the vessel in position and close to the pier at all times.

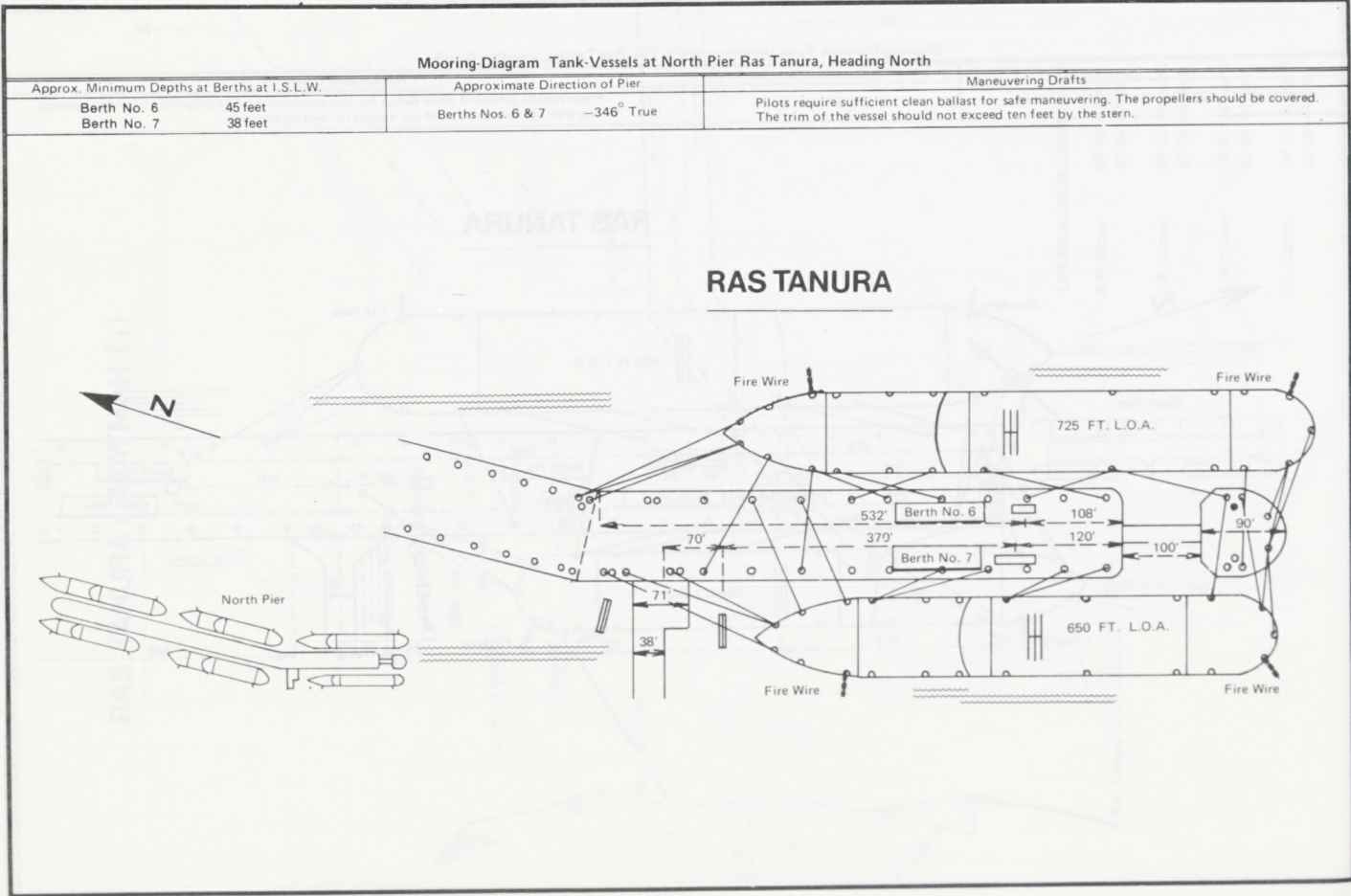
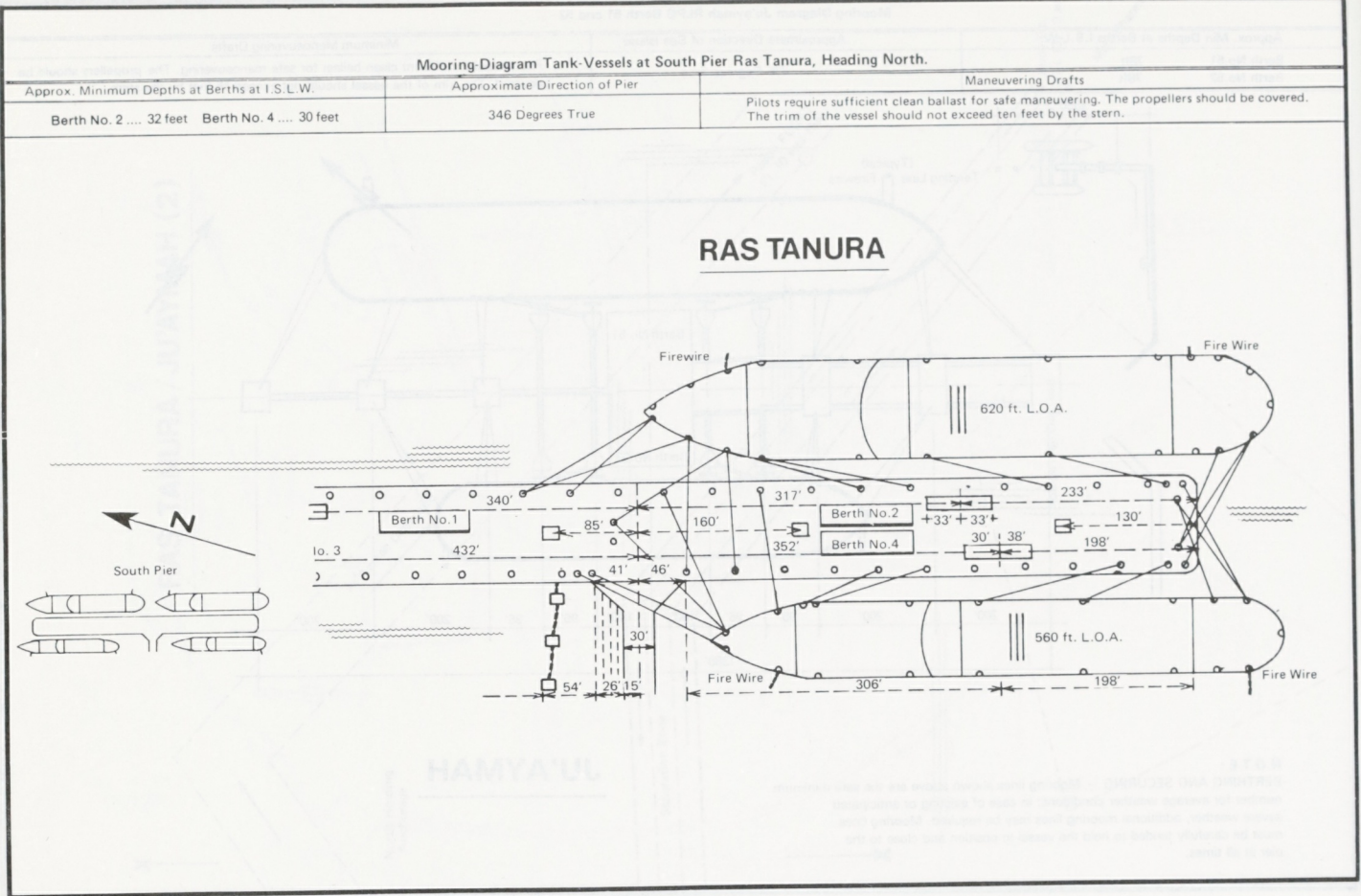
JU'AYMAH

Mooring Diagram Tank Vessels at South Pier Ras Tanura, Heading North.

Approx. Min. Depths at Berths at I.S.L.W.		Approximate Direction of Pier	Manoeuvring Drafts
Berth No. 1 33 feet	Berth No. 3 32 feet	346 Degrees True	Pilots require sufficient clean ballast for safe maneuvering. The propellers should be covered. The trim of the vessel should not exceed ten feet by the stern.

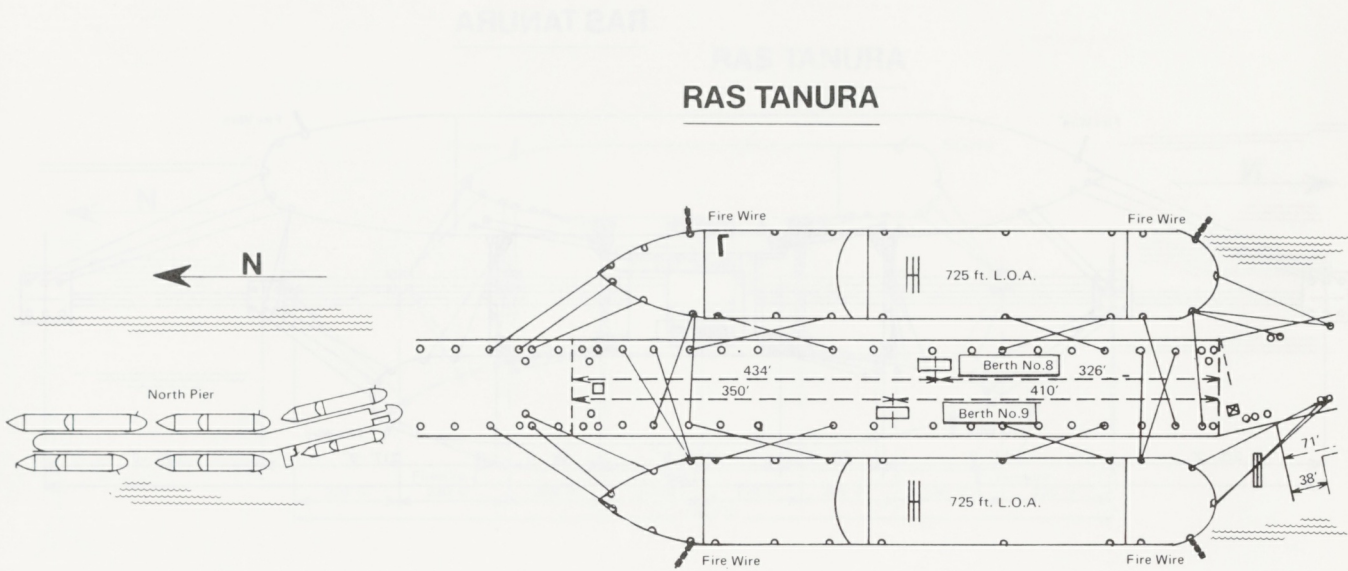
RAS TANURA





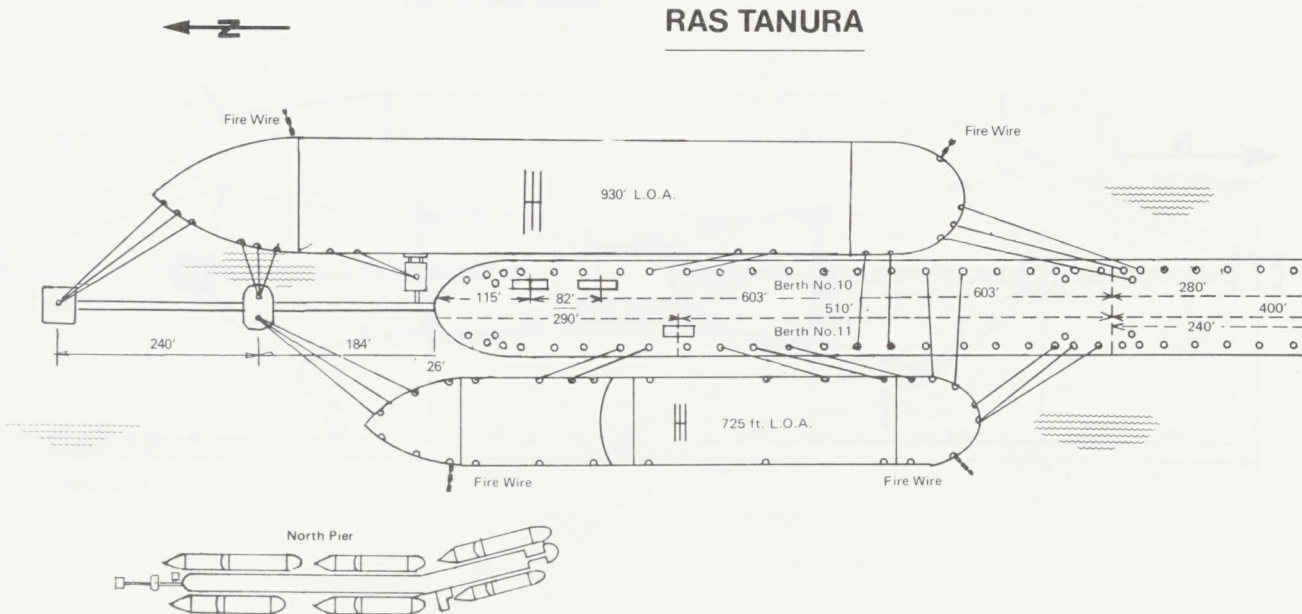
Mooring-Diagram Tank-Vessels at North Pier Ras Tanura, Heading North

Approx. Minimum Depths at Berths at I.S.L.W.		Approximate Direction of Pier	Maneuvering Drafts
Berth No. 8	49 feet	Berths Nos. 8, 9 – 360° True	Pilots require sufficient clean ballast for safe maneuvering. The propellers should be covered. The trim of the vessel should not exceed ten feet by the stern.
Berth No. 9	45 feet		



Mooring-Diagram Tank-Vessels at North Pier Ras Tanura, Heading North

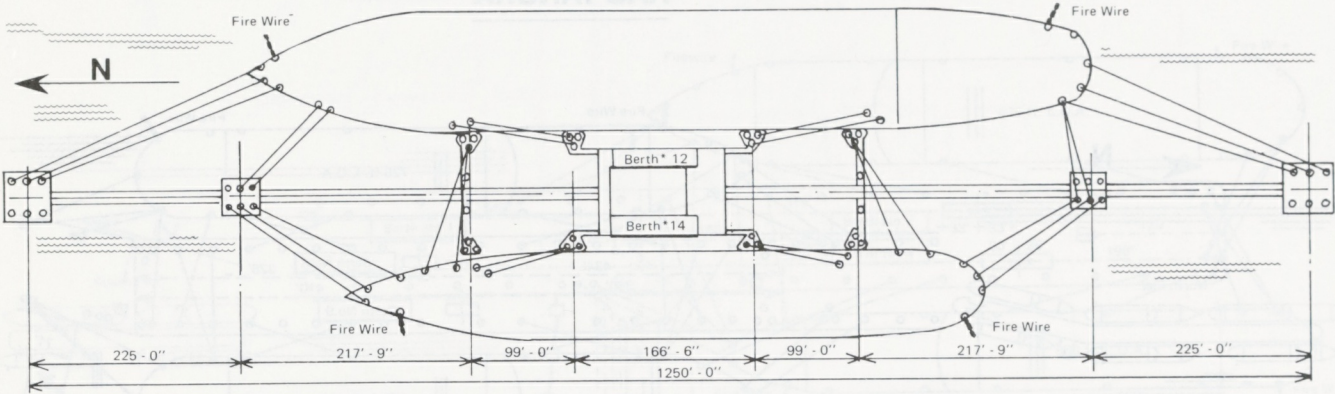
Approx. Minimum Depths at Berths at I.S.L.W.		Approximate Direction of Pier	Maneuvering Drafts
Berth No. 10	49 feet	Berths Nos. 10 & 11-360° True	Pilots require sufficient clean ballast for safe maneuvering. The propellers should be covered. The trim of the vessel should not exceed ten feet by the stern.
Berth No. 11	45 feet		



Mooring-Diagram Tank-Vessels at Sea Island No. 1 Ras Tanura, Heading North.

Approx. Minimum Depths at Berths at I.S.L.W.	Approx. Direction of Sea Island	Minimum Maneuvering Drafts
Berth No.12 85 feet Berth No.14 85 feet	356 Degrees True	*Pilots require sufficient clean ballast for safe maneuvering. The propellers should be covered. The trim of the vessel should not exceed fifteen feet by the stern.

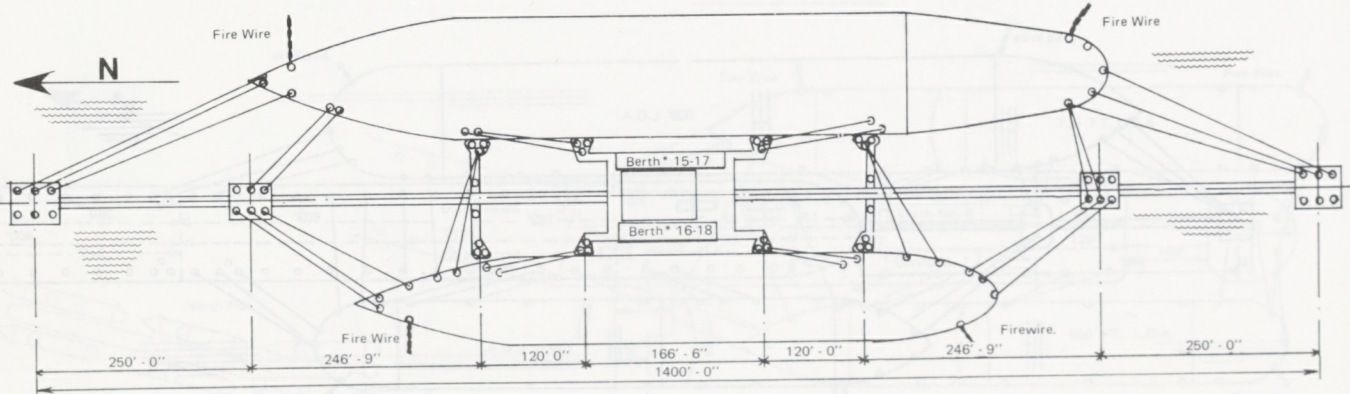
RAS TANURA



Mooring-Diagram Tank-Vessels at Sea Islands No. 2 and 3 Ras Tanura, Heading North

Approx. Min. Depths at Berths at I.S.L.W.	Approx. Direction of Sea Island	Minimum Maneuvering Drafts
Berth No.15 85 feet Berth No.17 85 feet Berth No.16 85 feet Berth No.18 85 feet	356 Degrees True	*Pilots require sufficient clean ballast for safe maneuvering. The propellers should be covered. The trim of the vessel should not exceed fifteen feet by the stern.

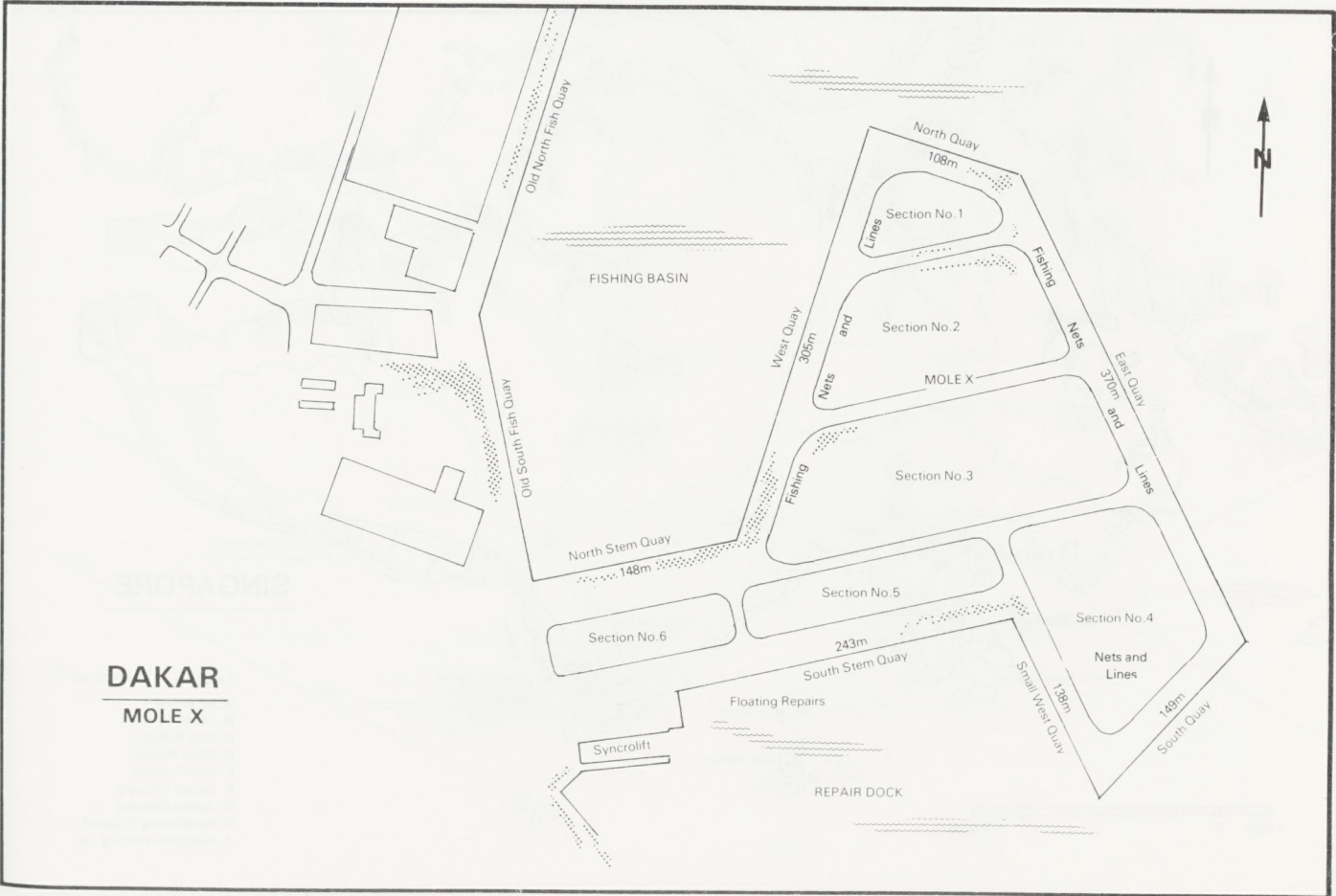
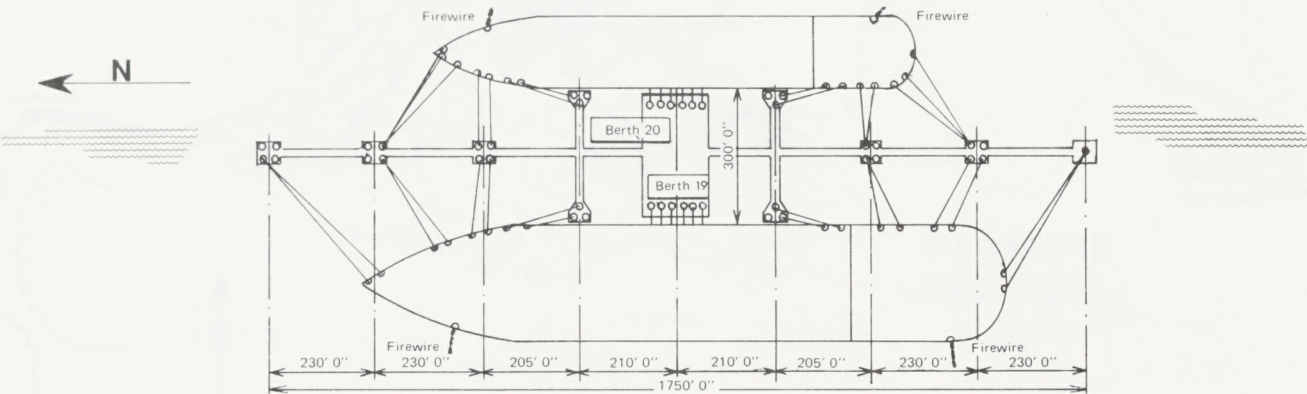
RAS TANURA

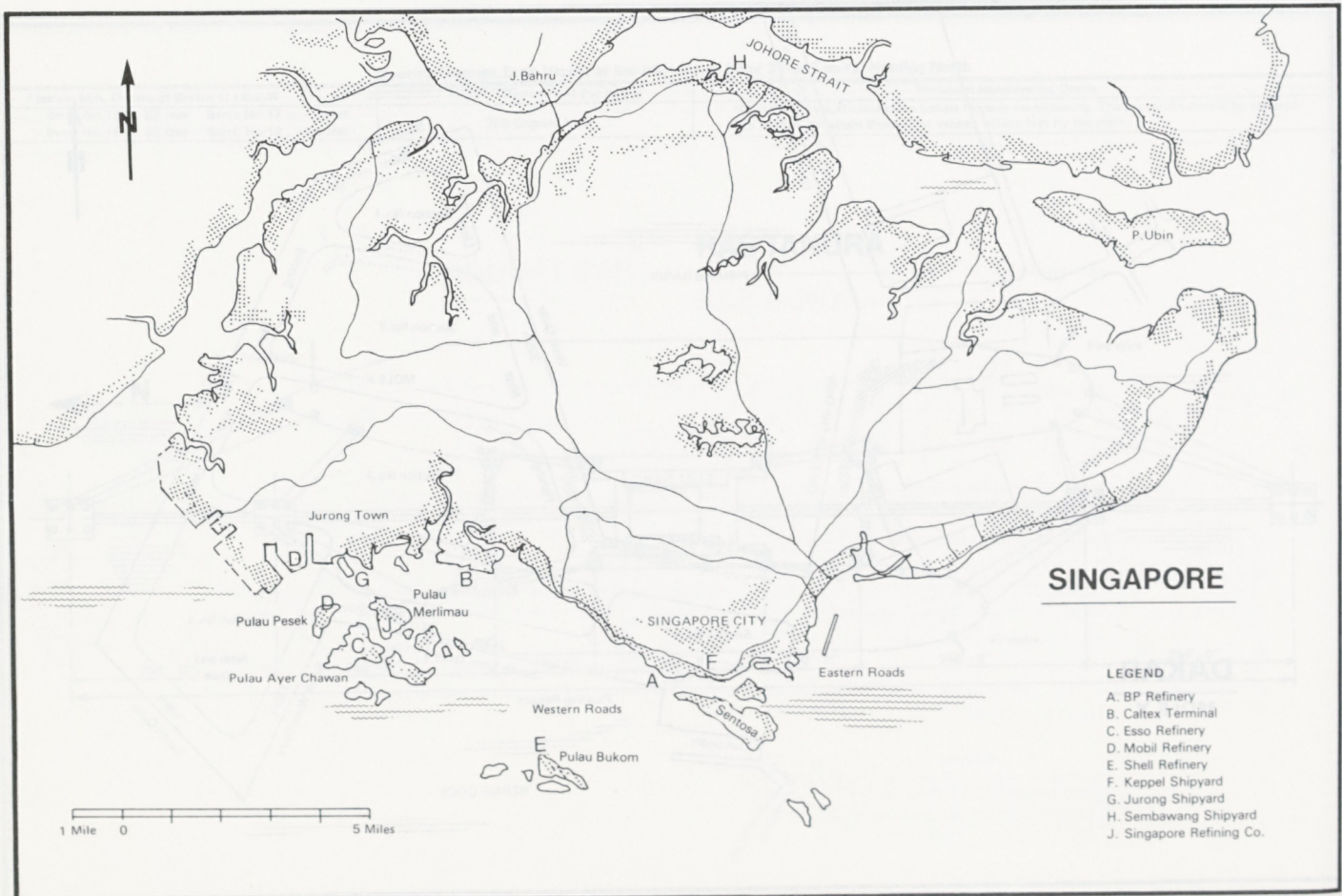
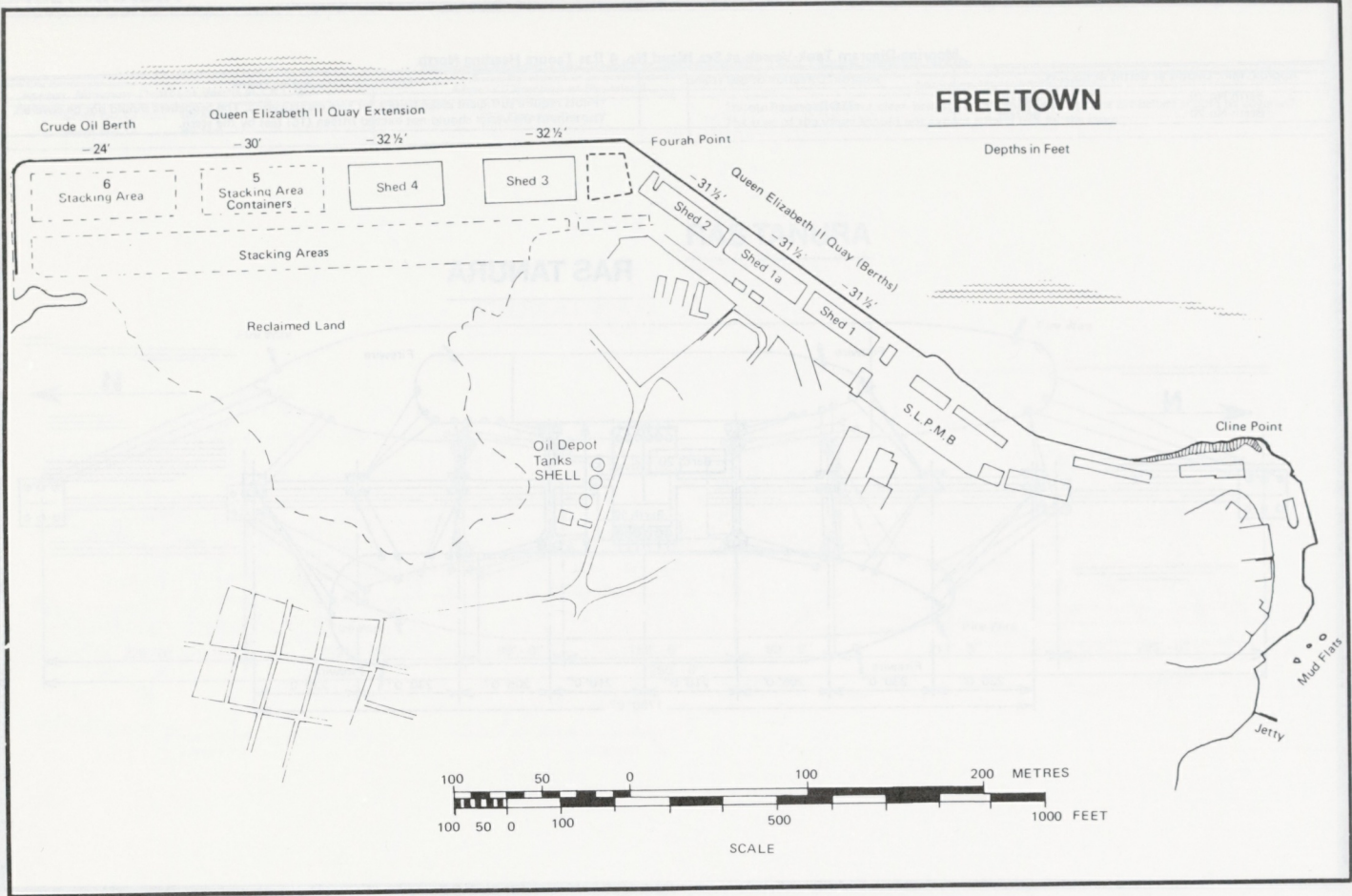


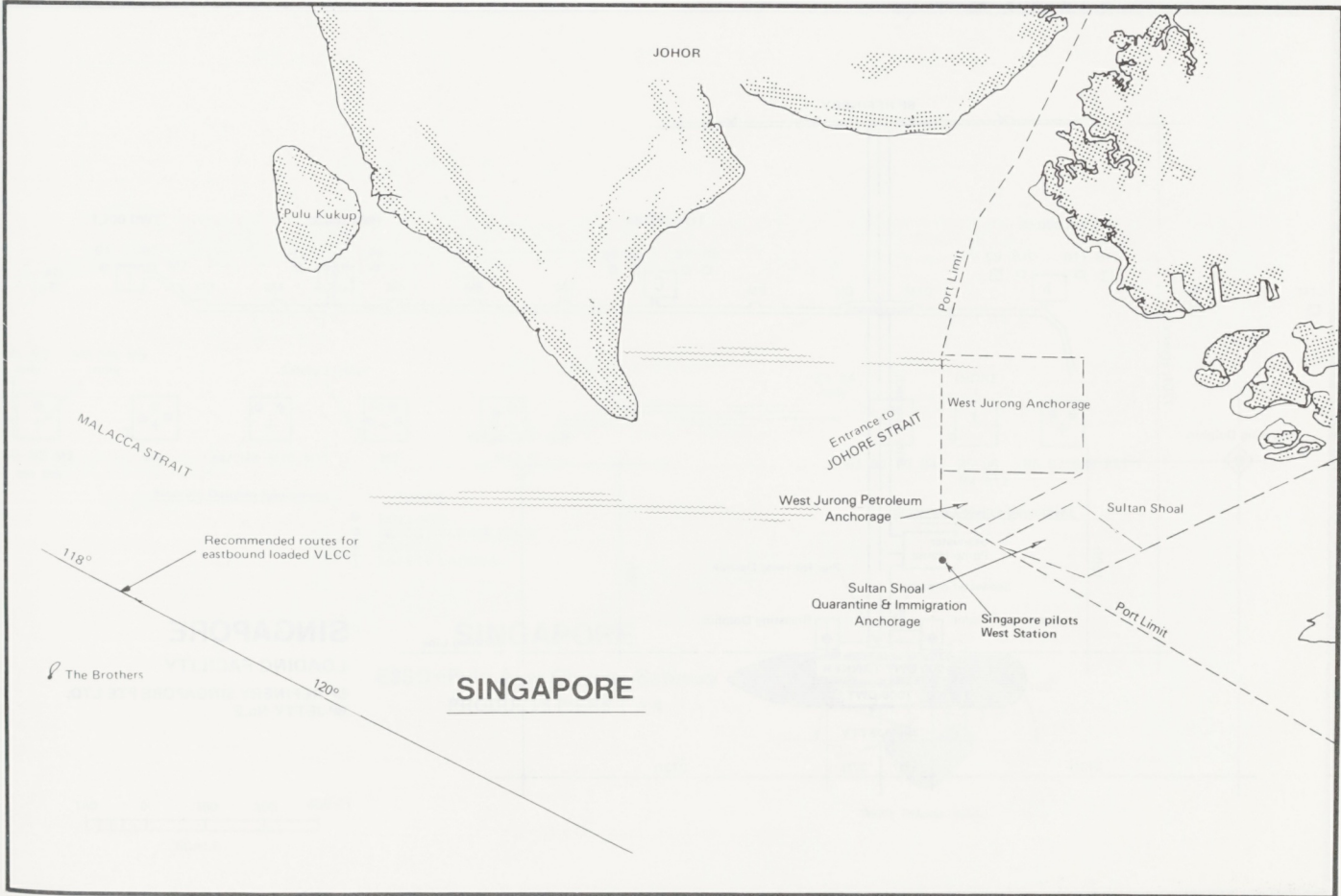
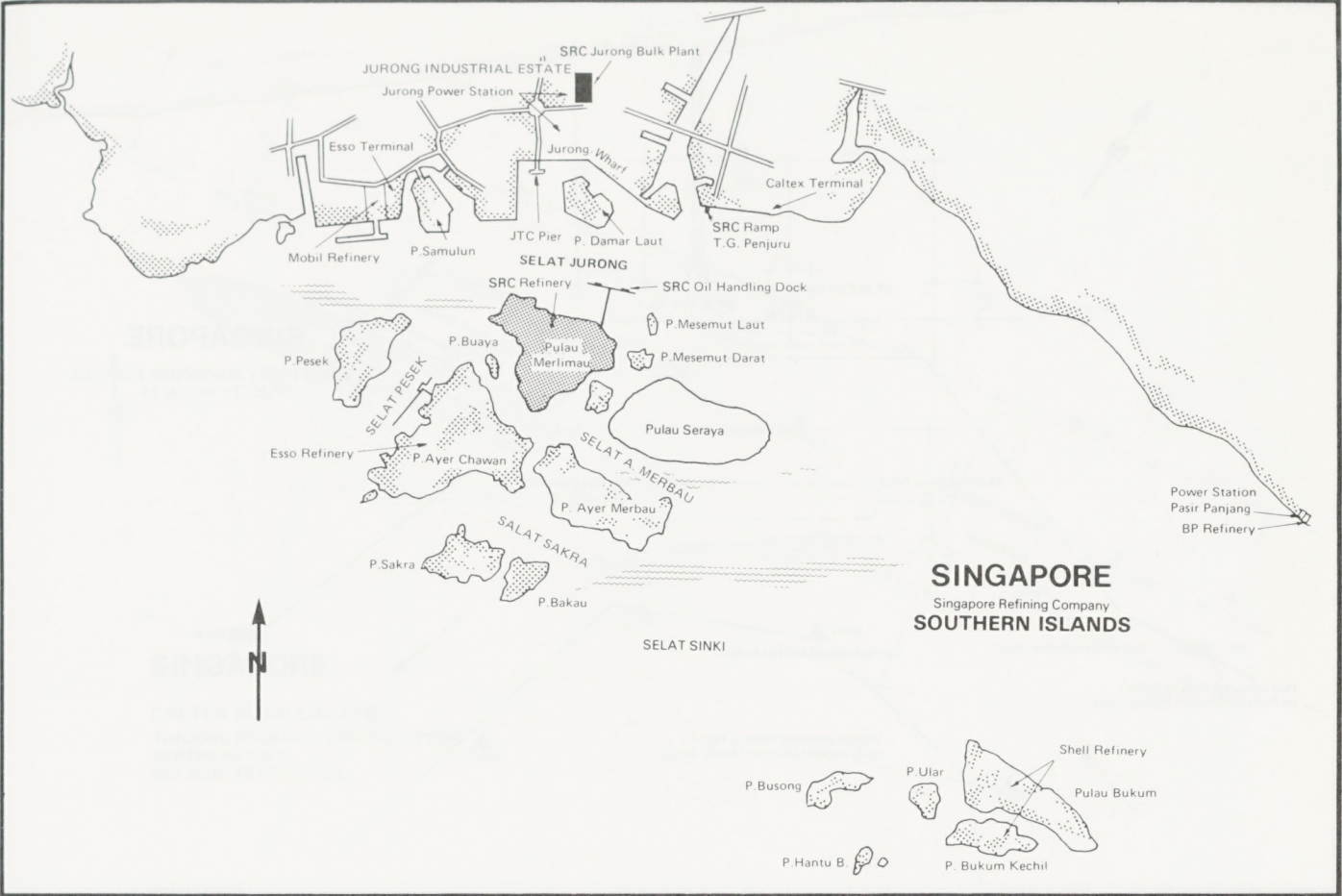
Mooring Diagram Tank-Vessels at Sea Island No. 4 Ras Tanura Heading North

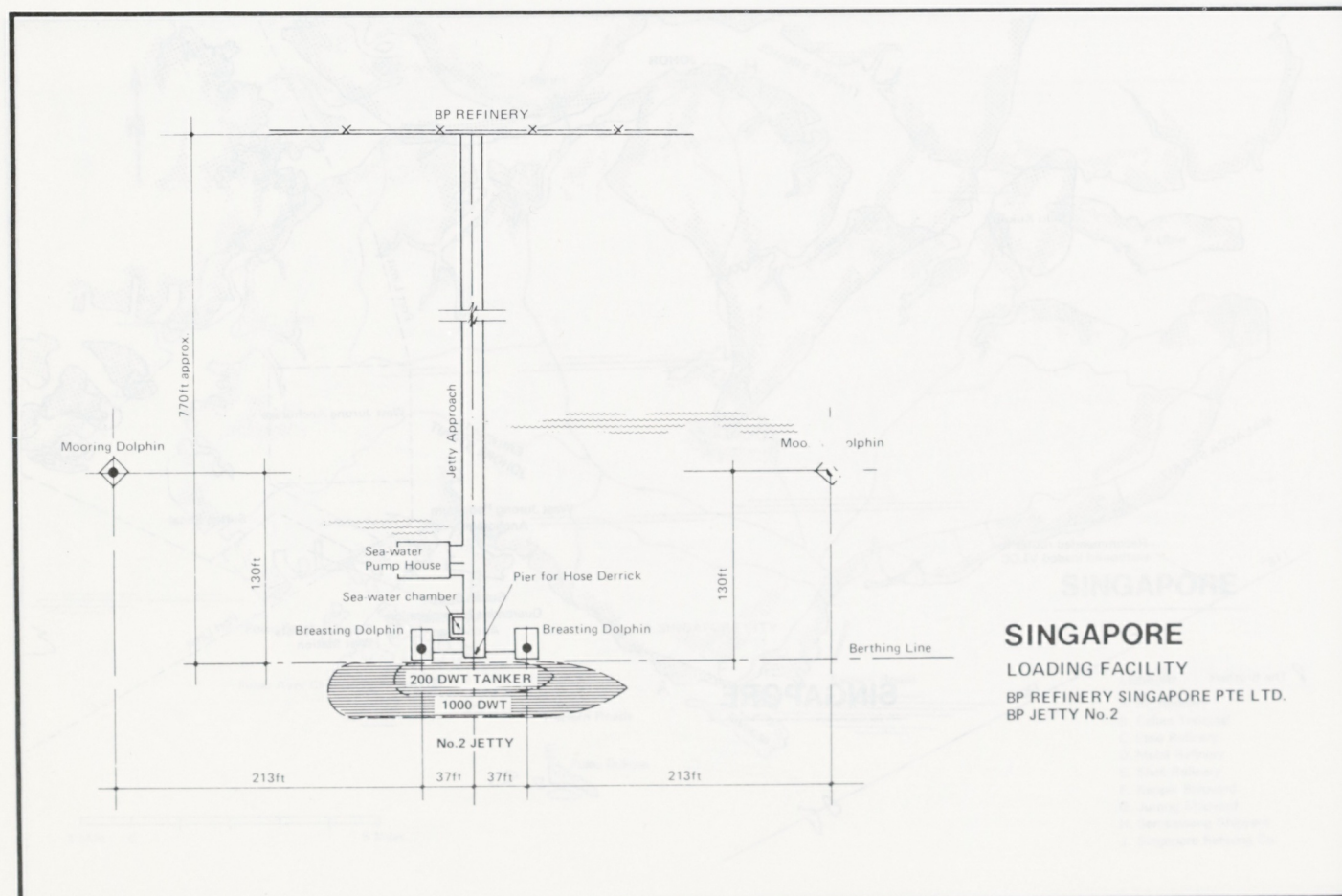
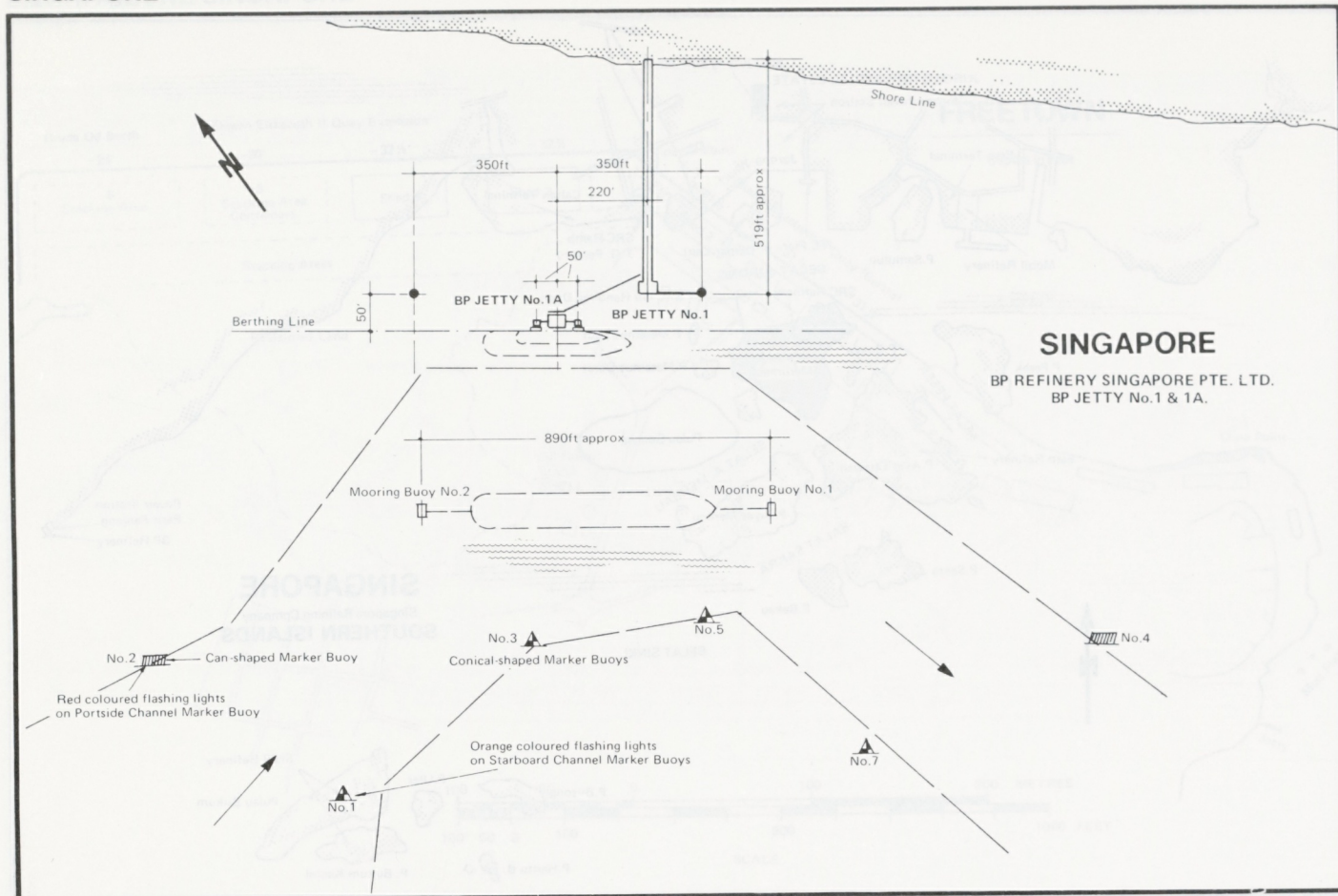
Approx. Min. Depths at Berths at I.S.L.W.	Approx. Direction of Sea Island	Minimum Maneuvering Drafts
Berth No.19 85 feet Berth No.20 85 feet	356 Degrees True	*Pilots require sufficient clean ballast for safe maneuvering. The propellers should not be covered. The trim of the vessel should not exceed fifteen (15) feet by the stern.

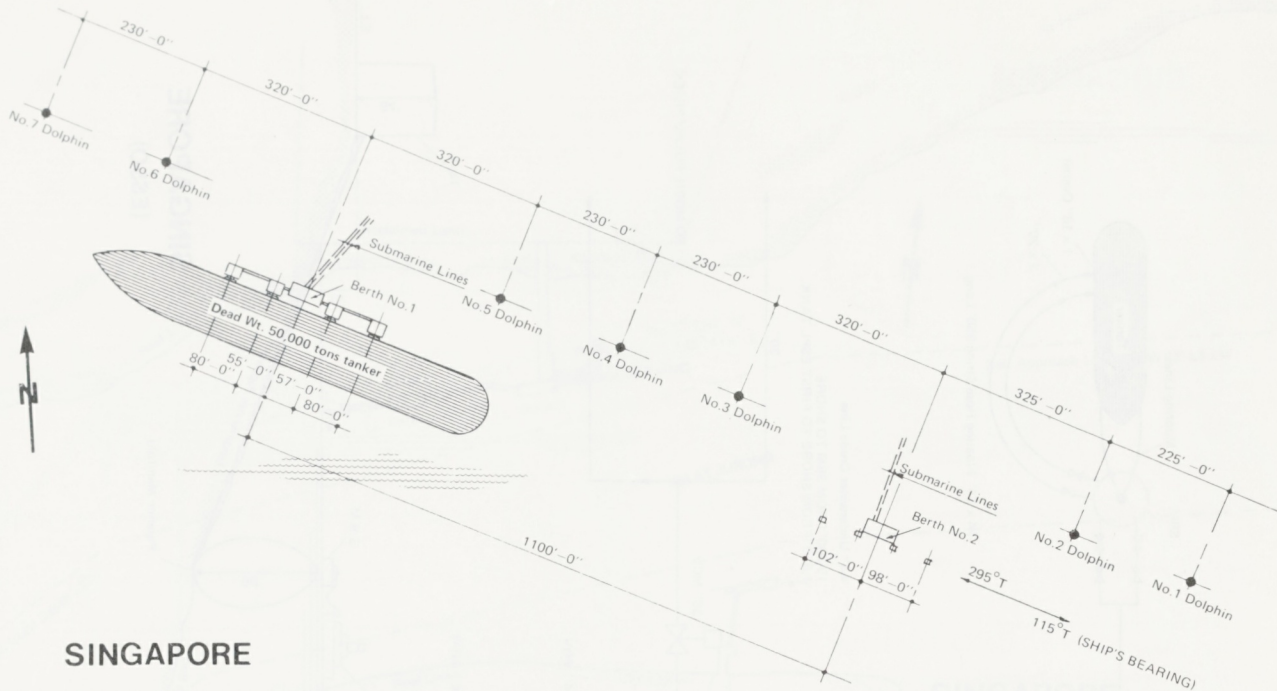
RAS TANURA





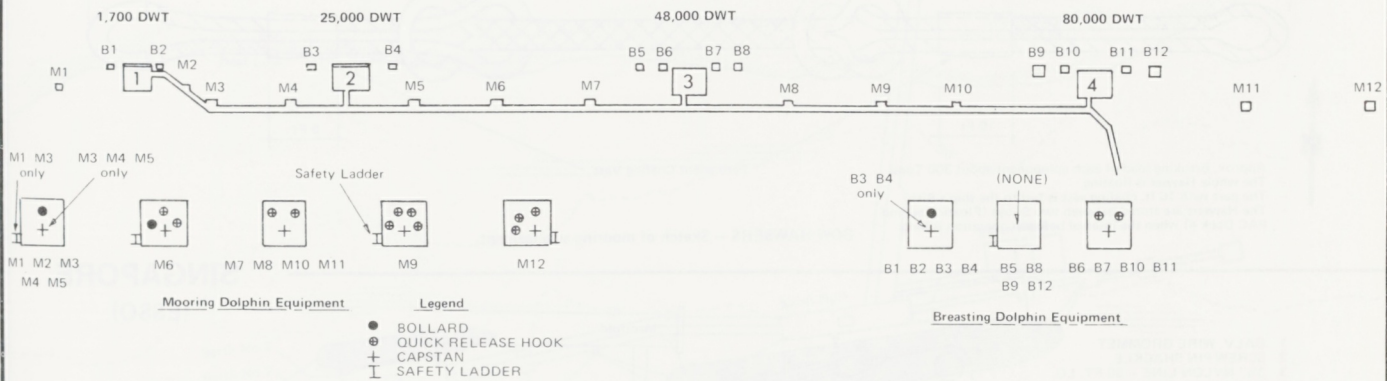






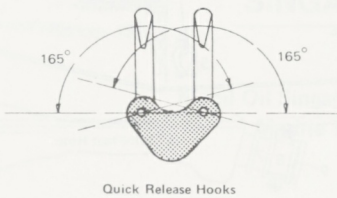
SINGAPORE

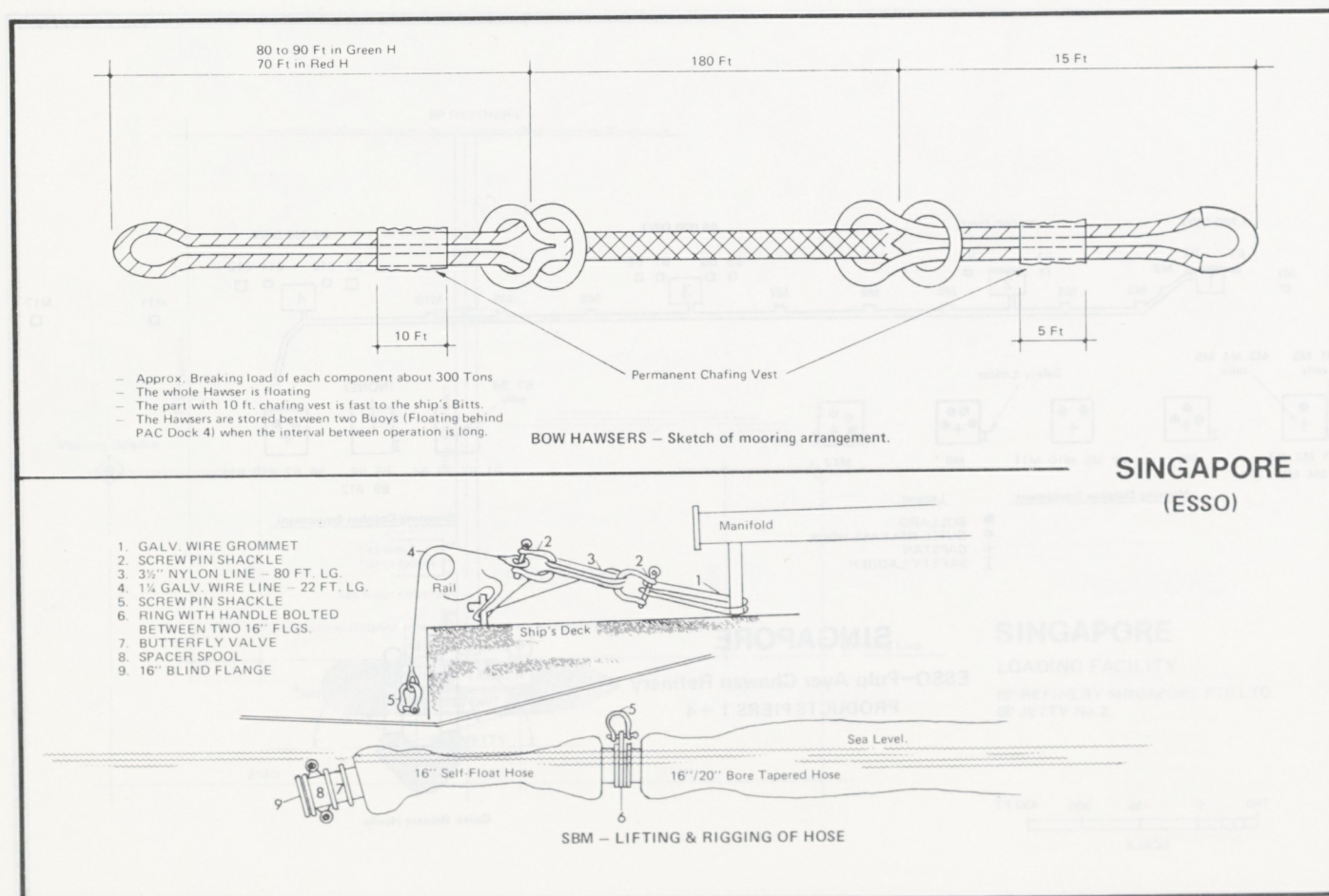
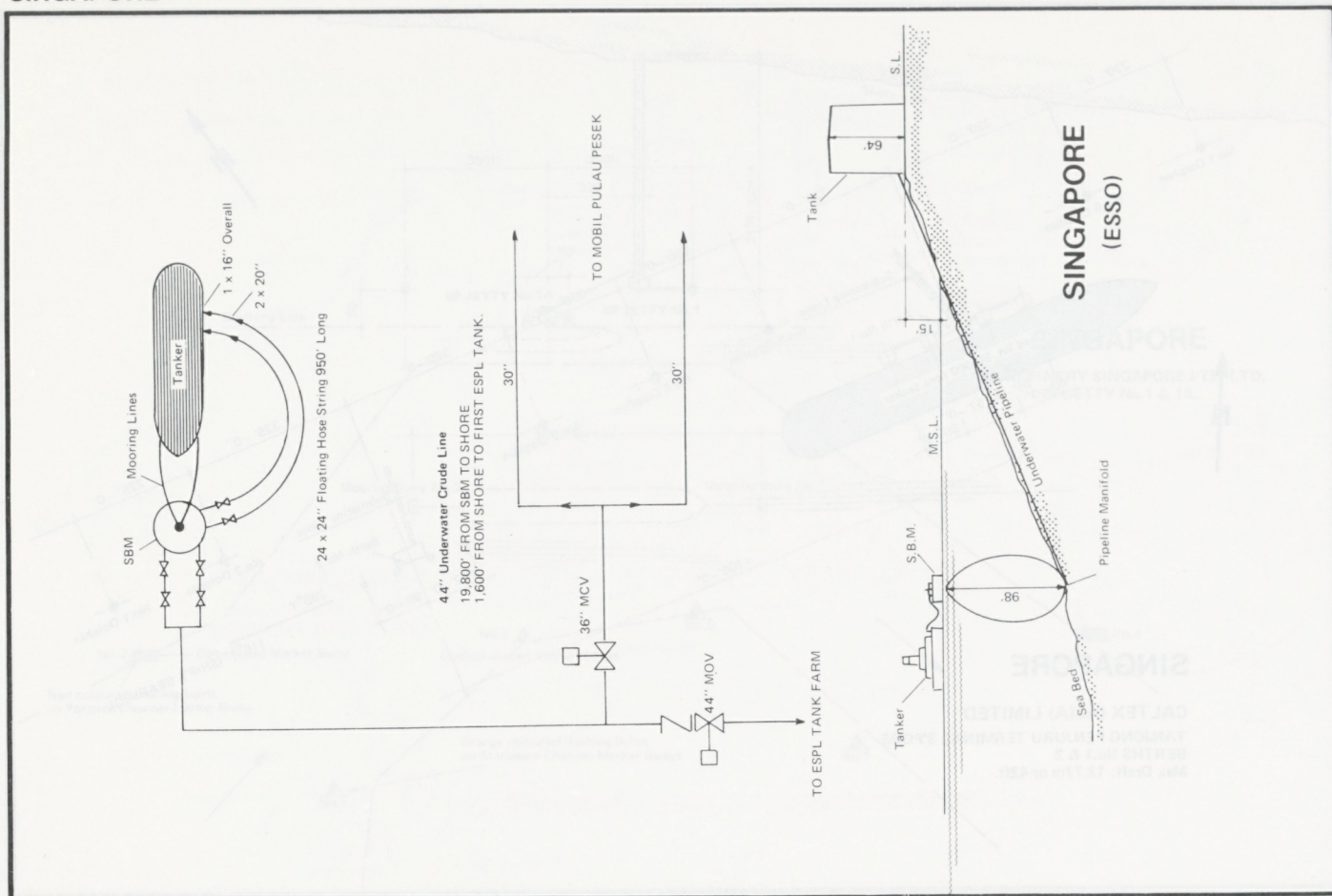
CALTEX (ASIA) LIMITED
TANJONG PENJURONG TERMINAL S'PORE
BERTHS No.1 & 2
Max Draft: 12.77m or 42ft.

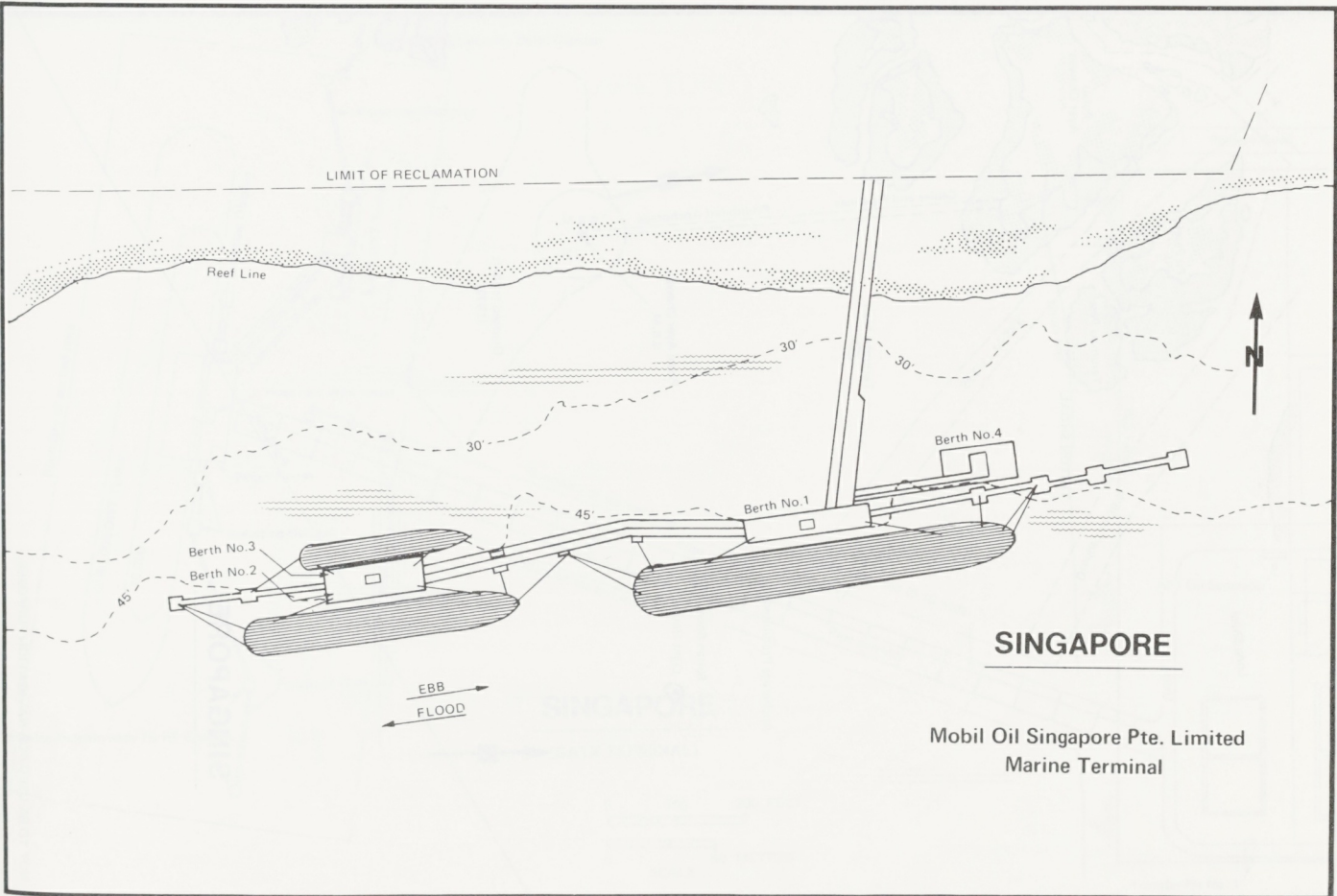
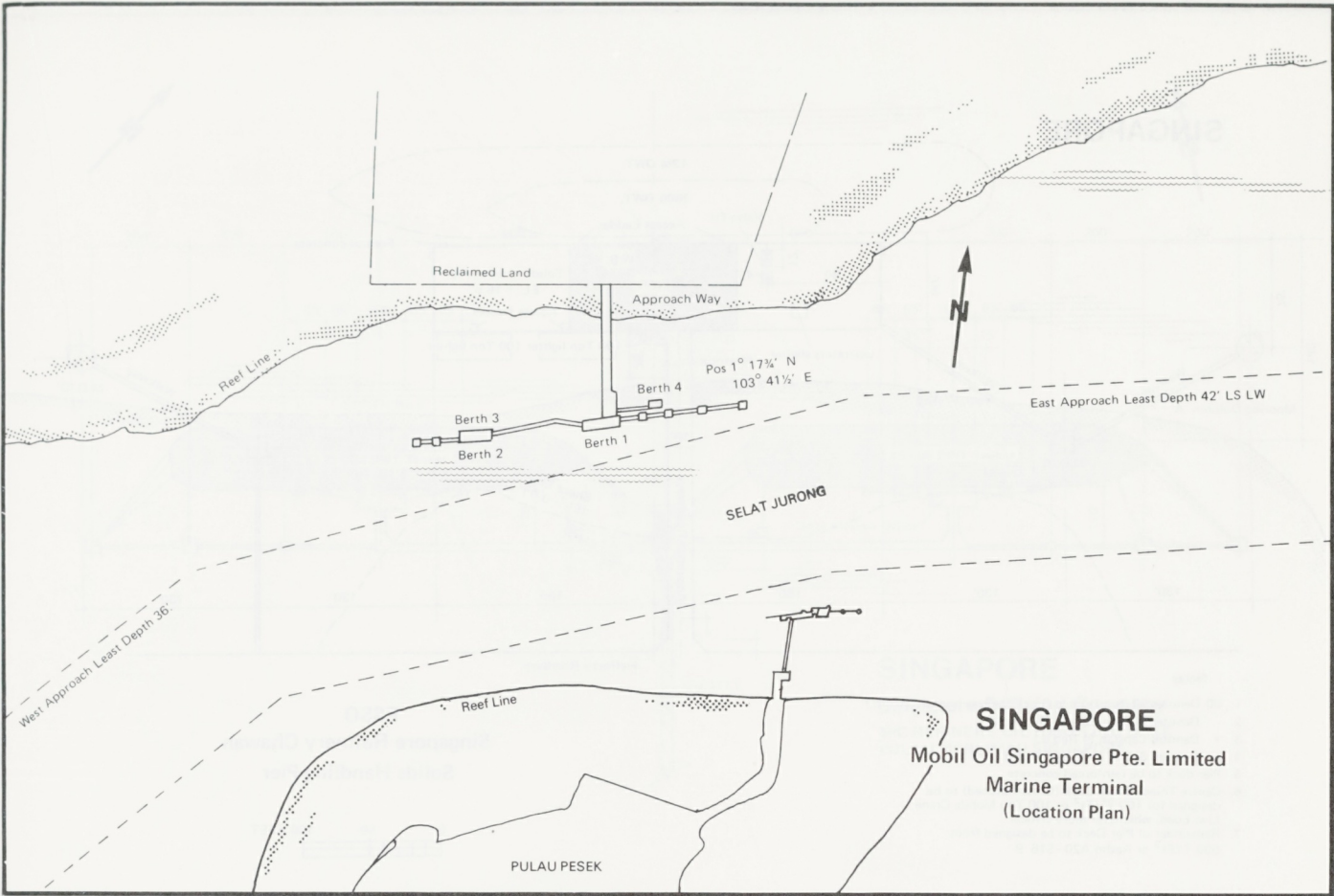


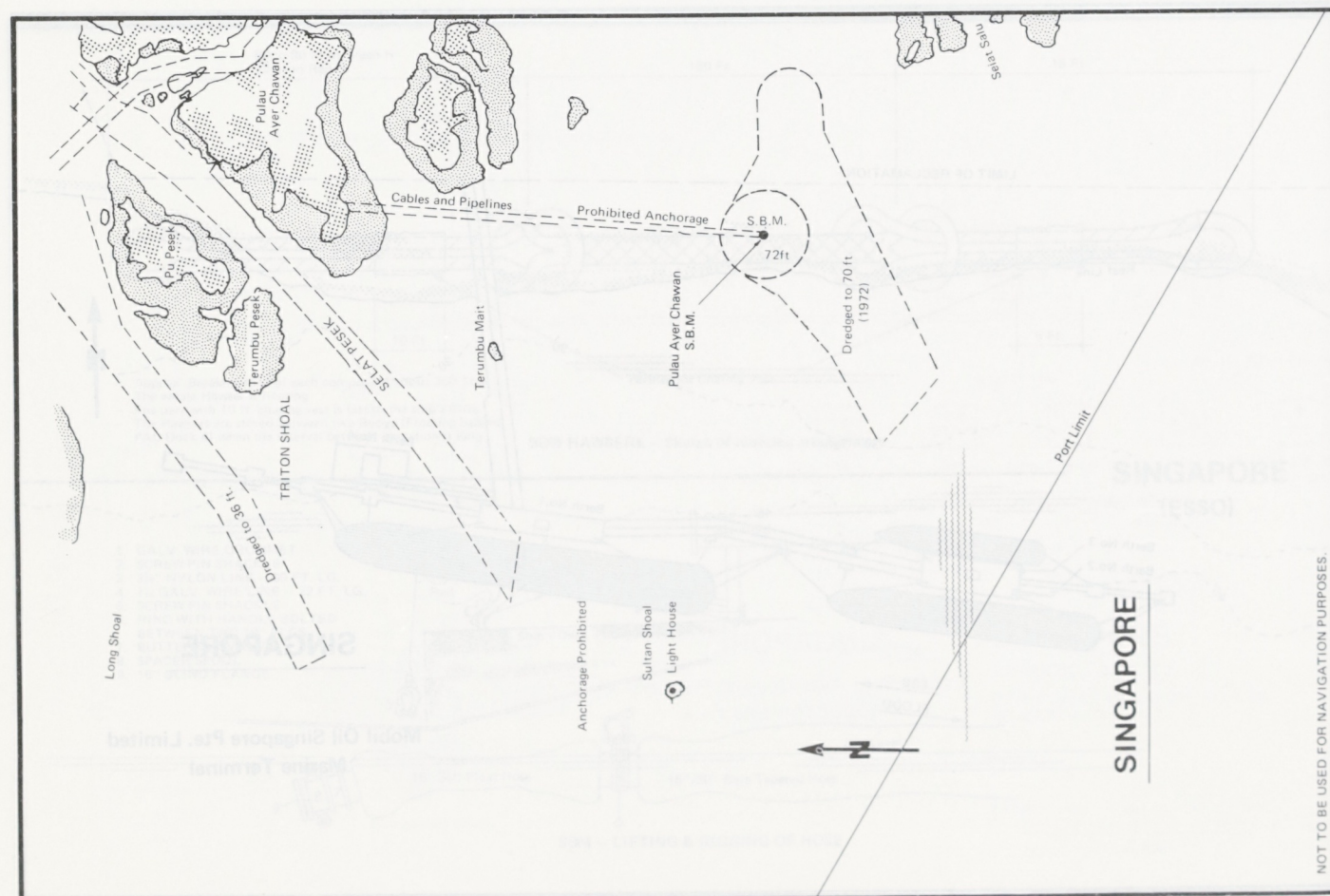
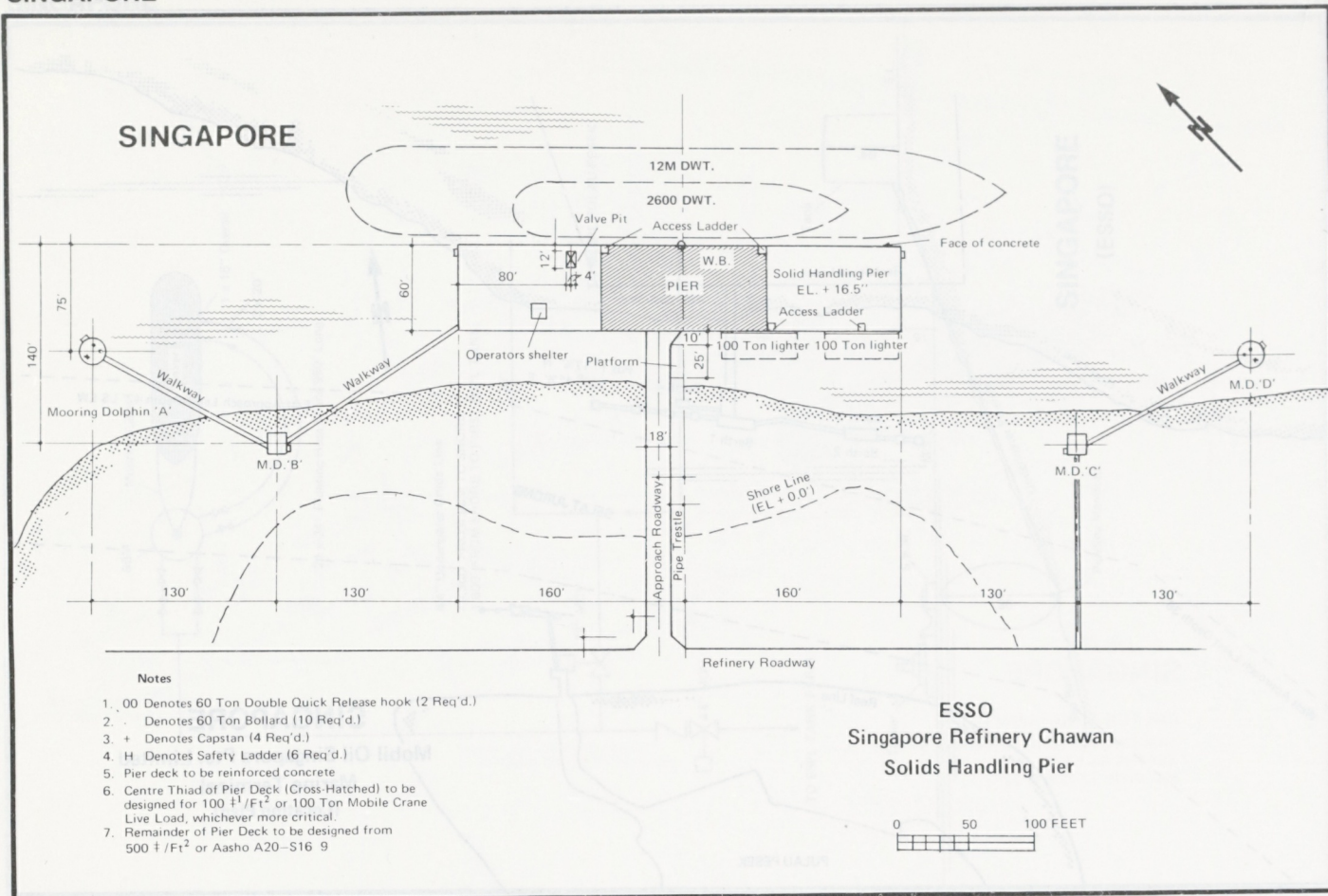
SINGAPORE

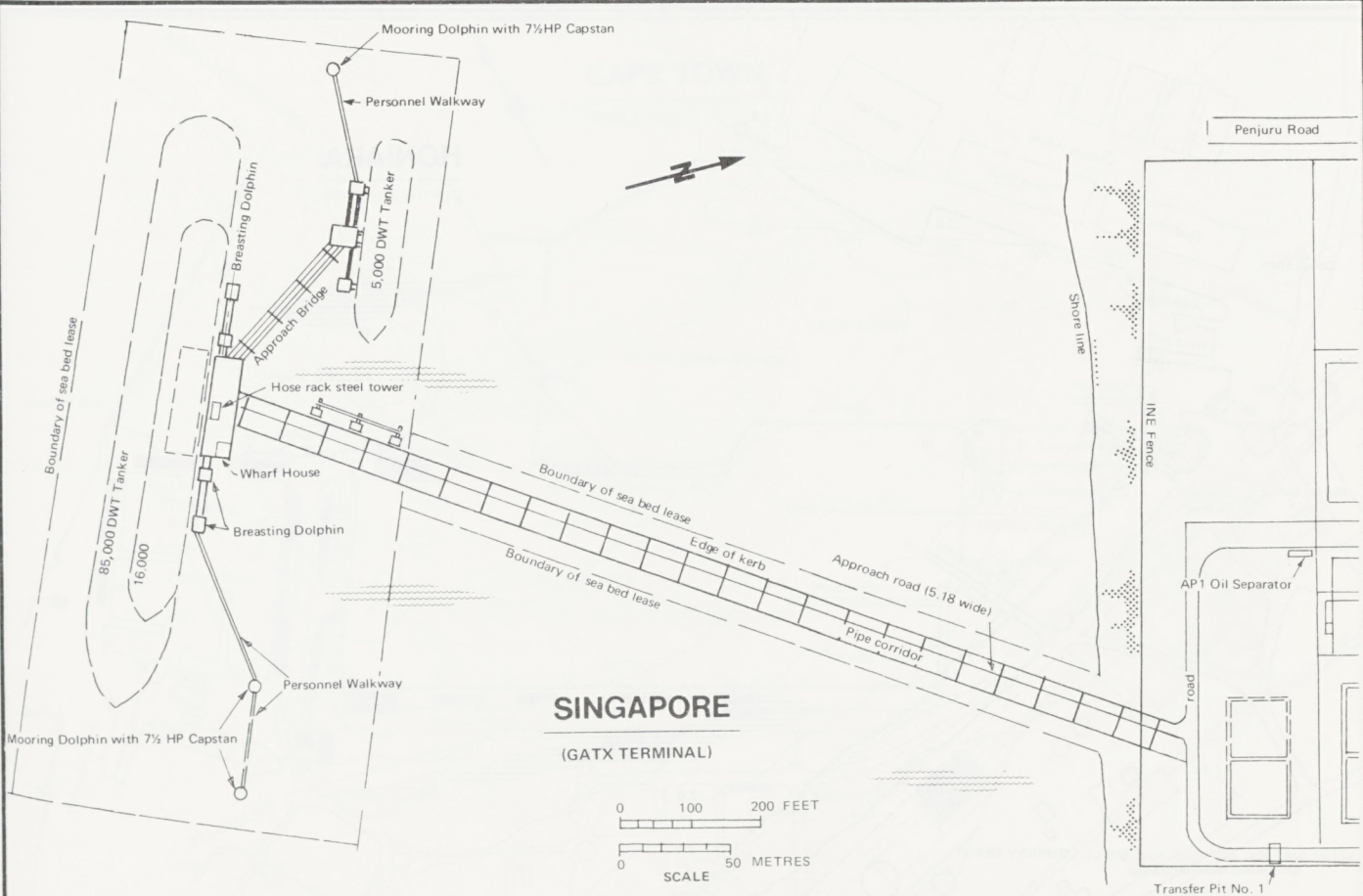
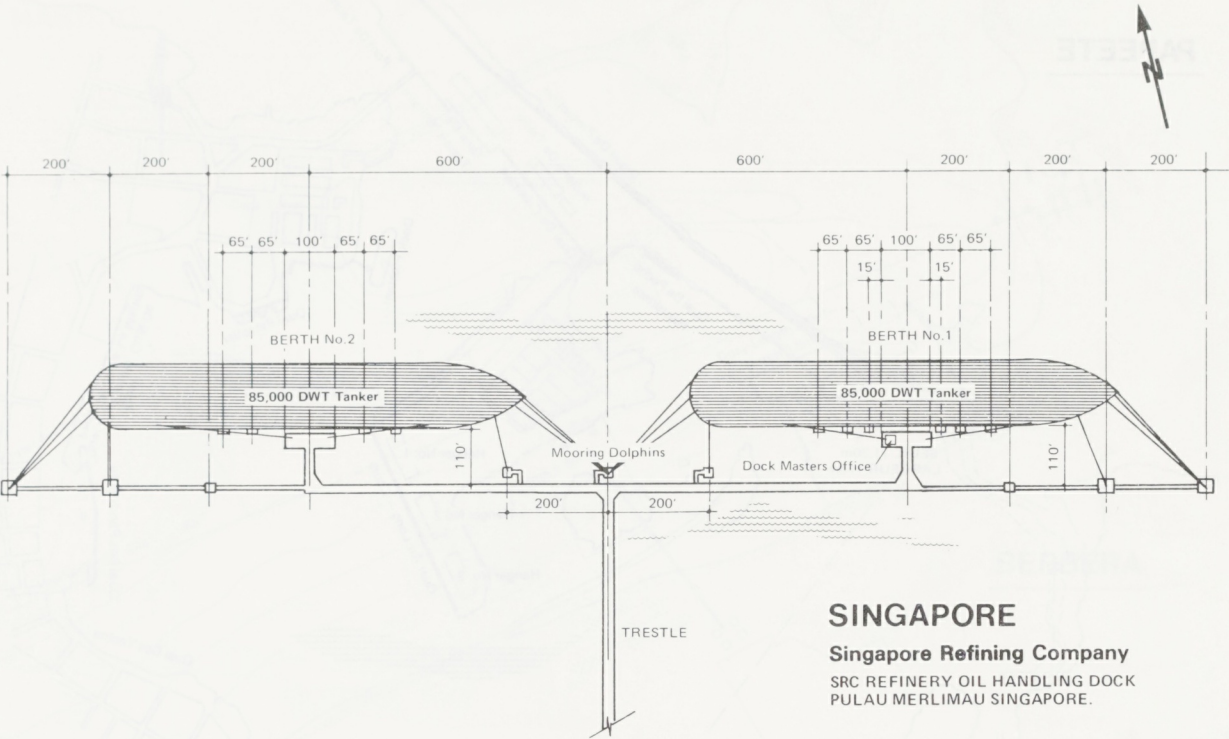
ESSO-Pulo Ayer Chawan Refinery
PRODUCTS PIERS 1 → 4



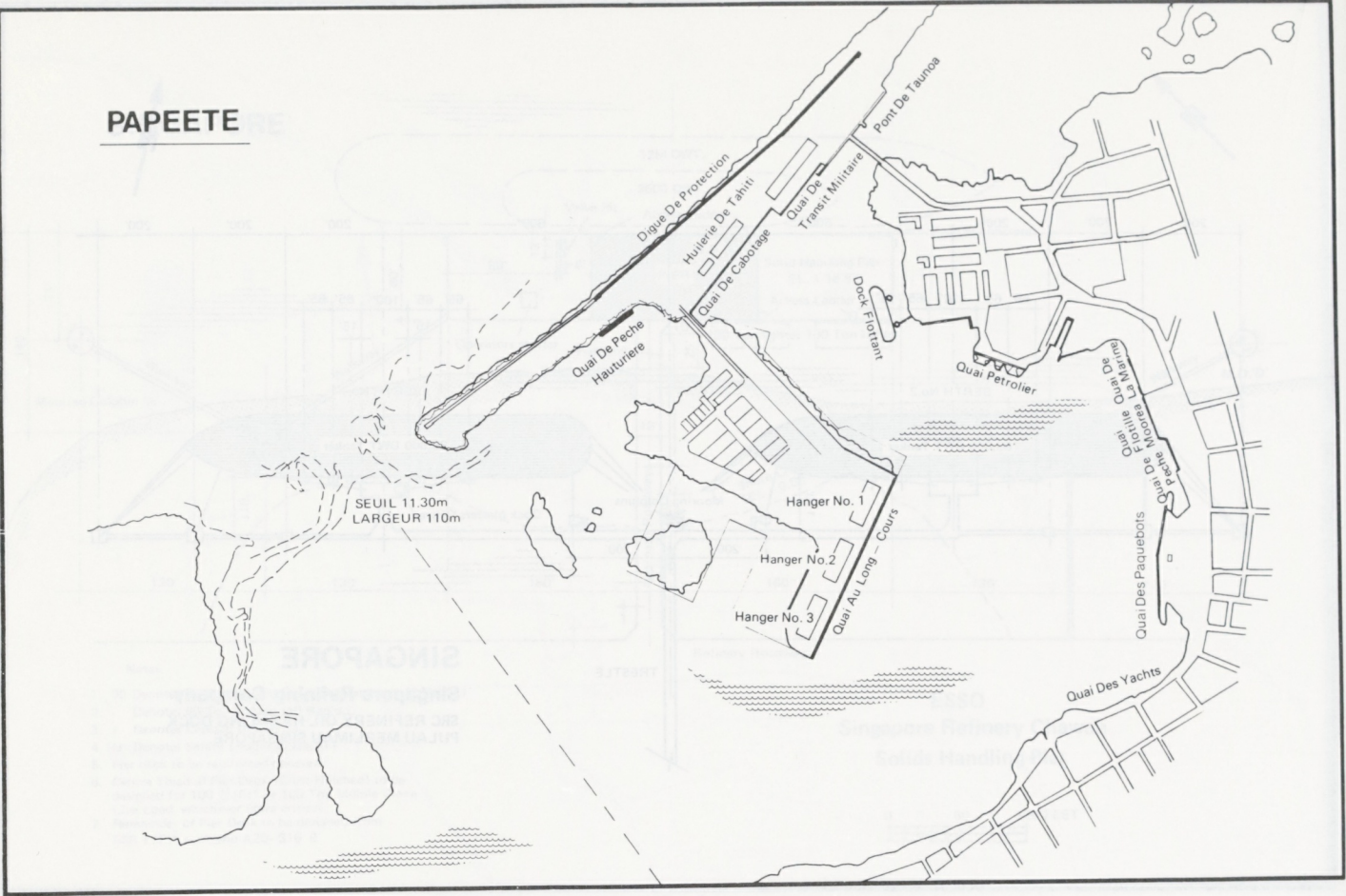
SINGAPORE
(ESSO)





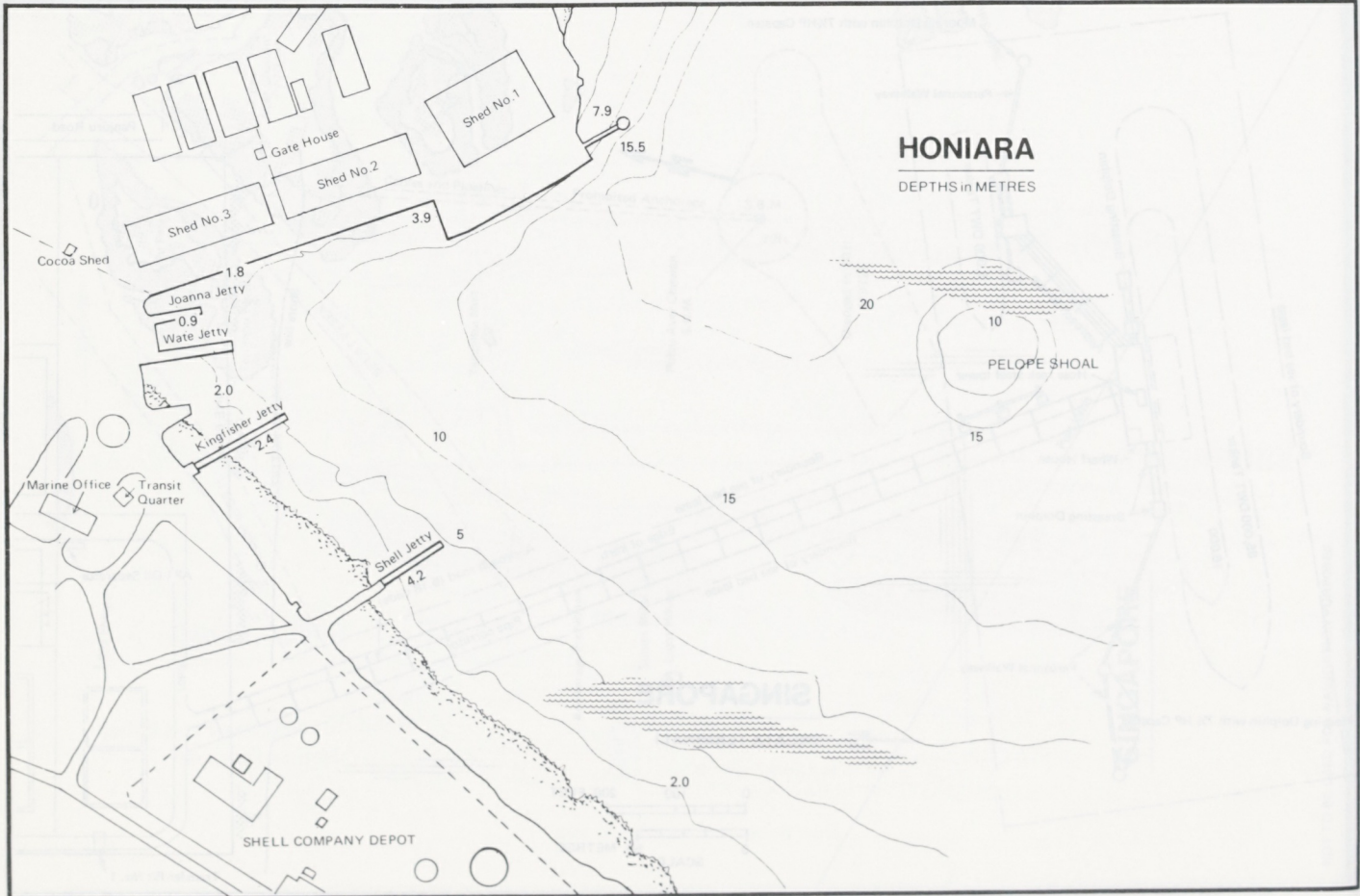


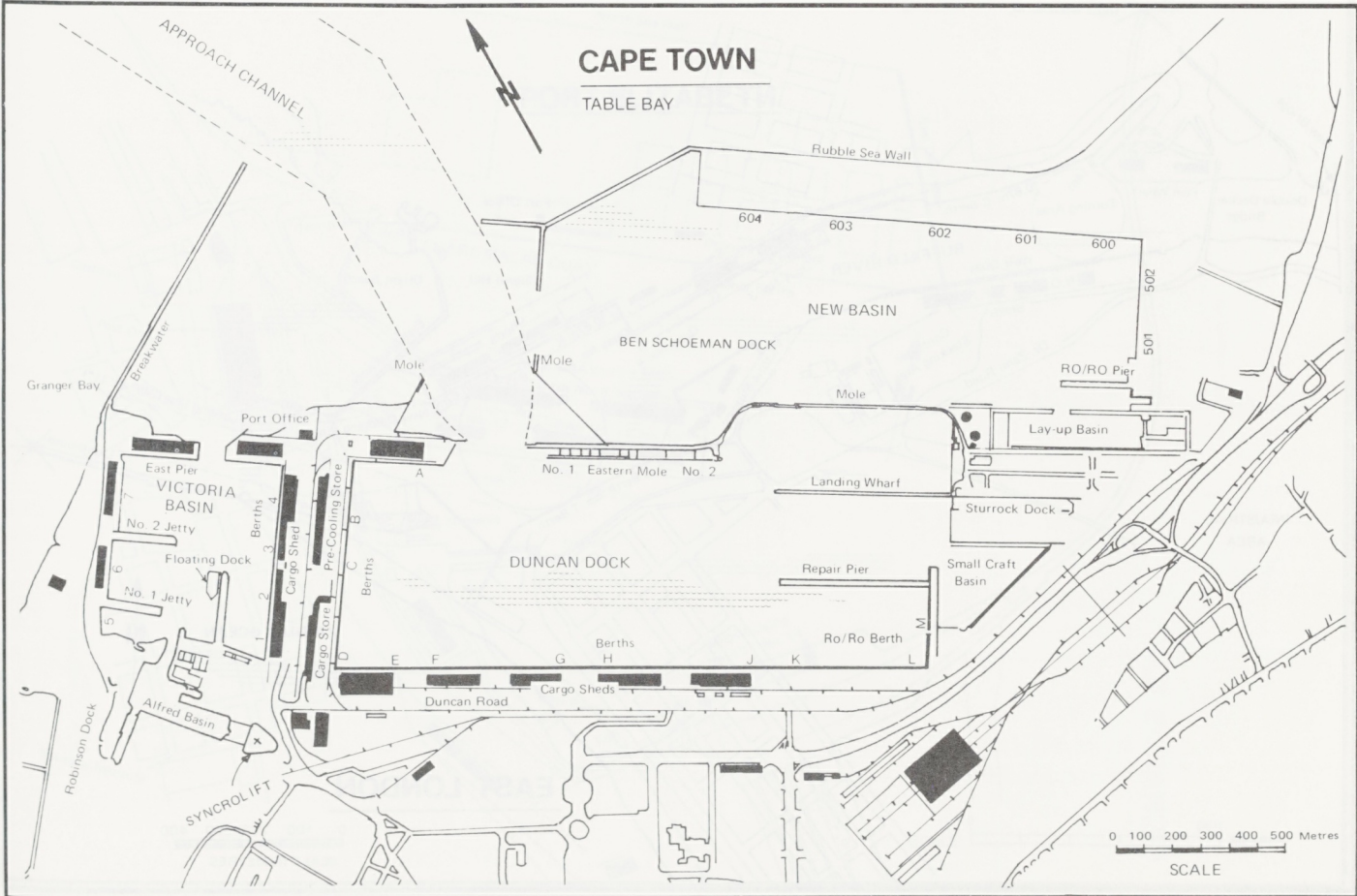
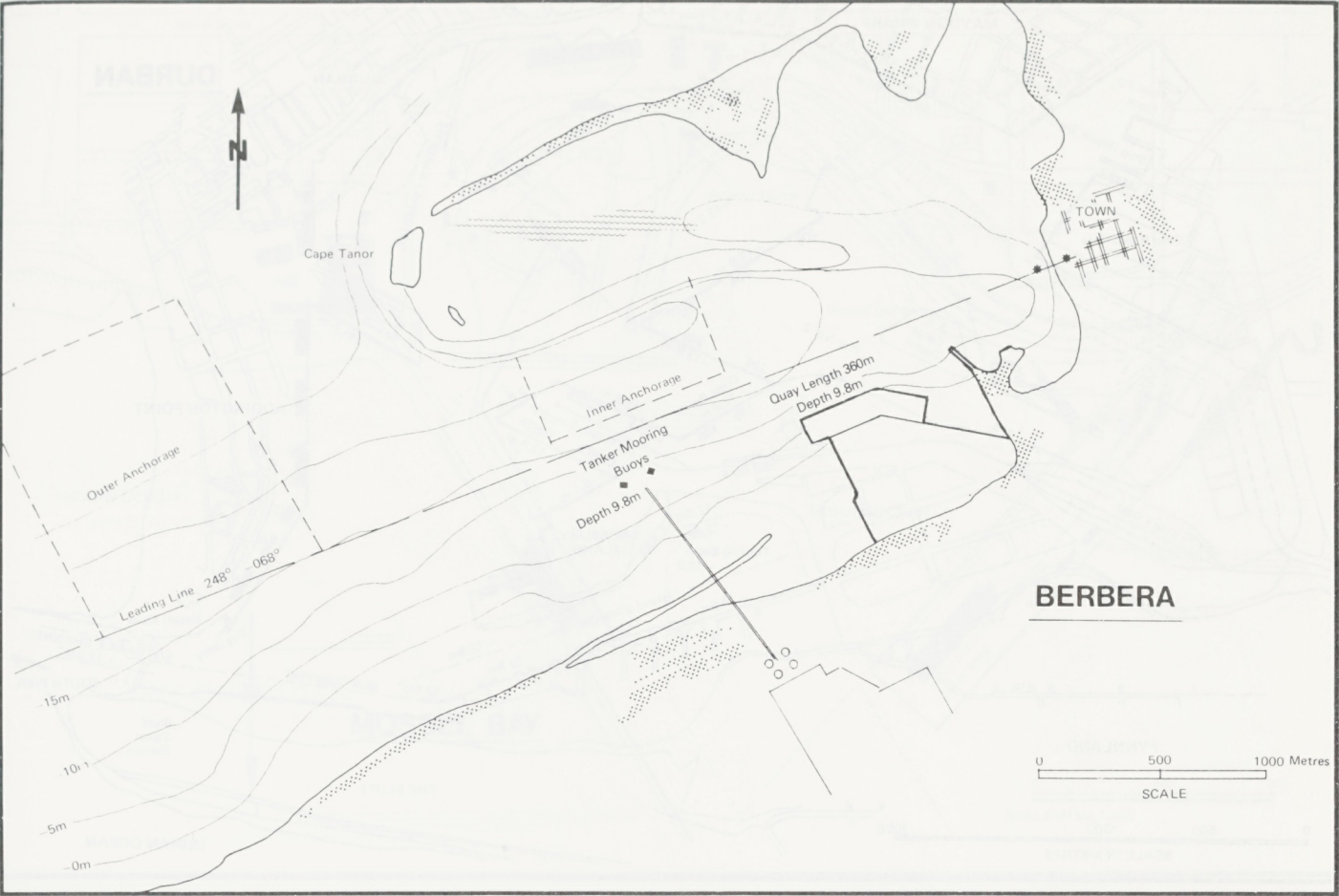
PAPEETE

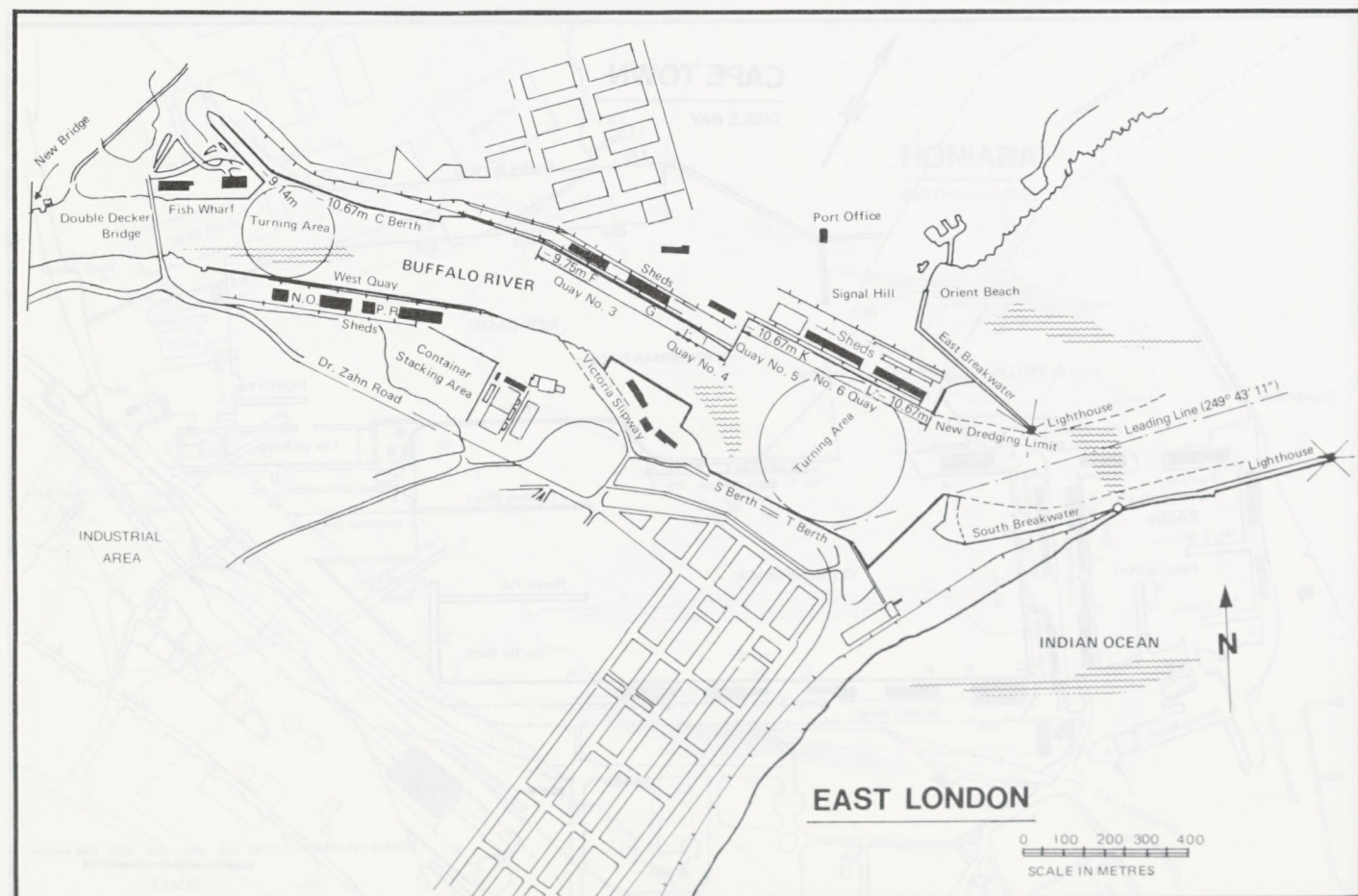
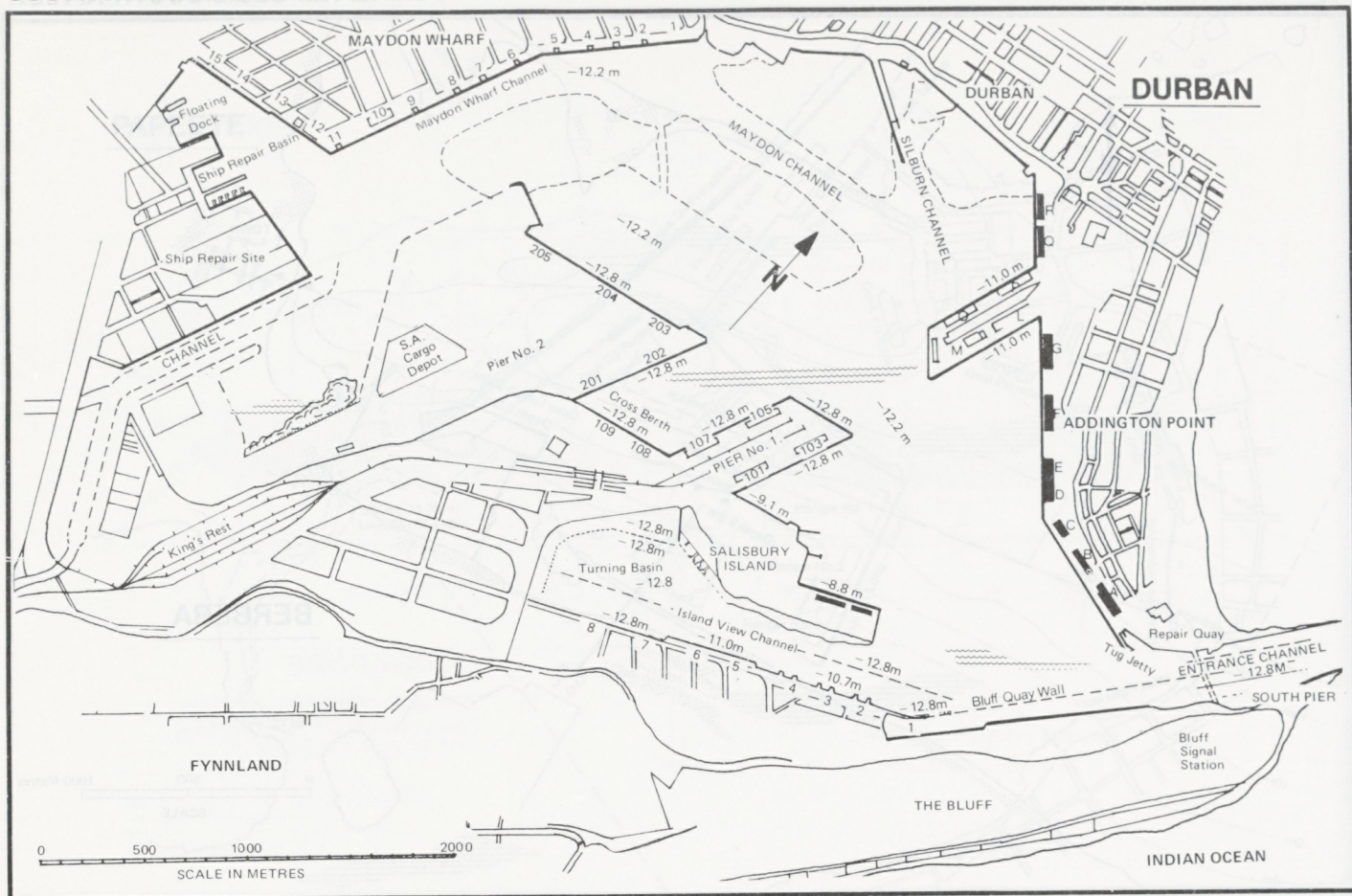


HONIARA

DEPTHS in METRES

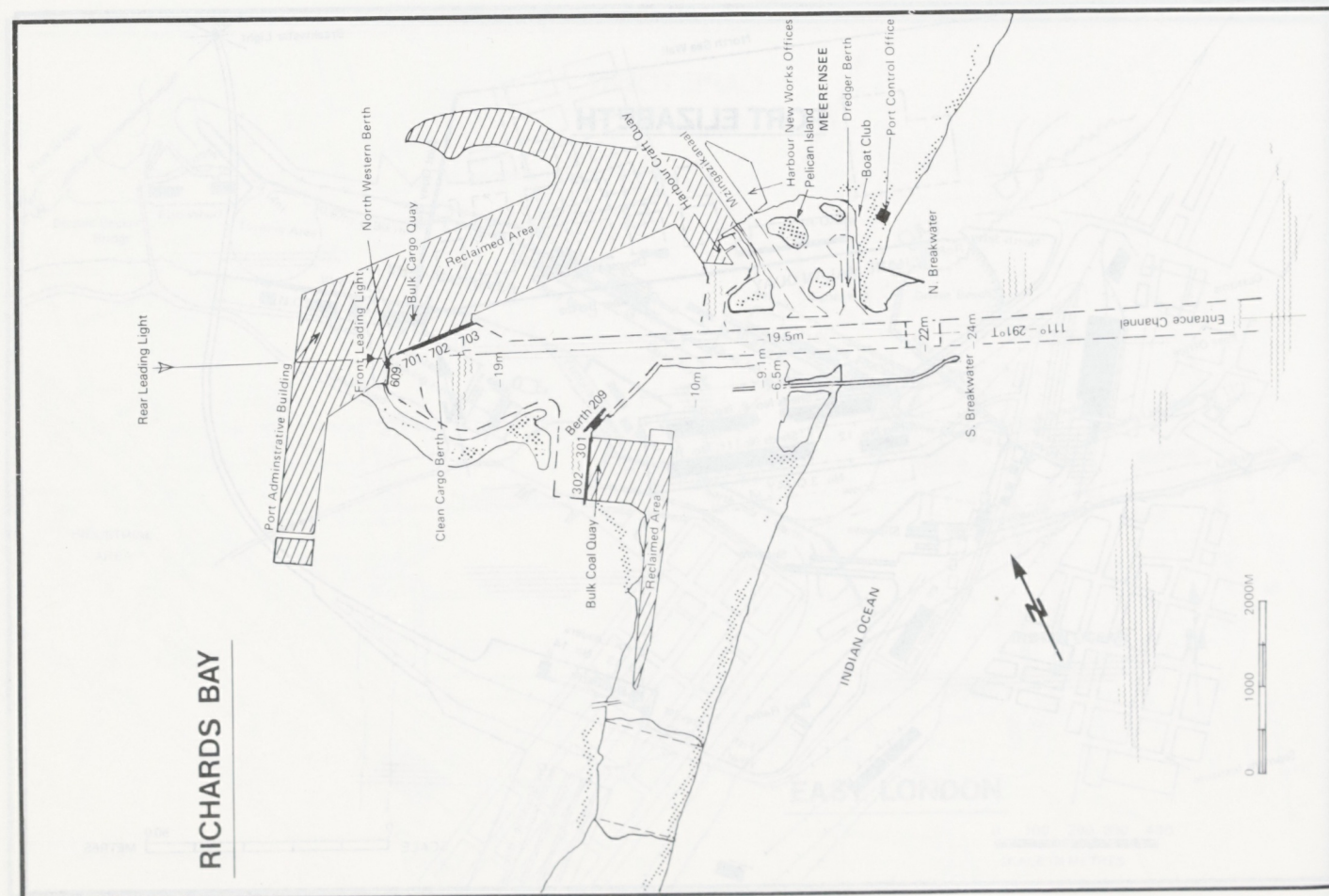
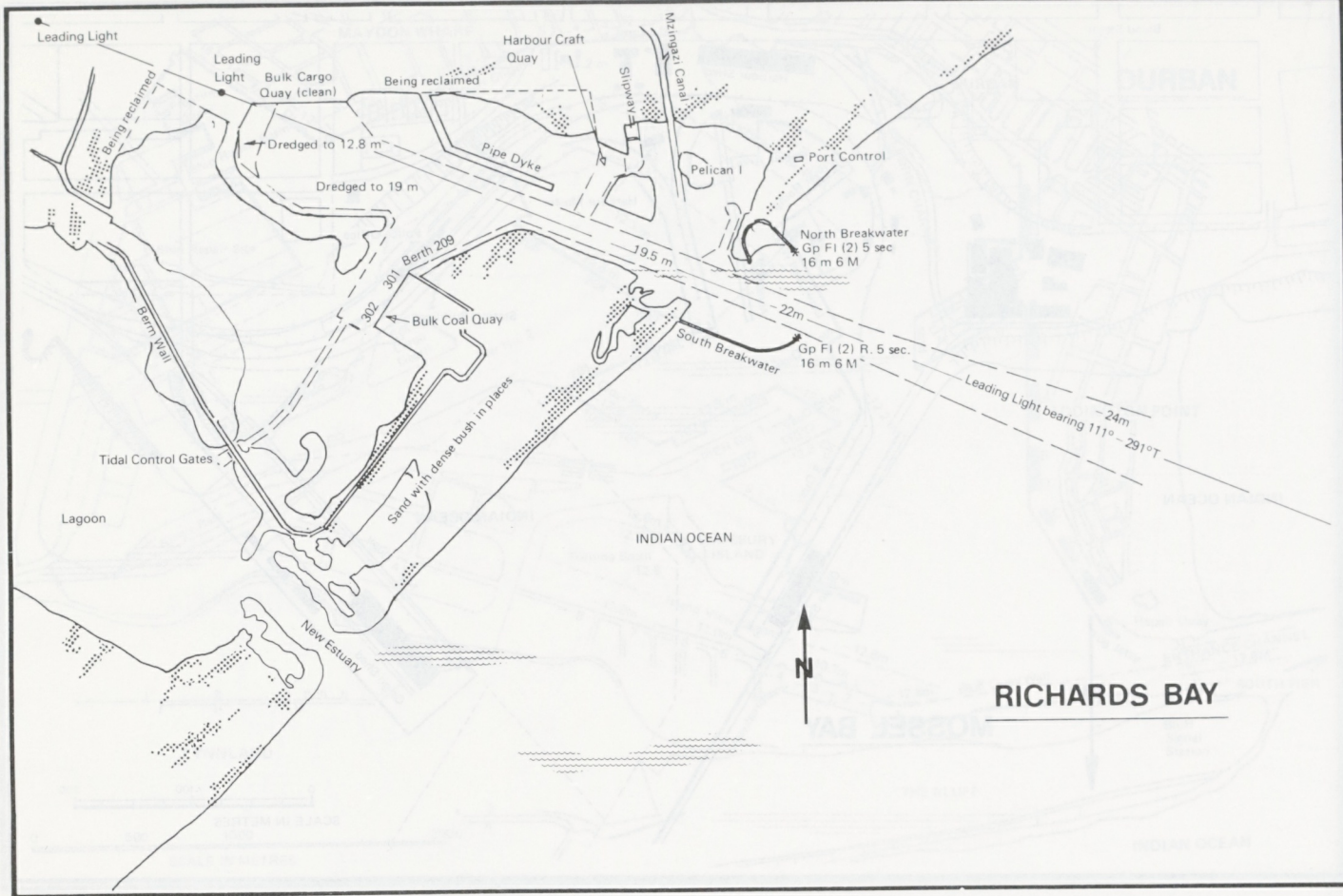


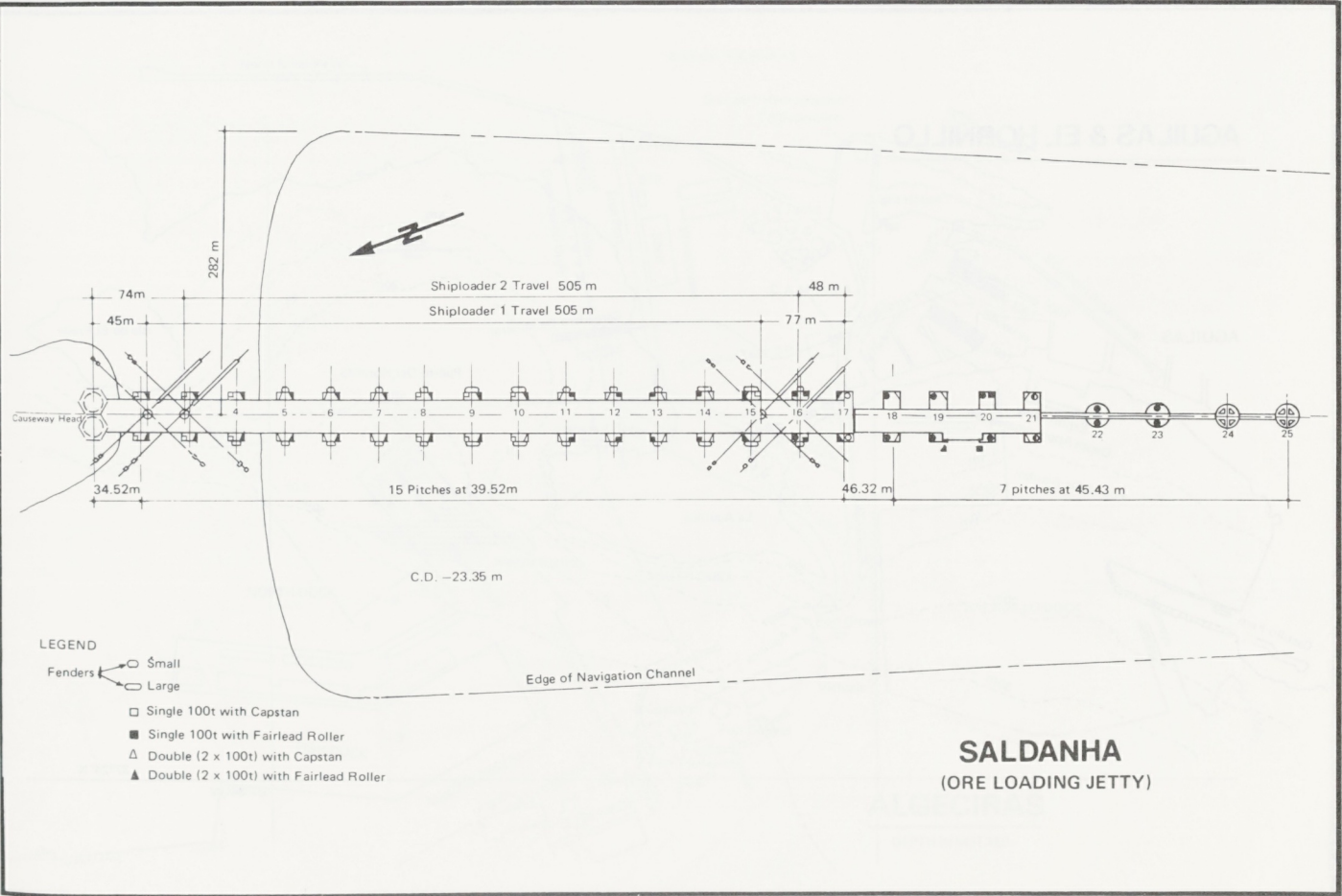
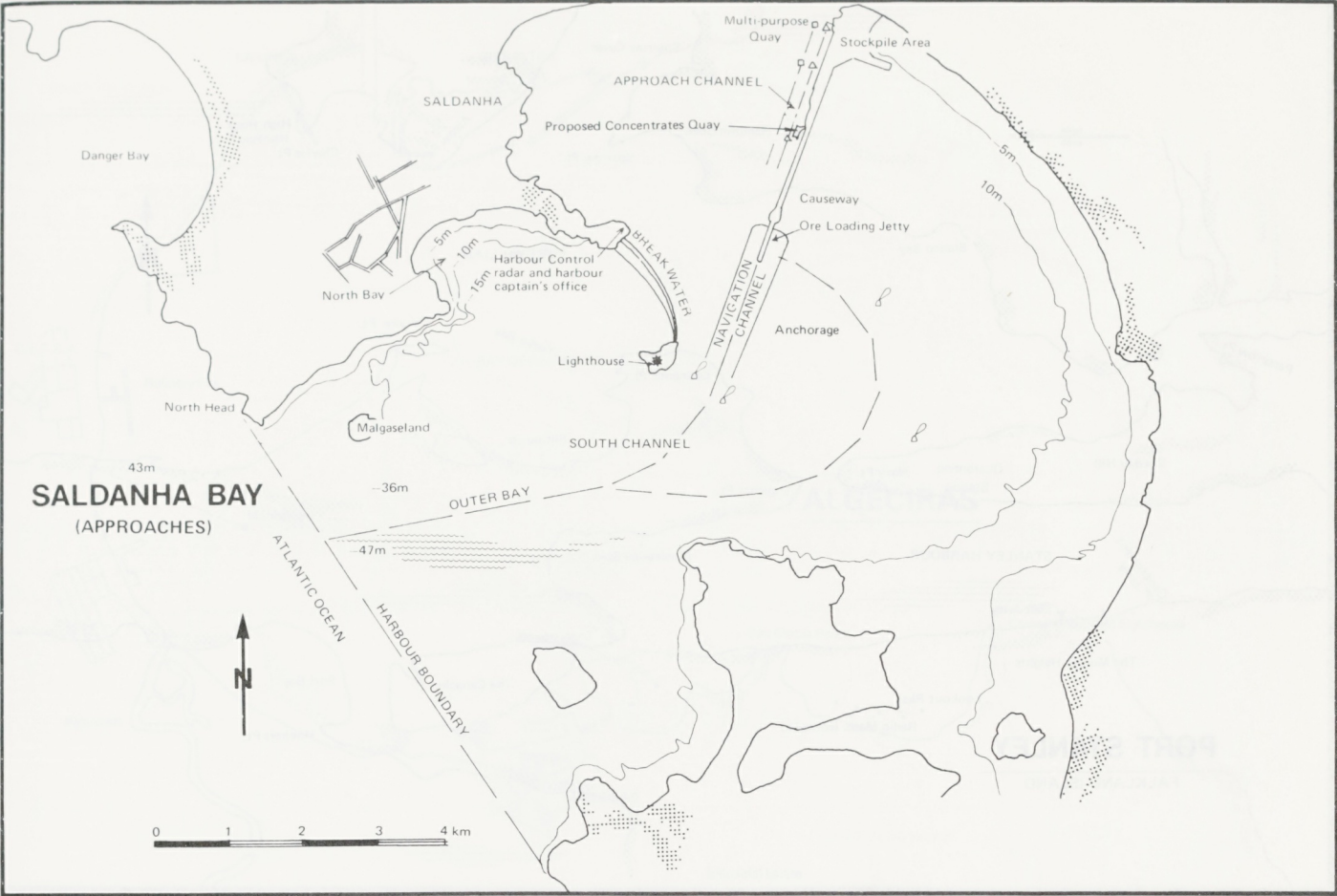


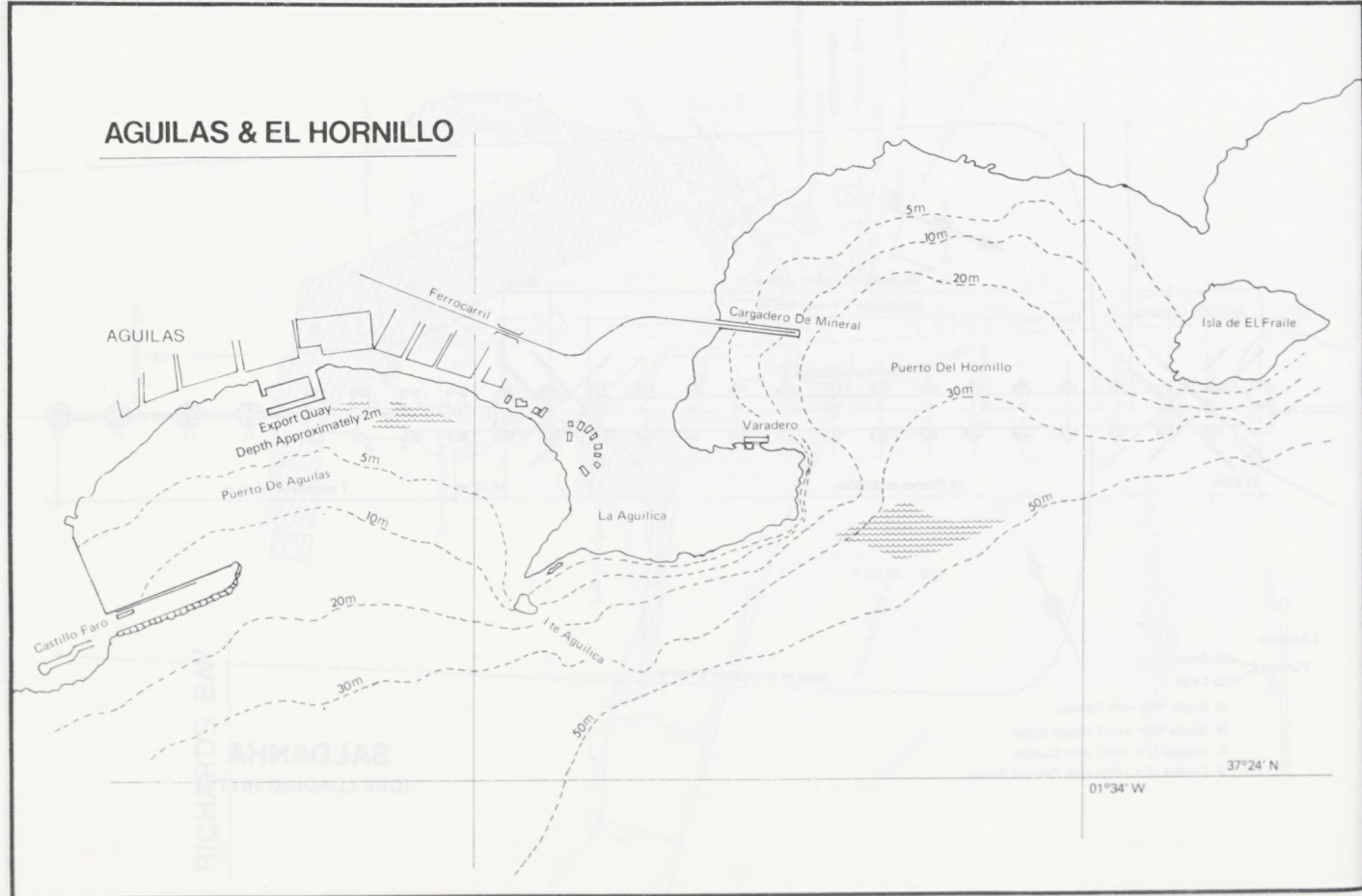
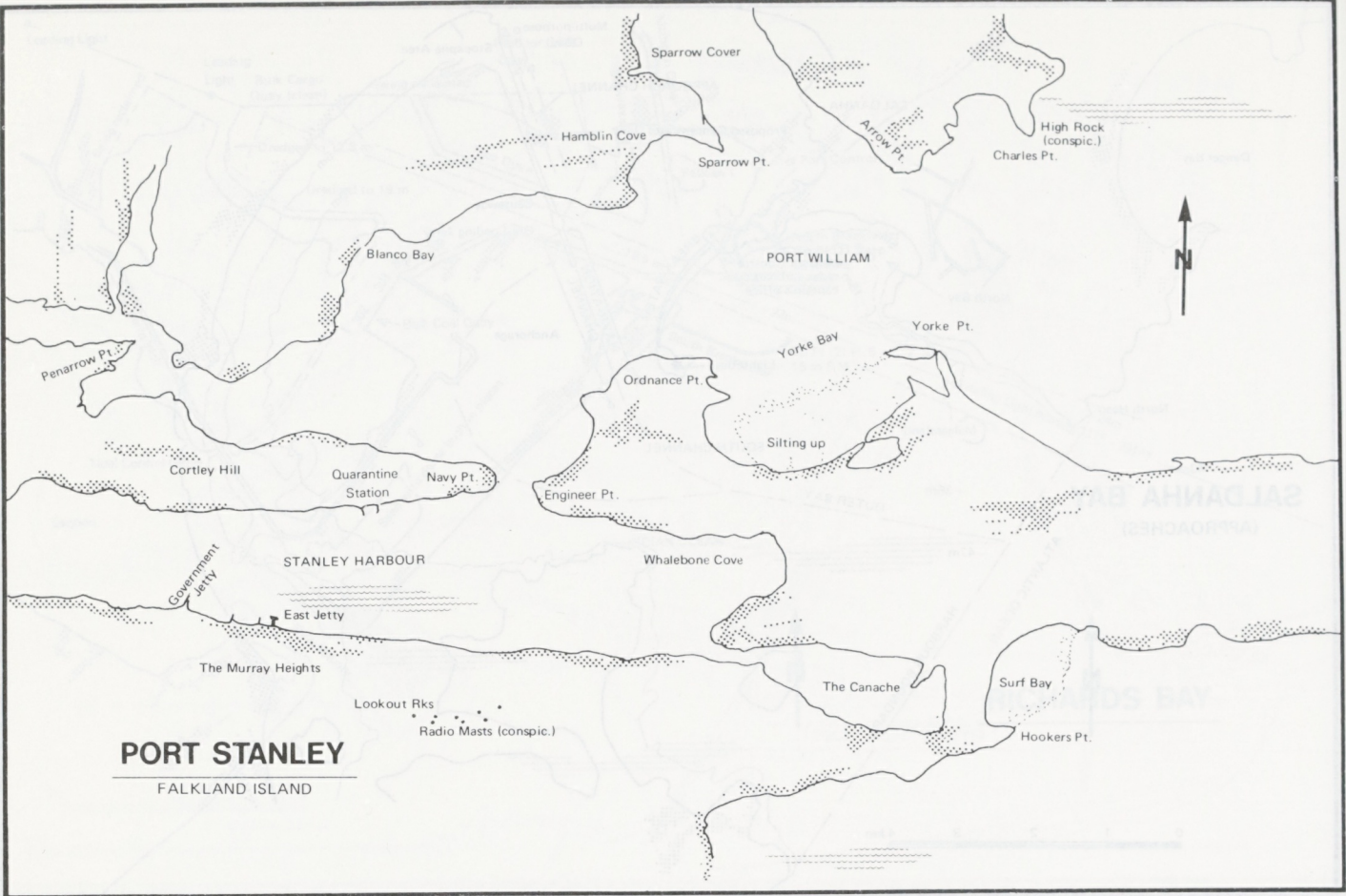


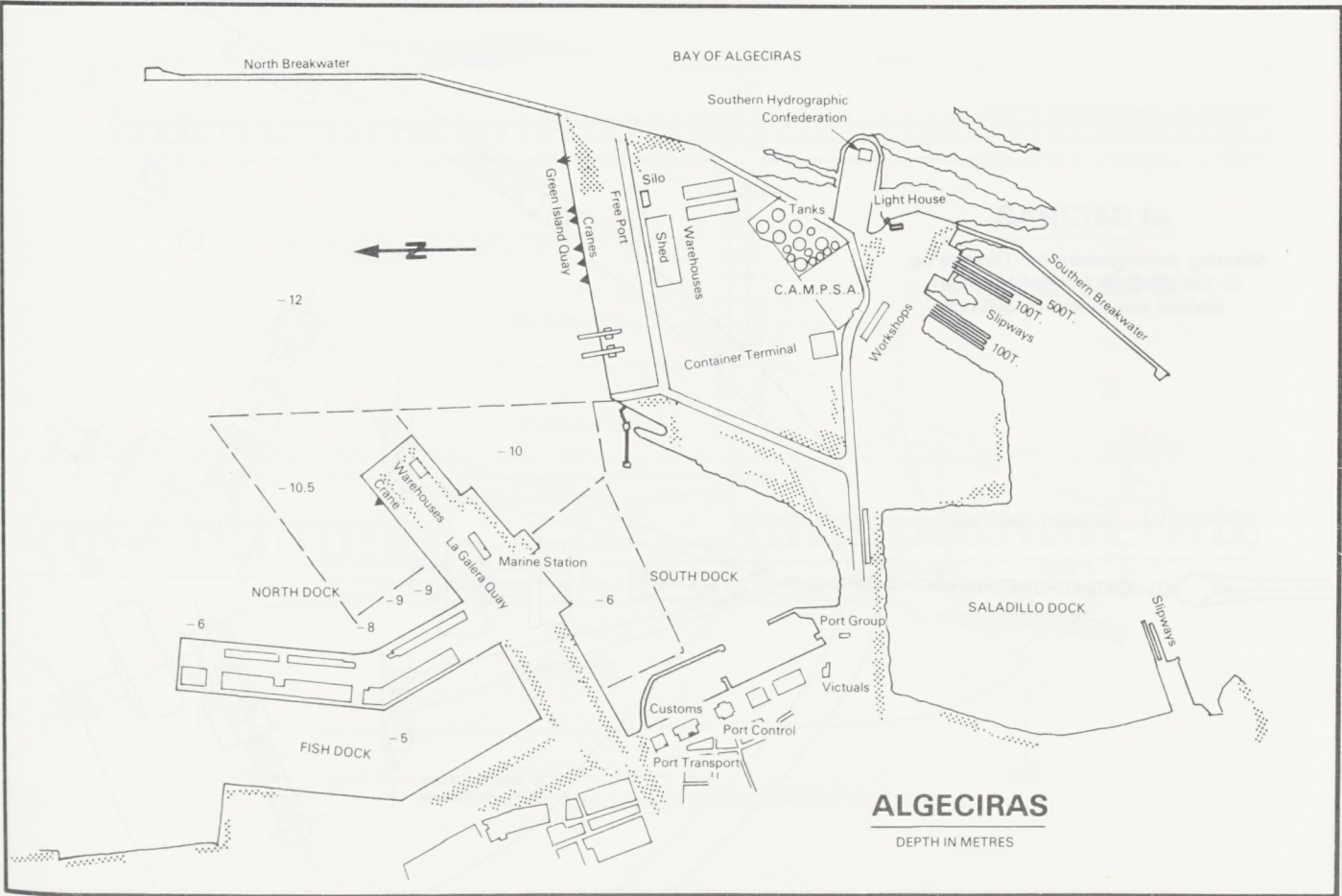


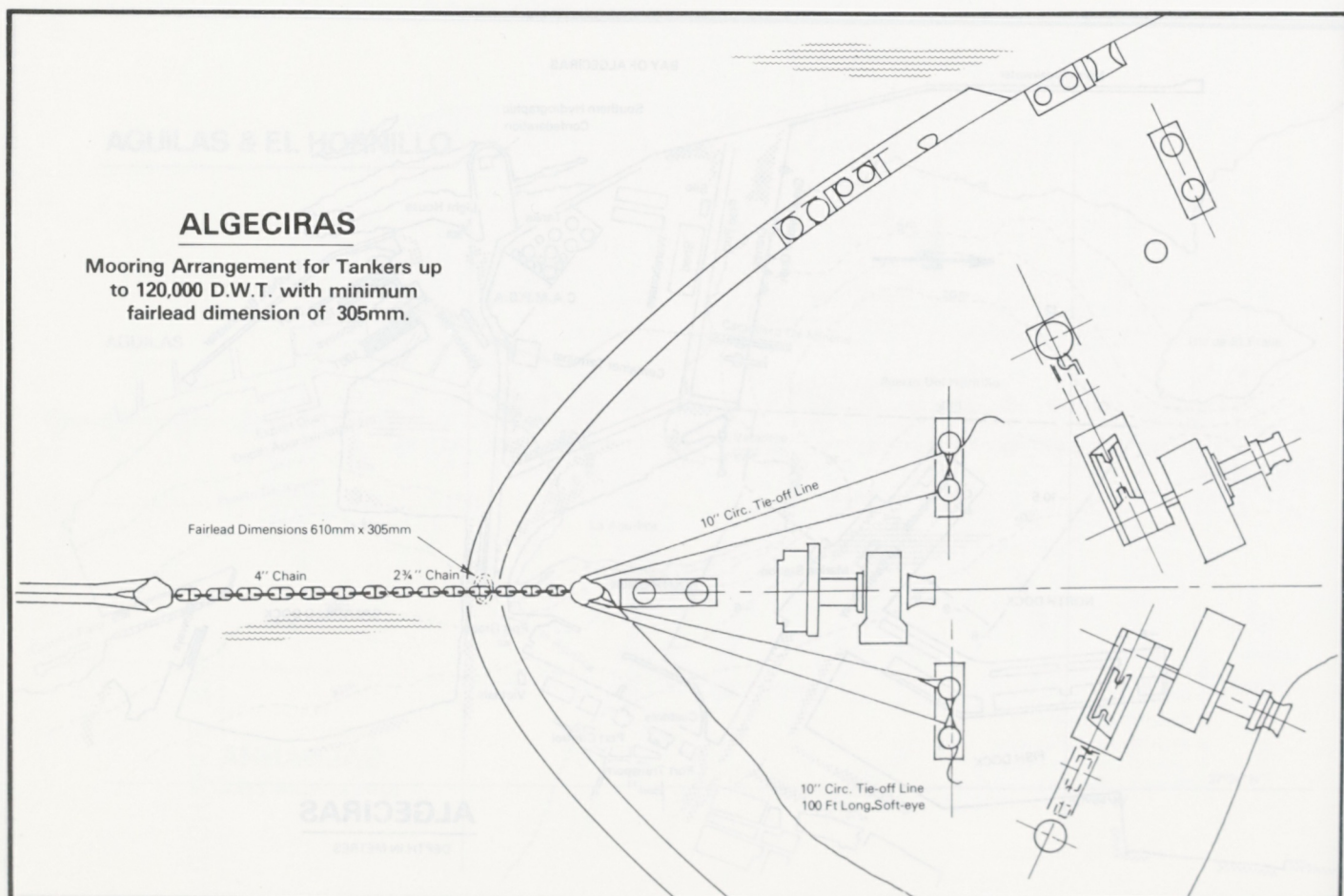
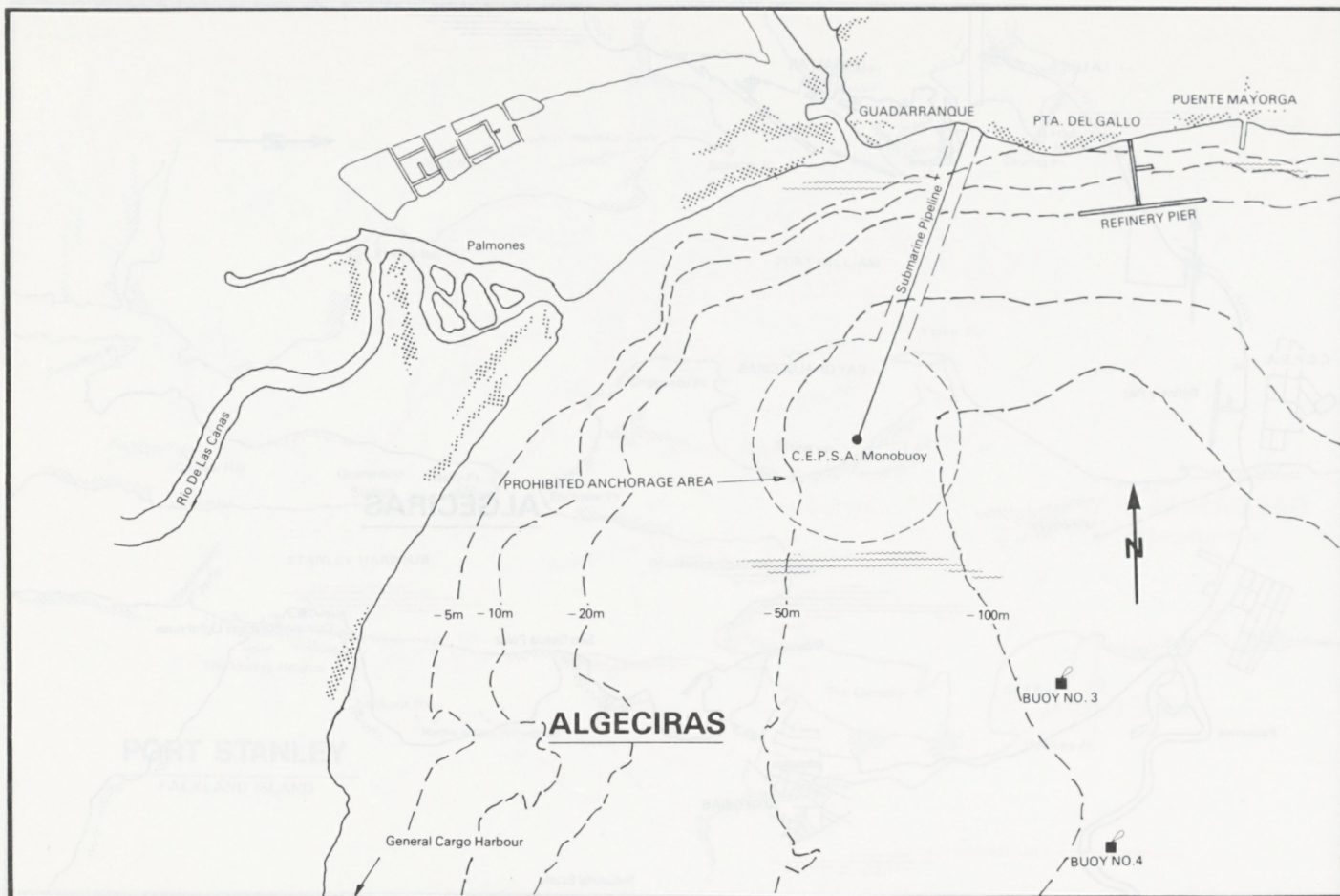
SOUTH AFRICA

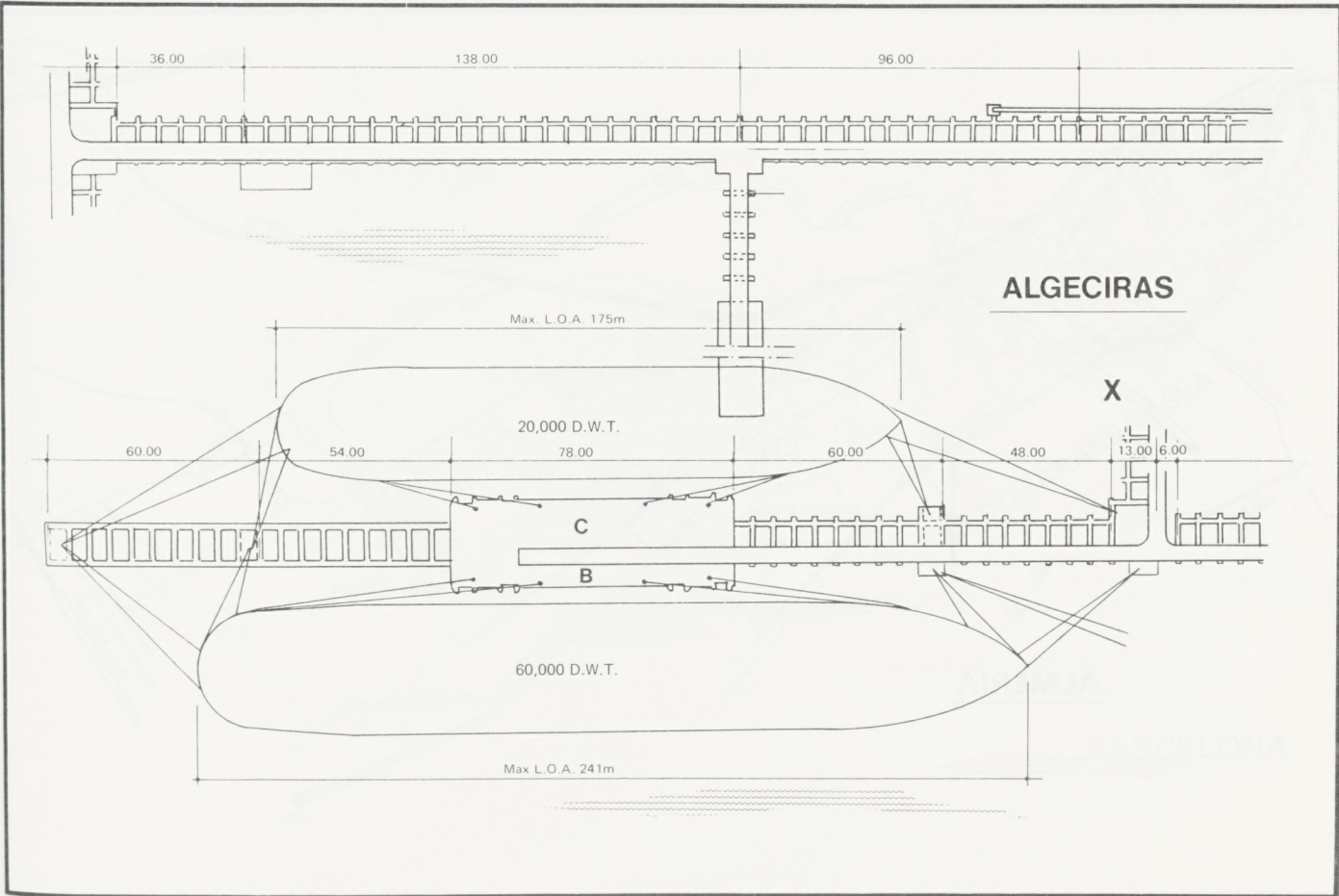
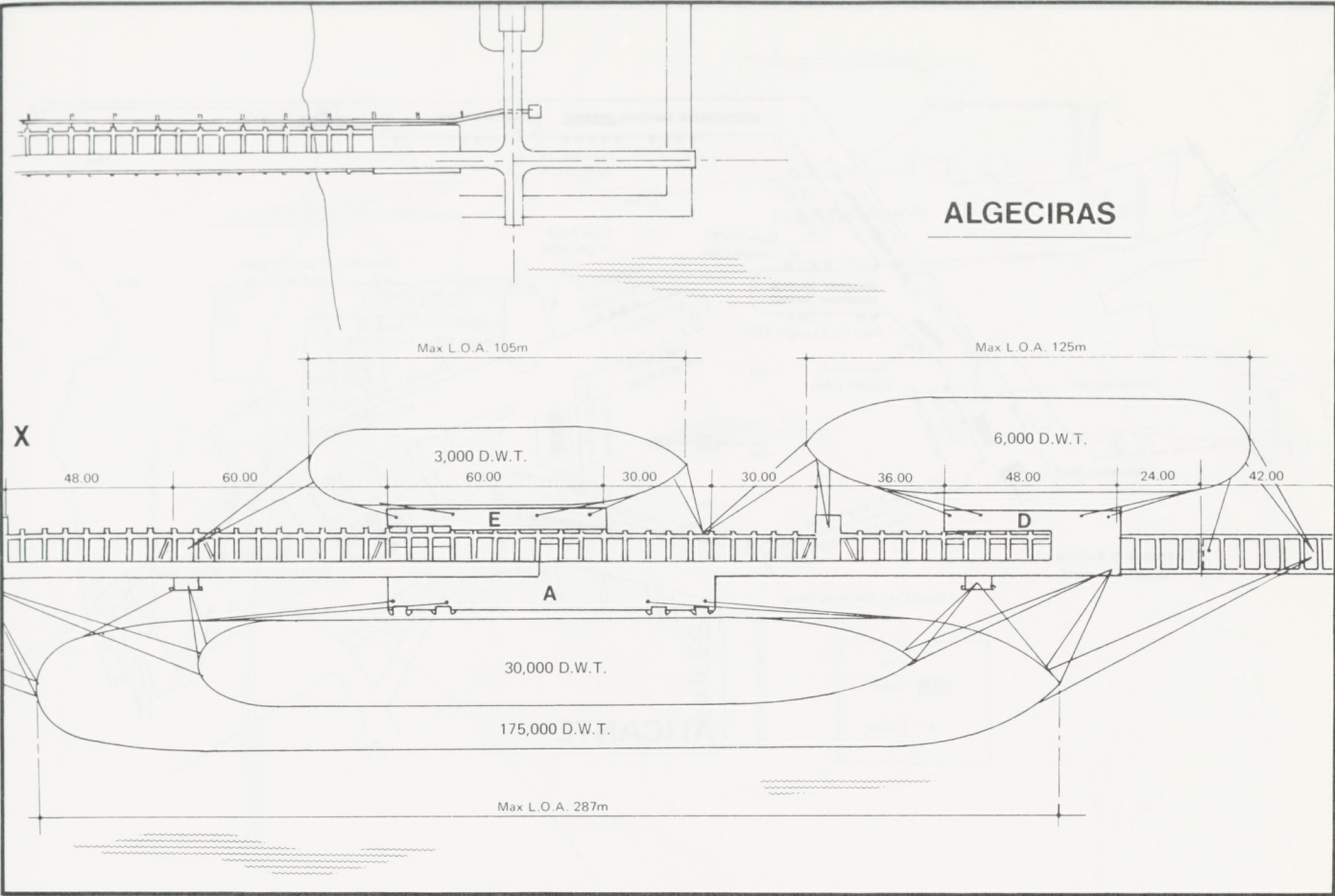


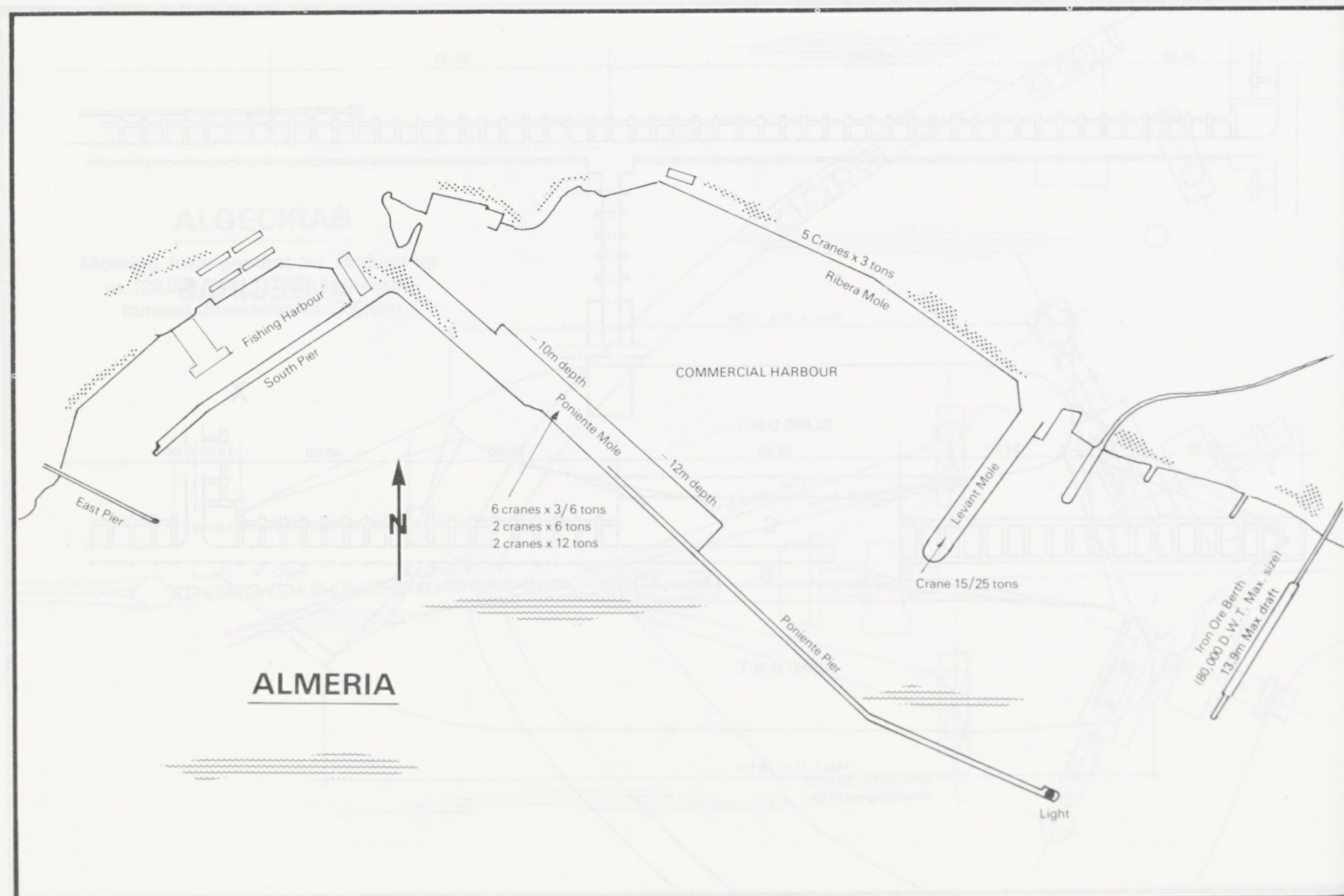
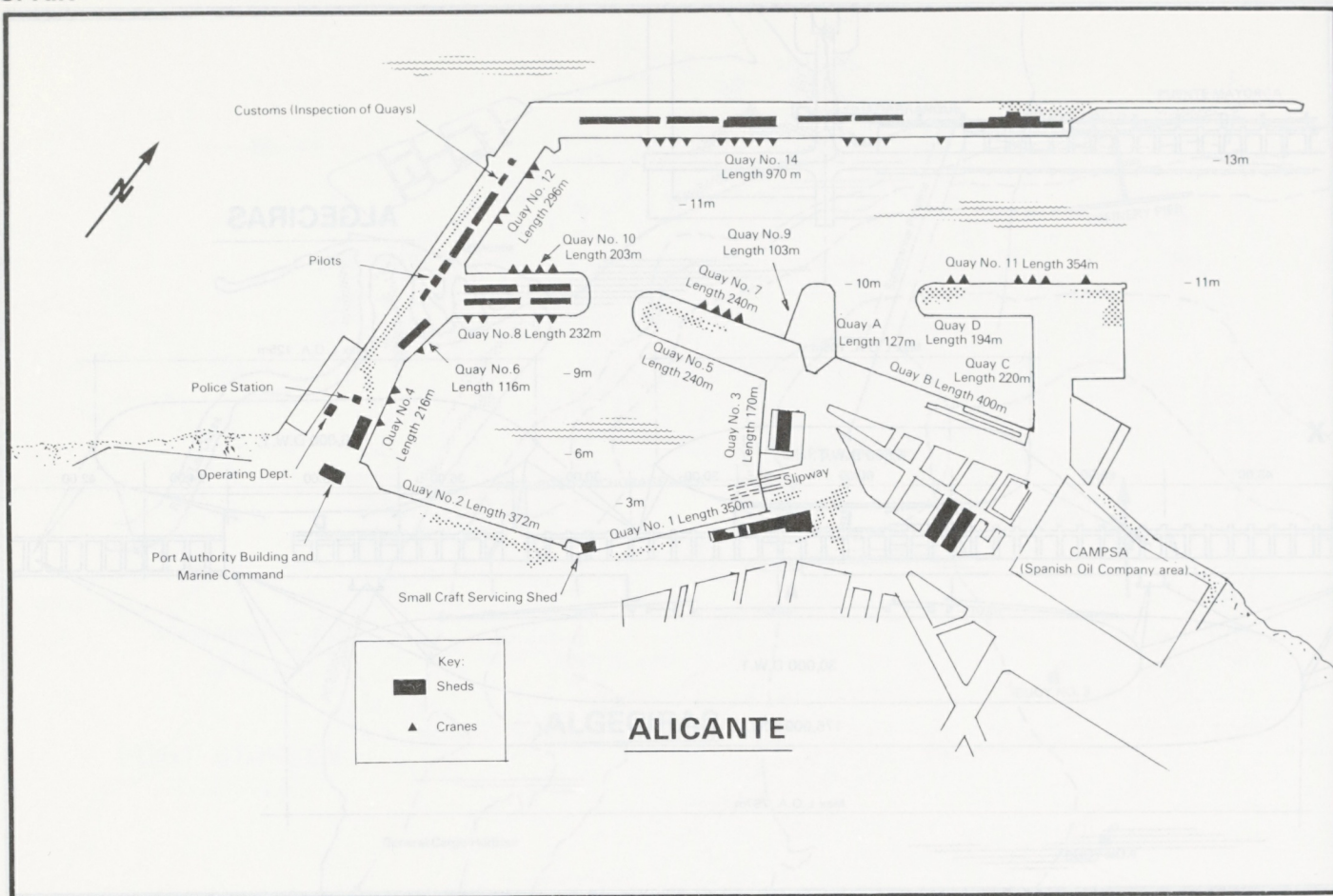


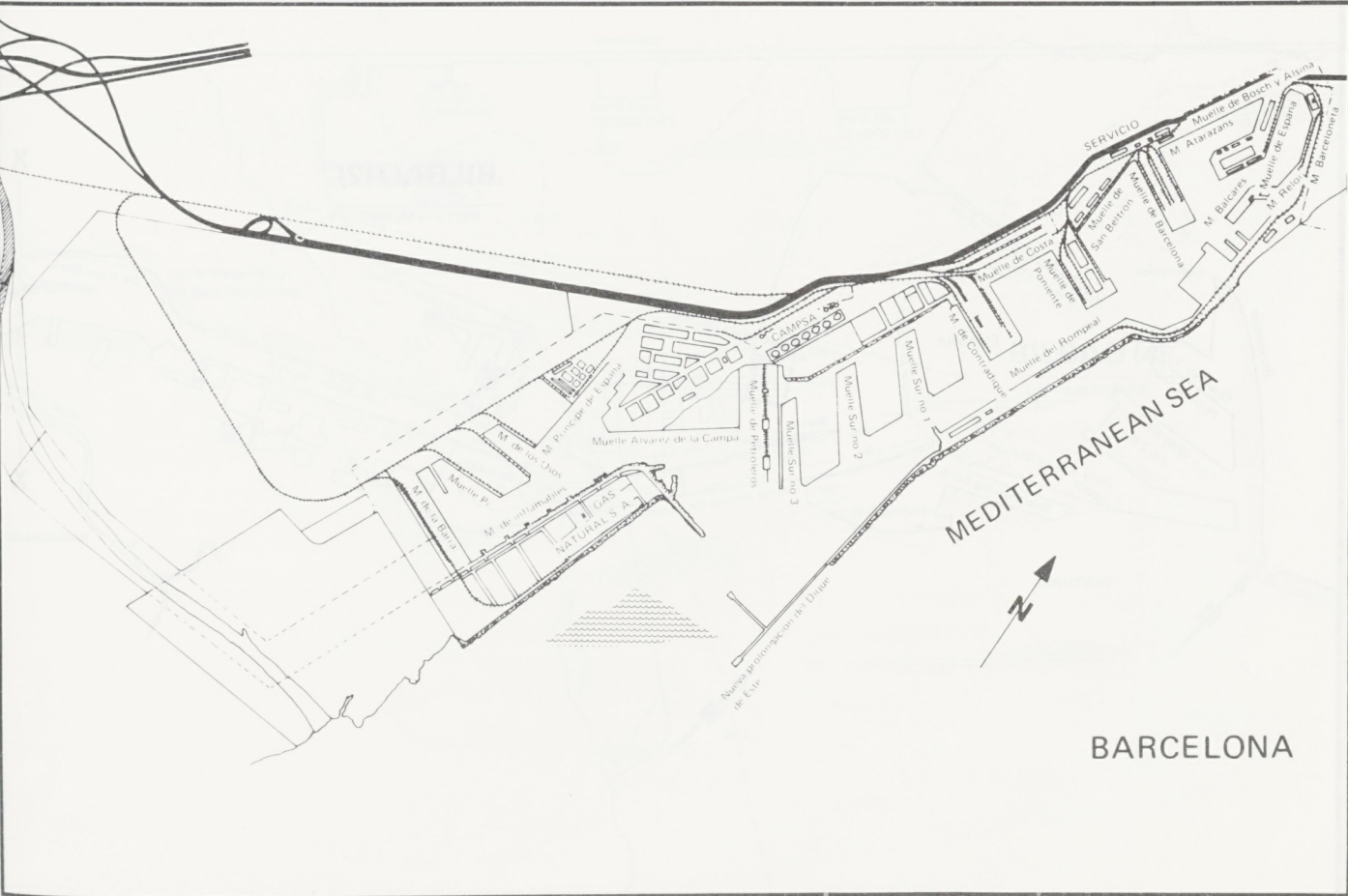
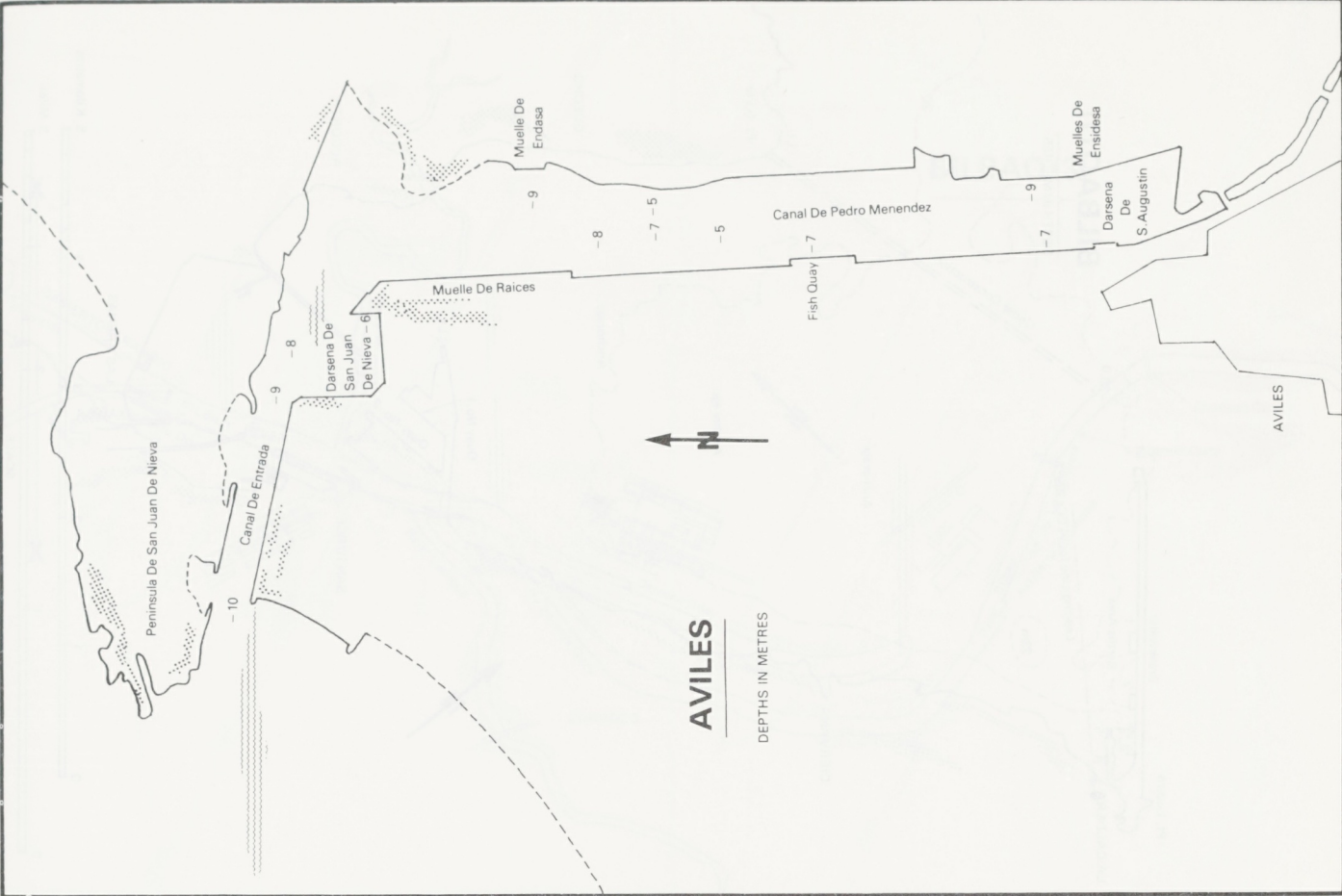


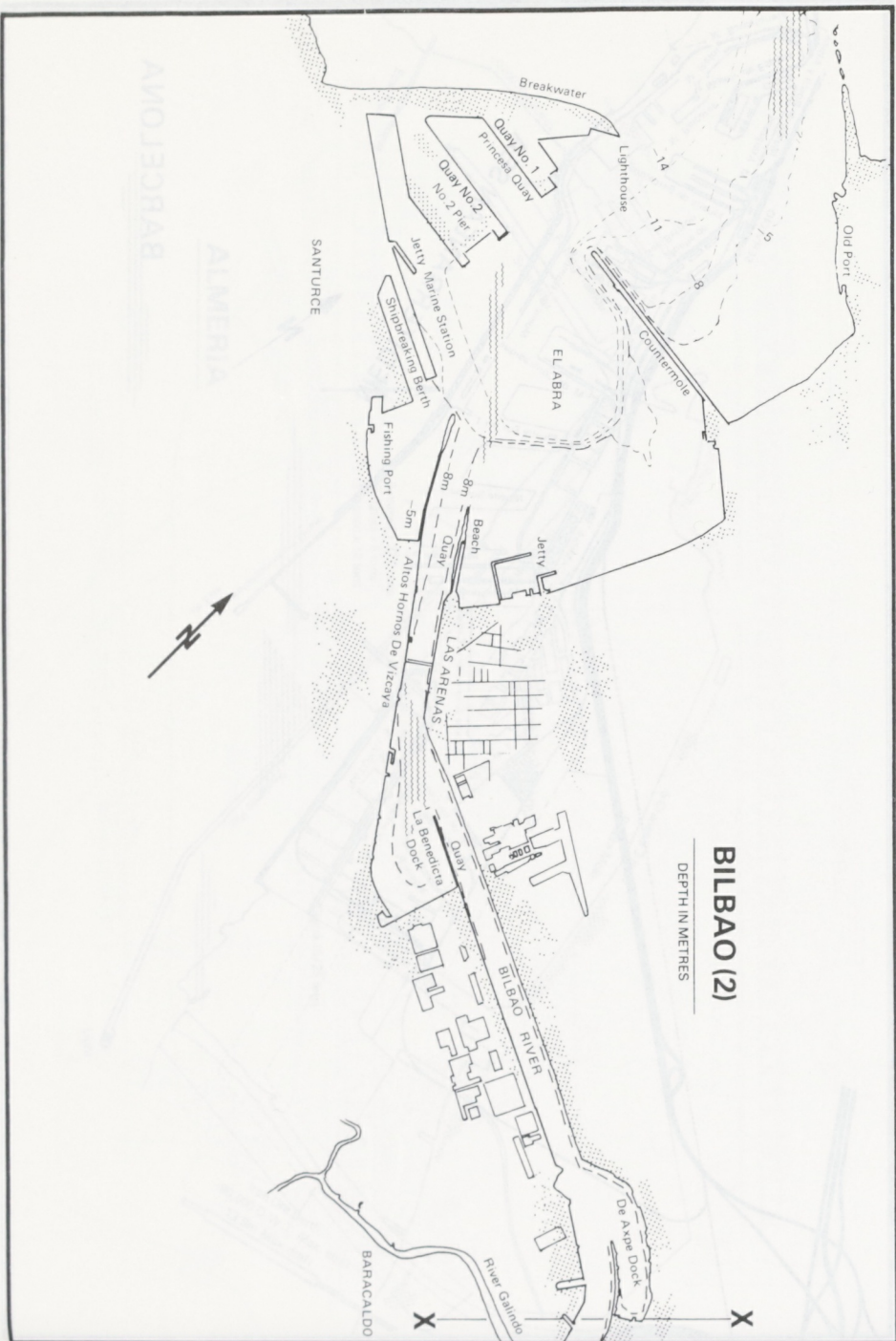
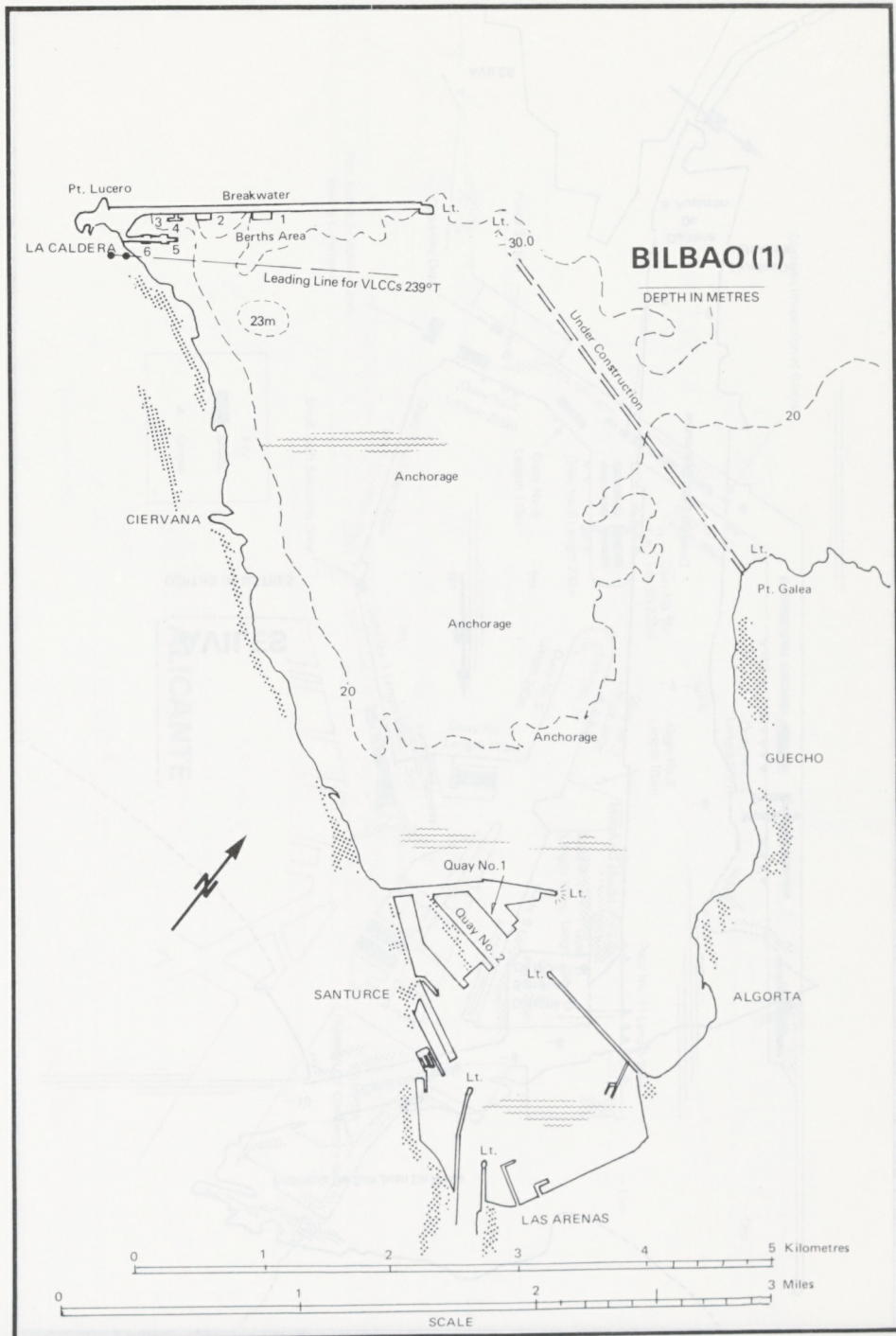


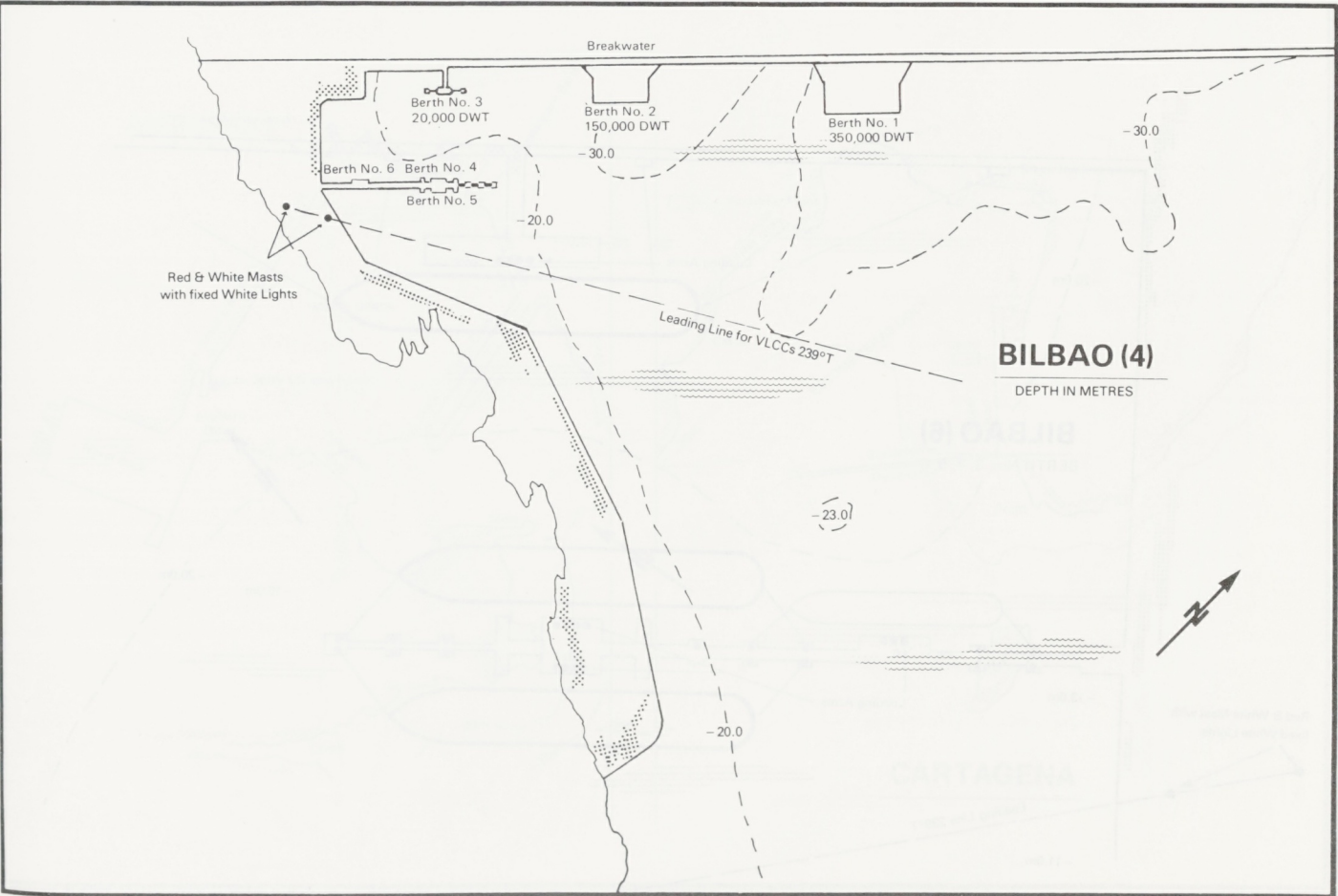
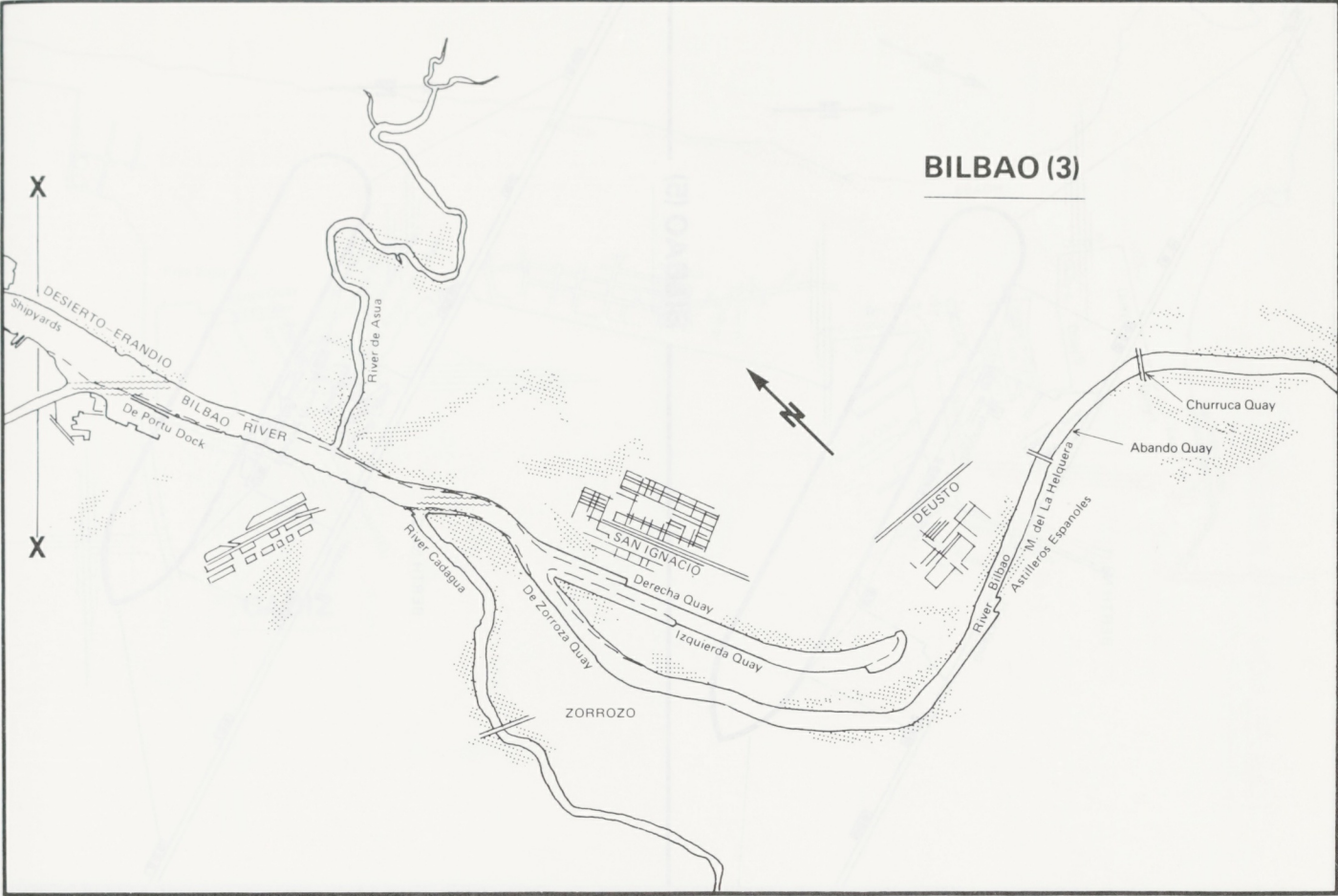


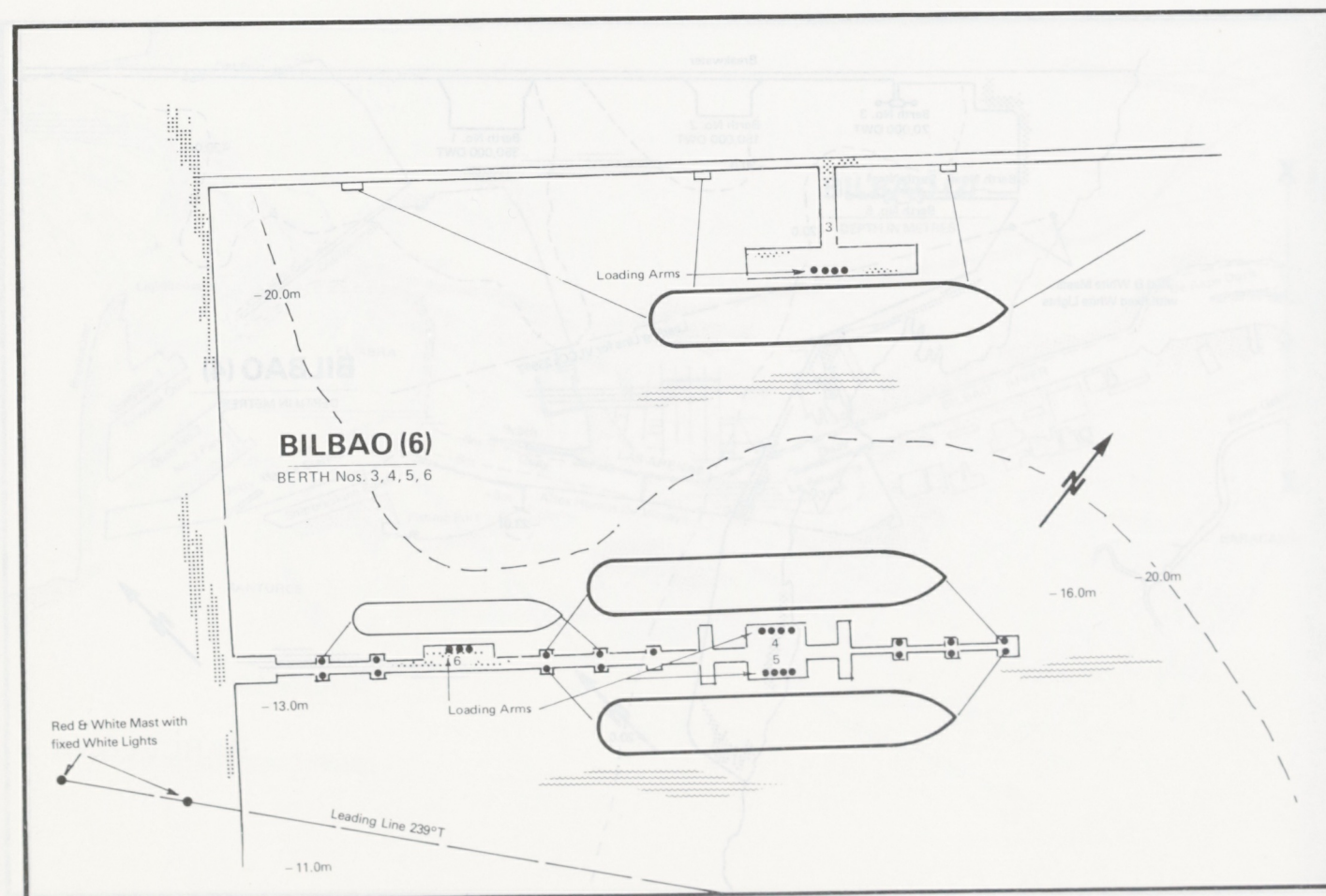
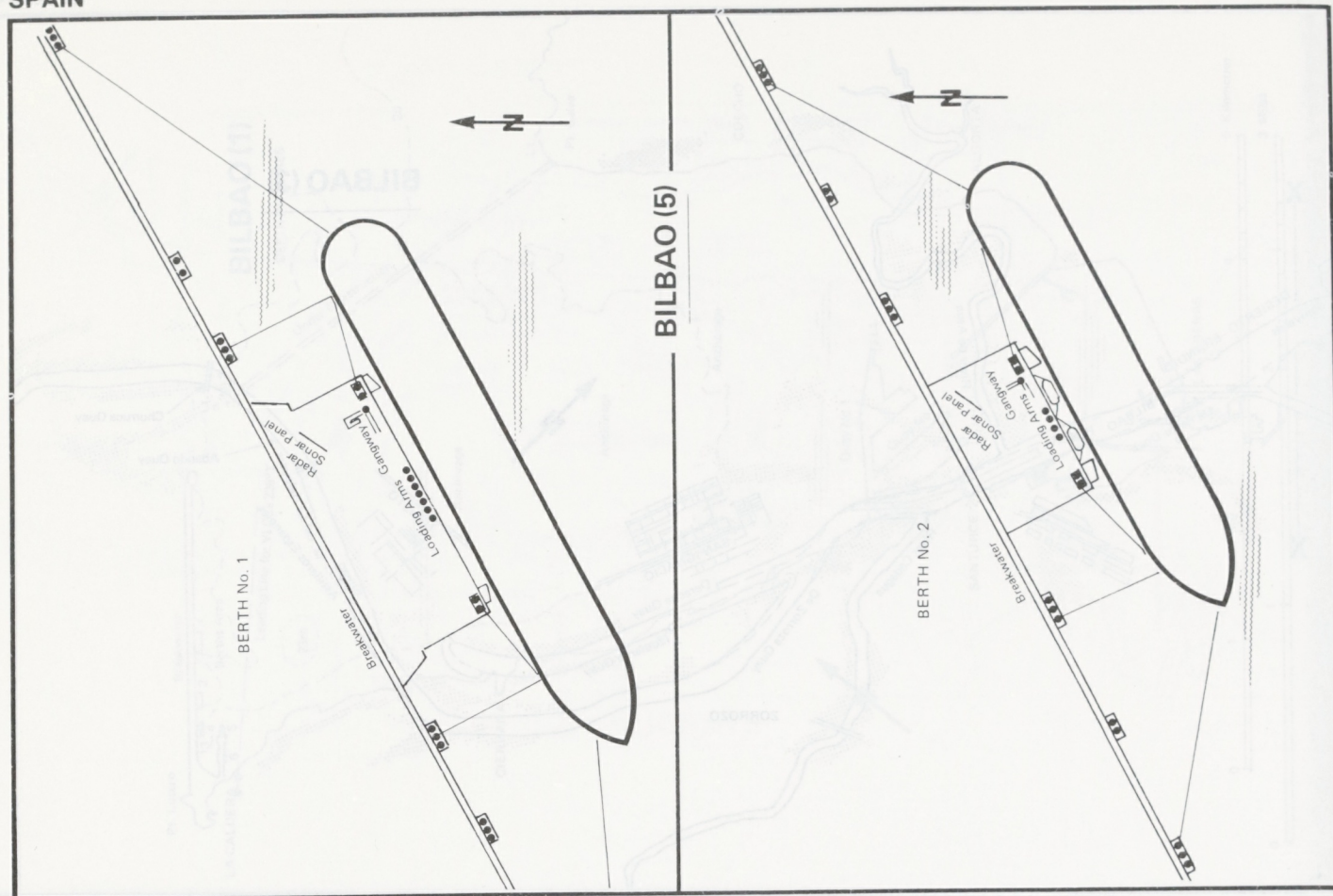


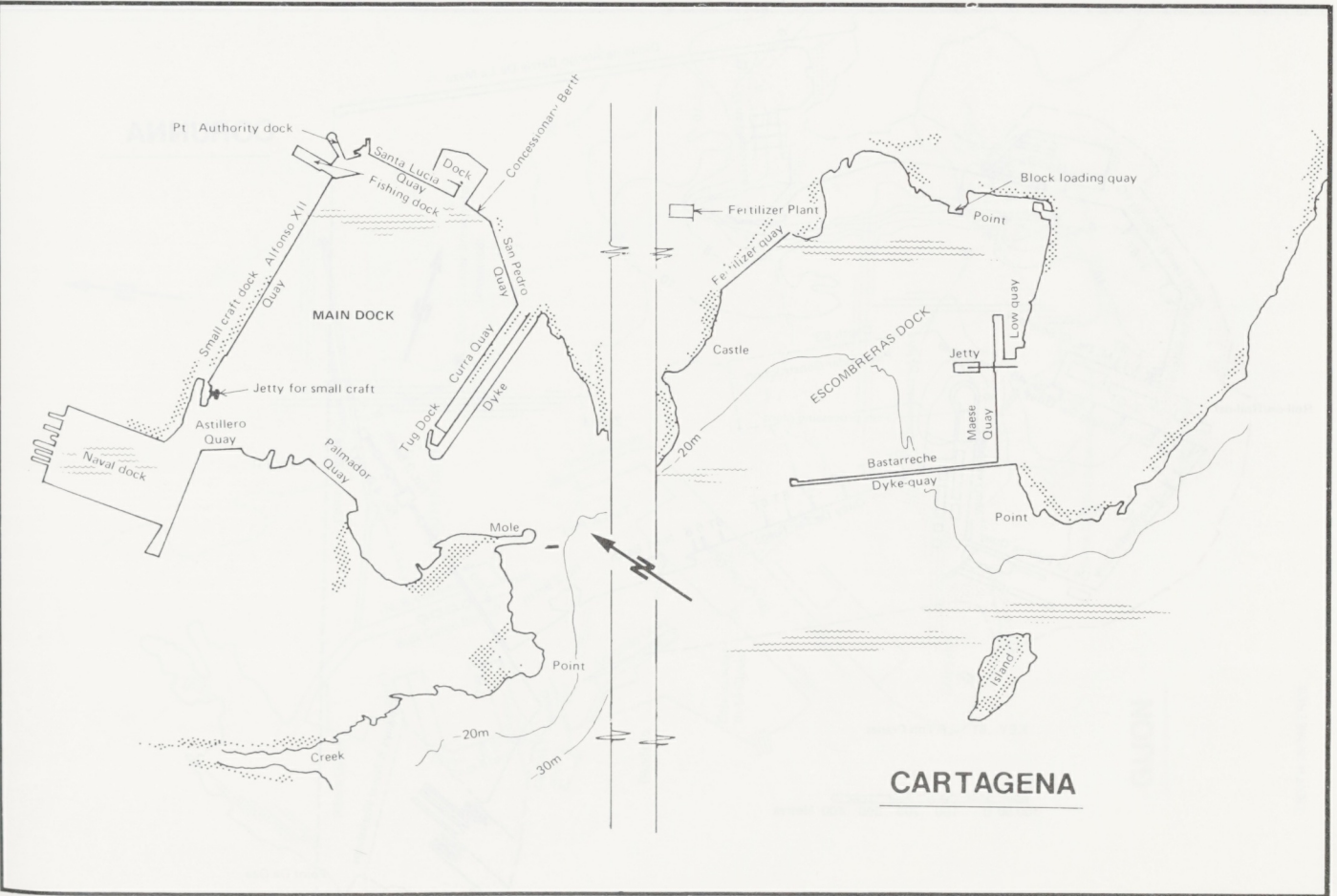
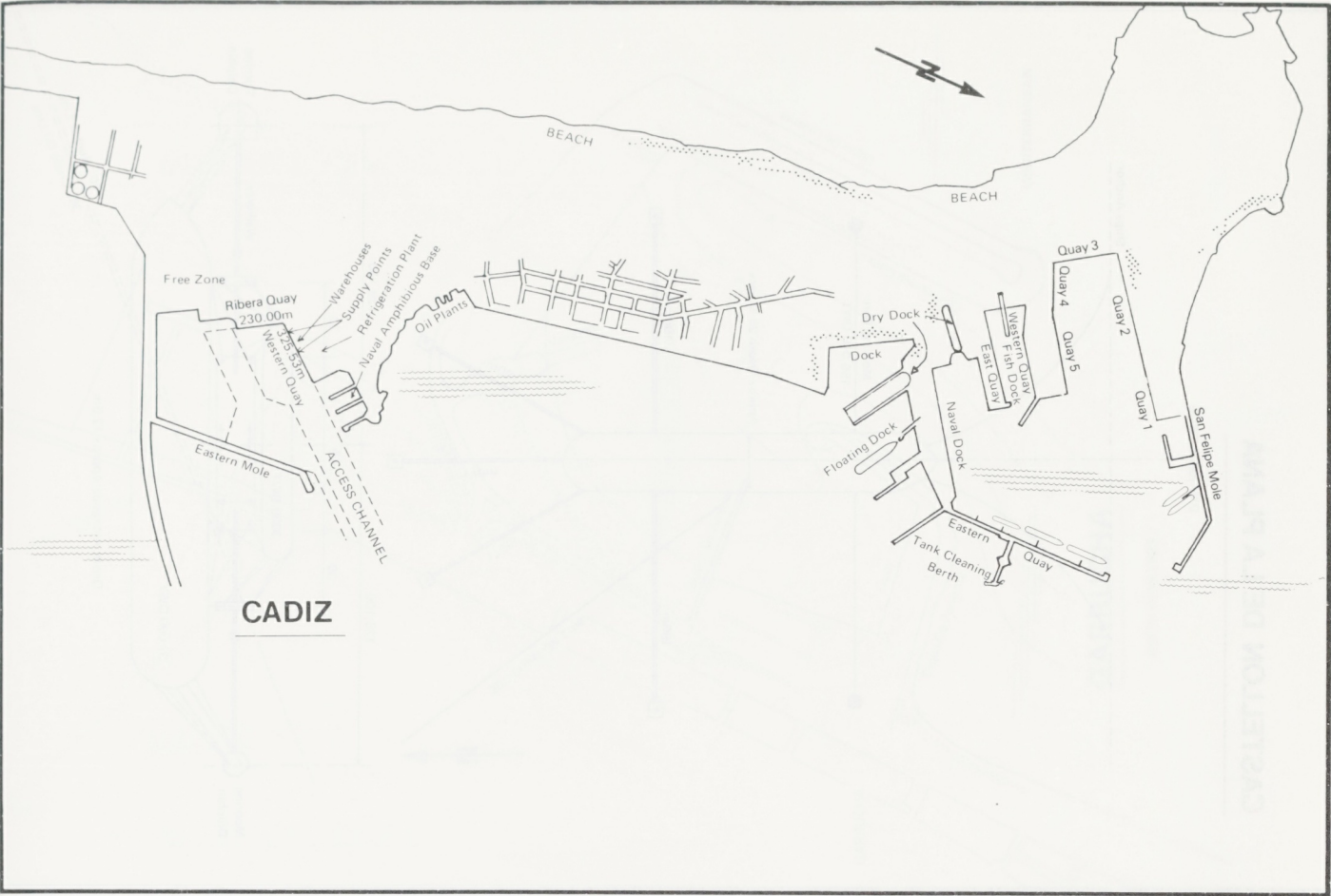


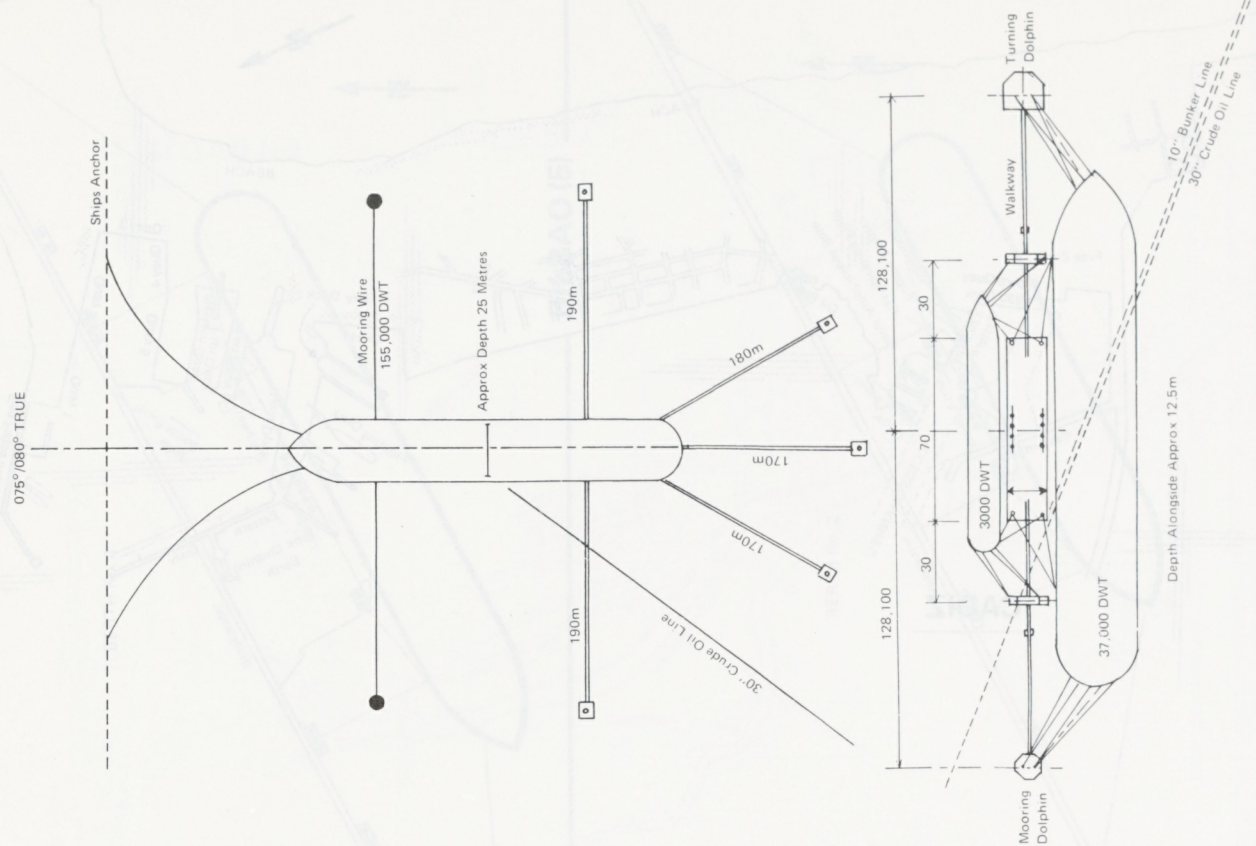


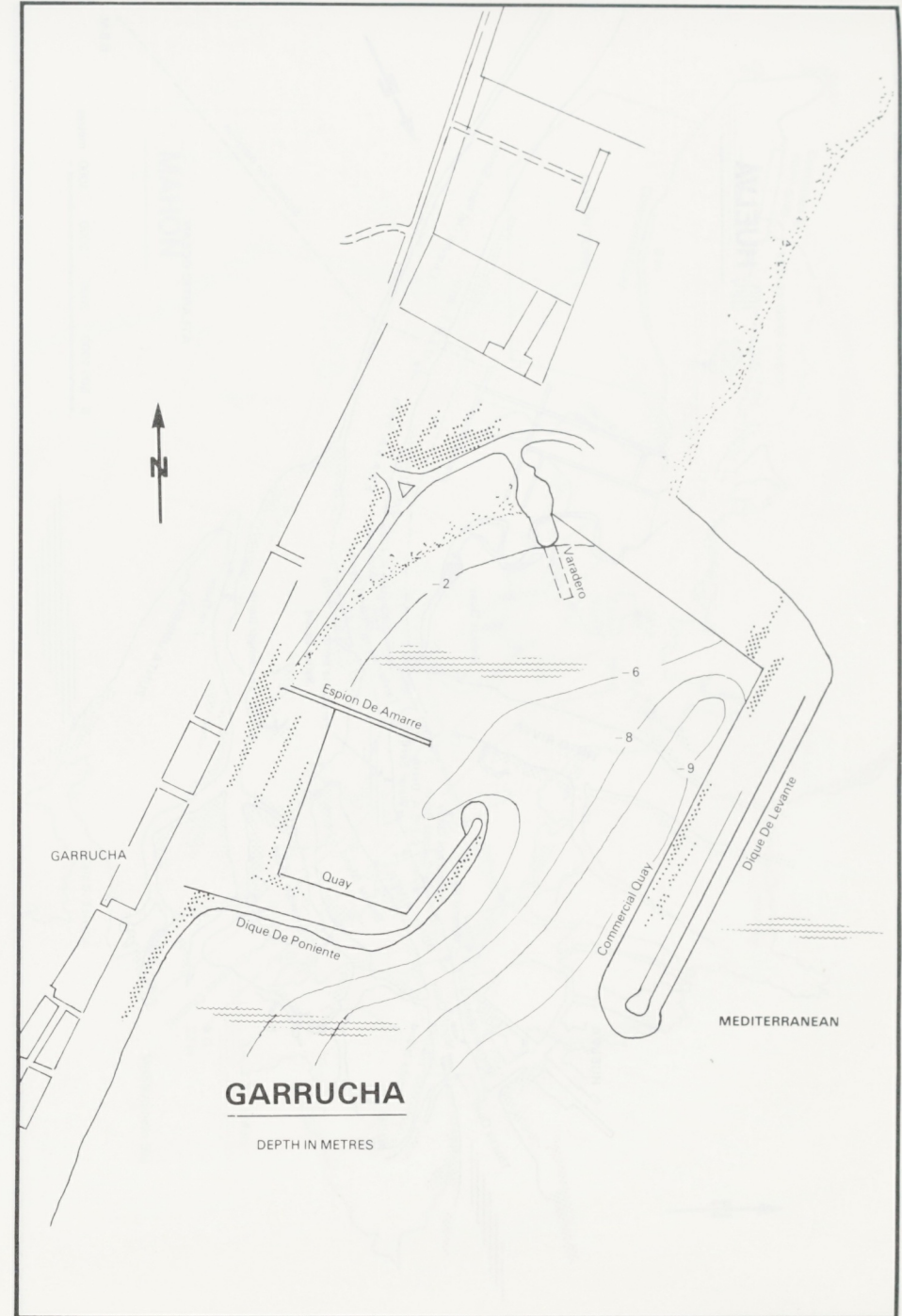
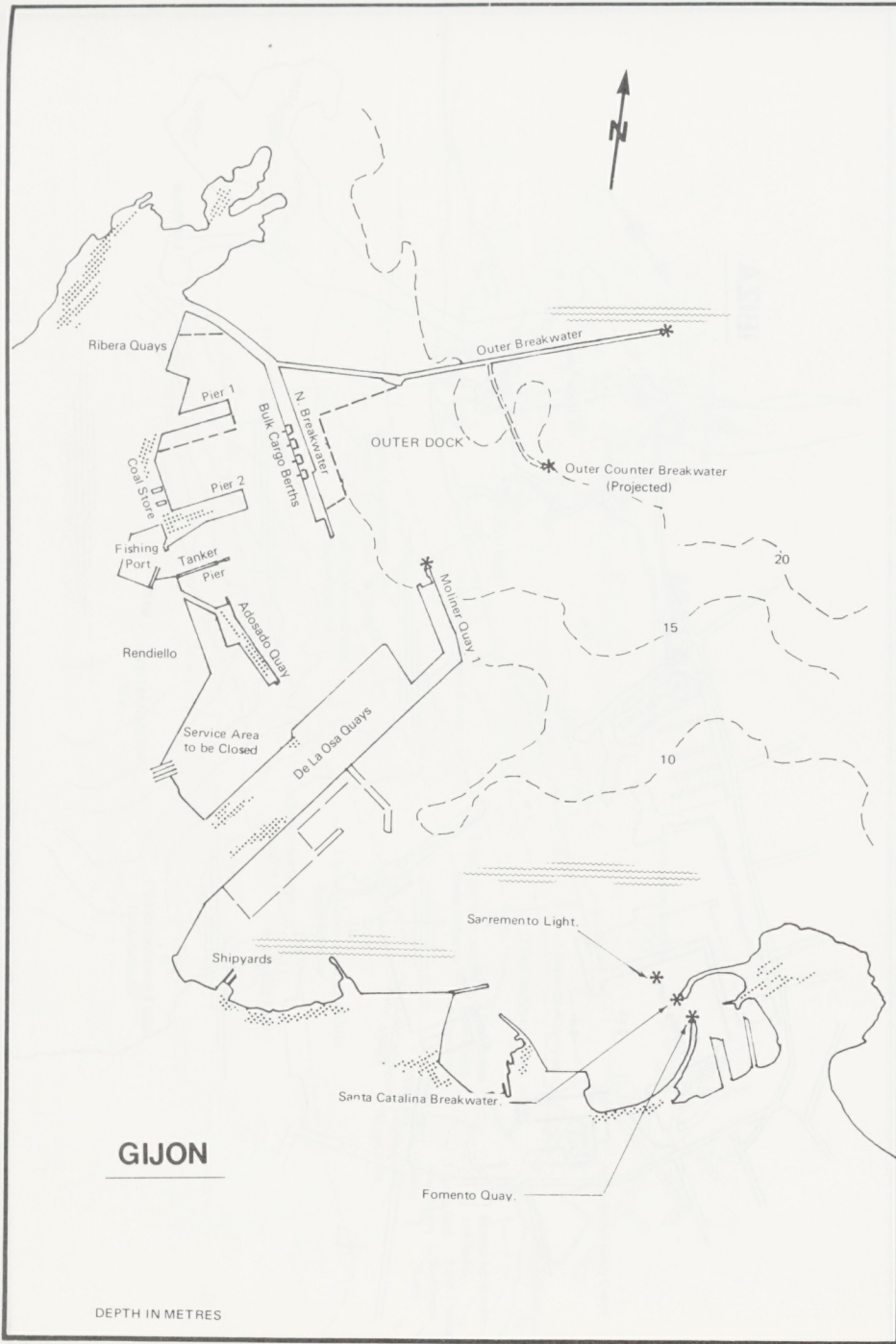


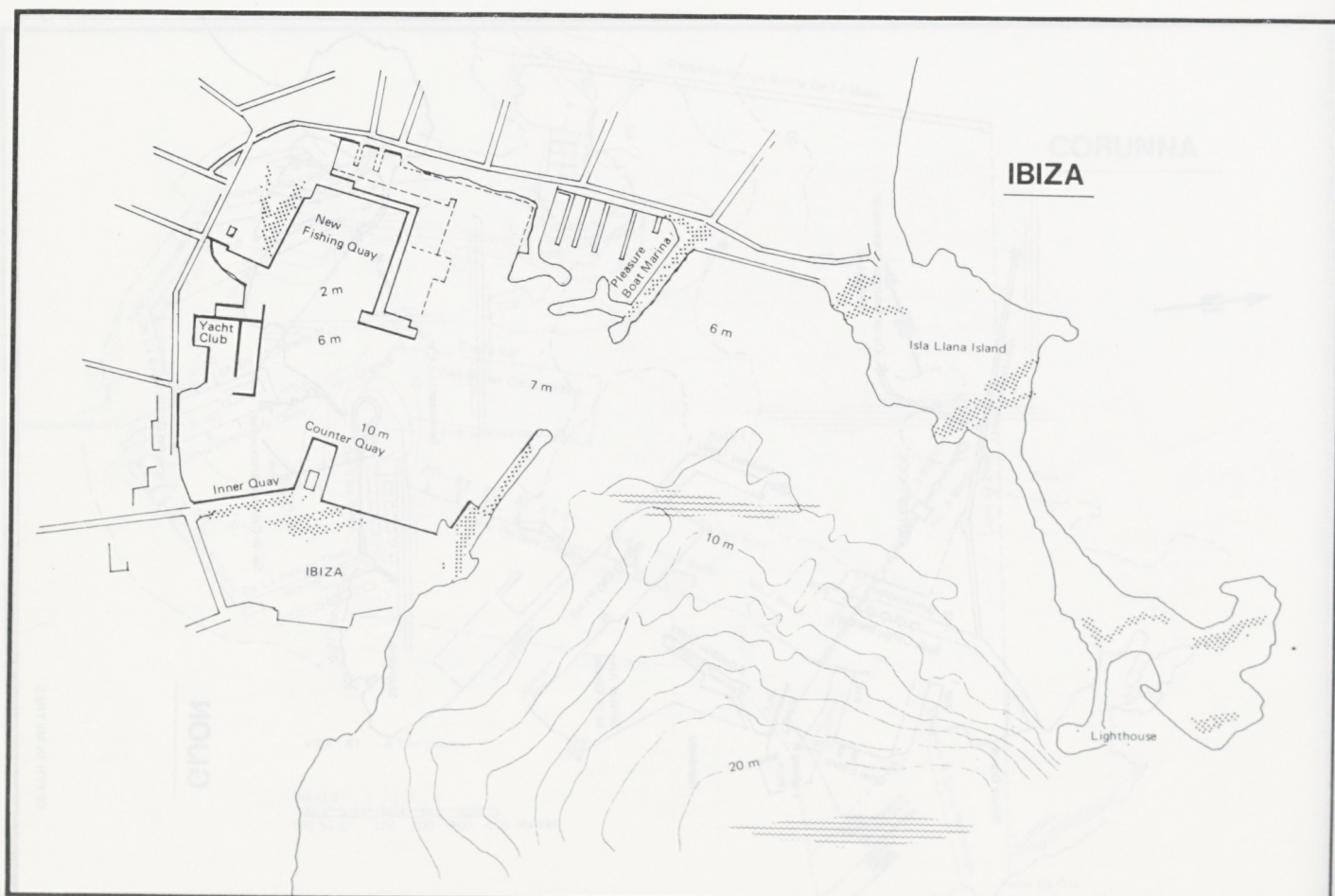
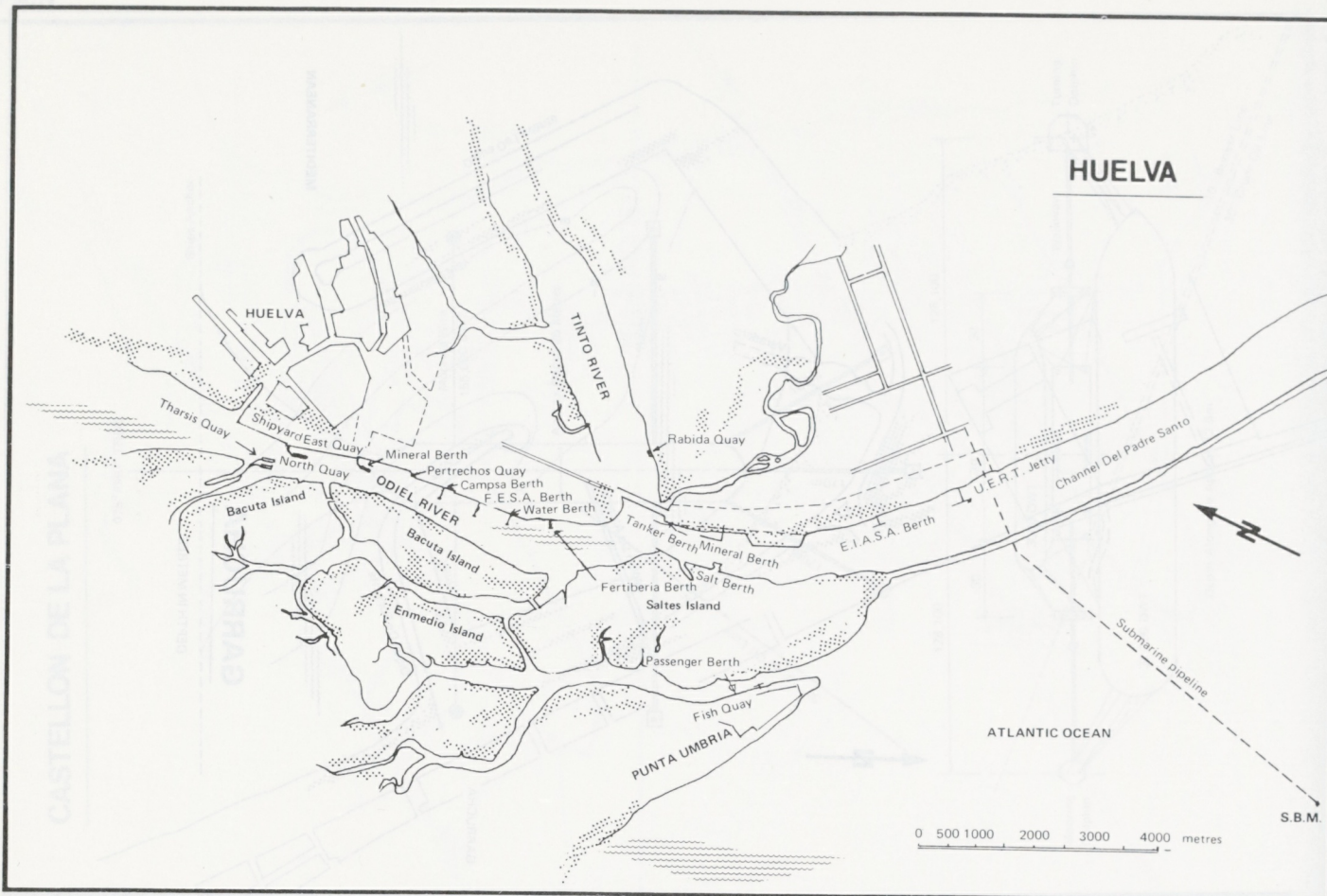


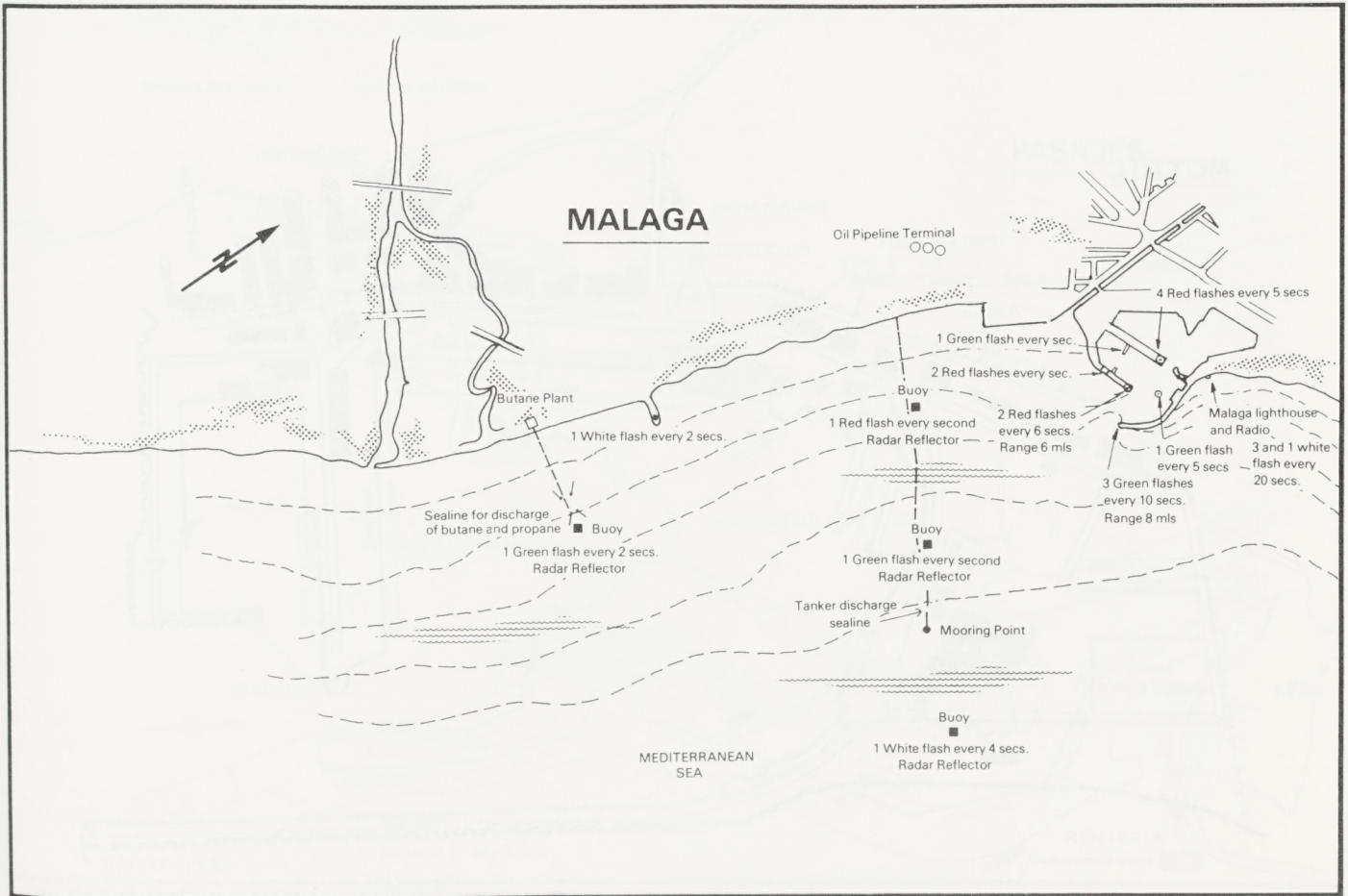


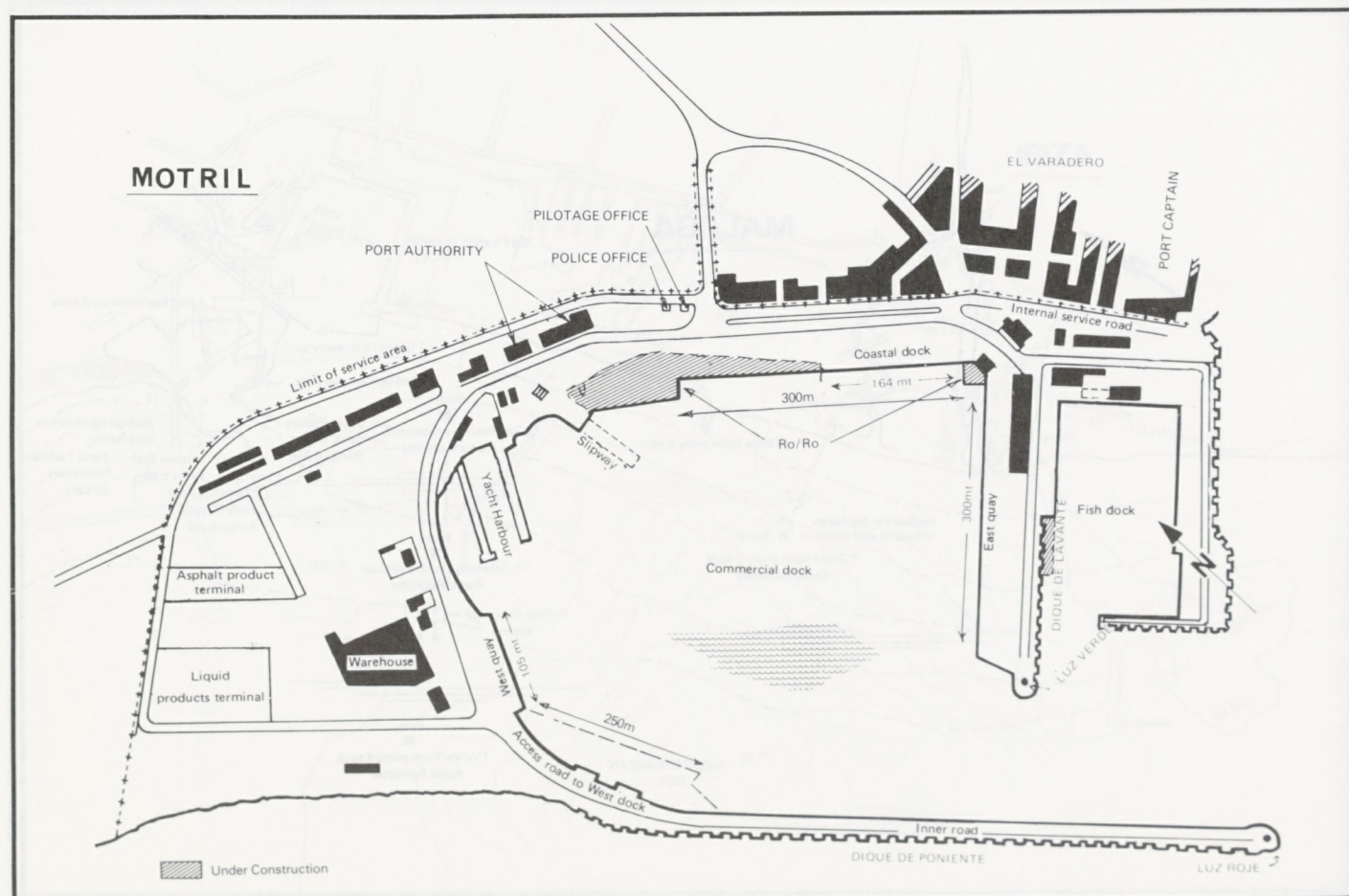
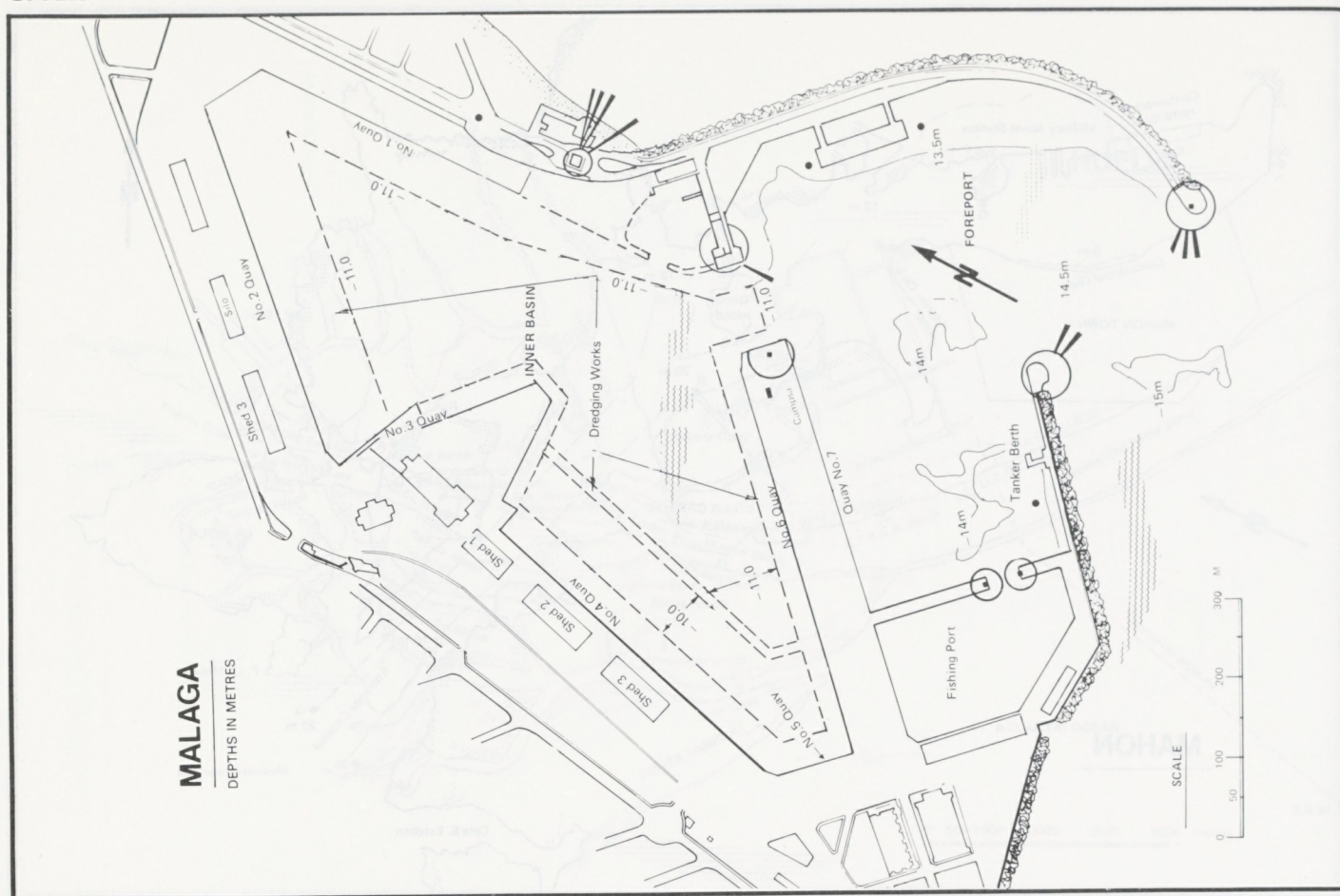


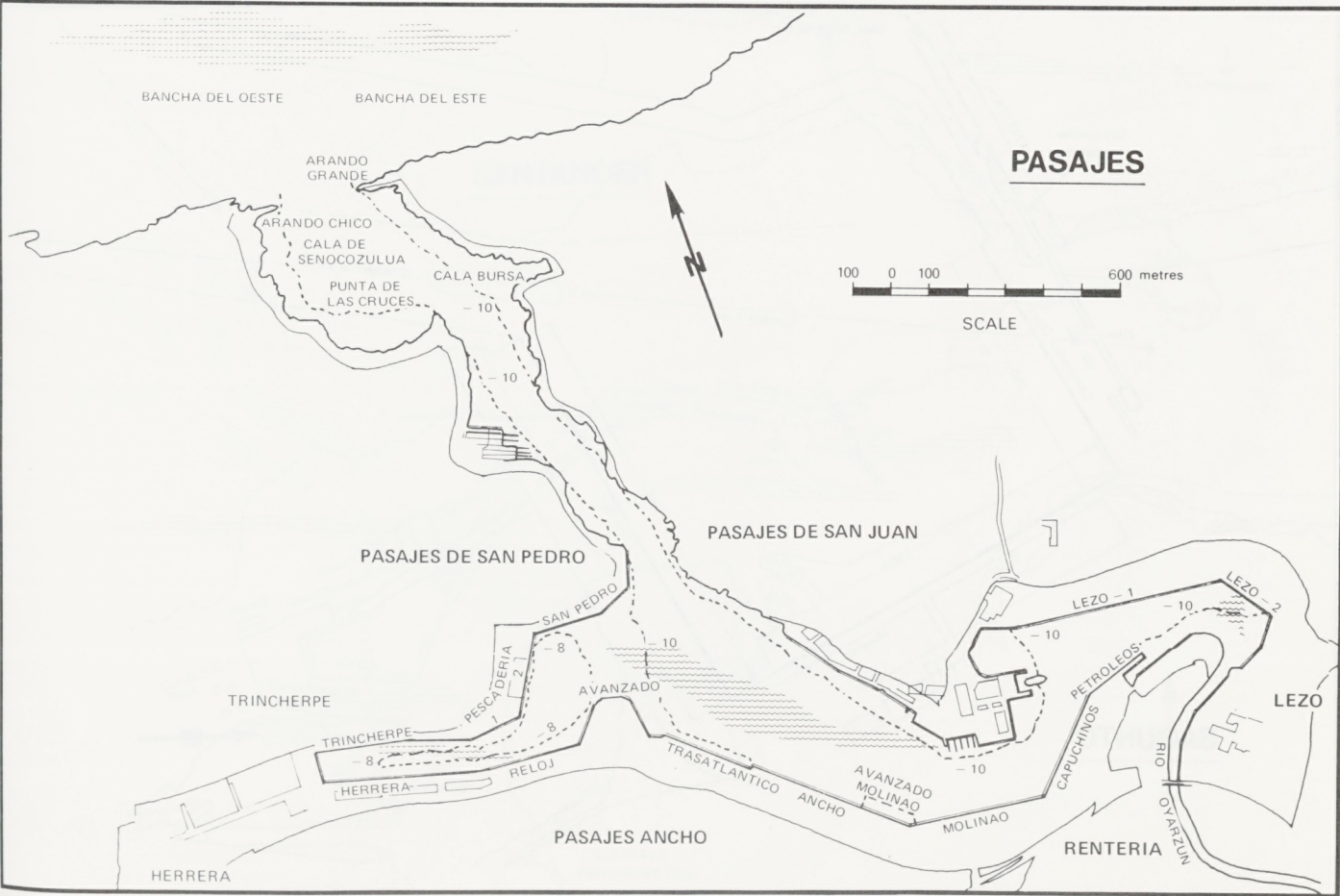
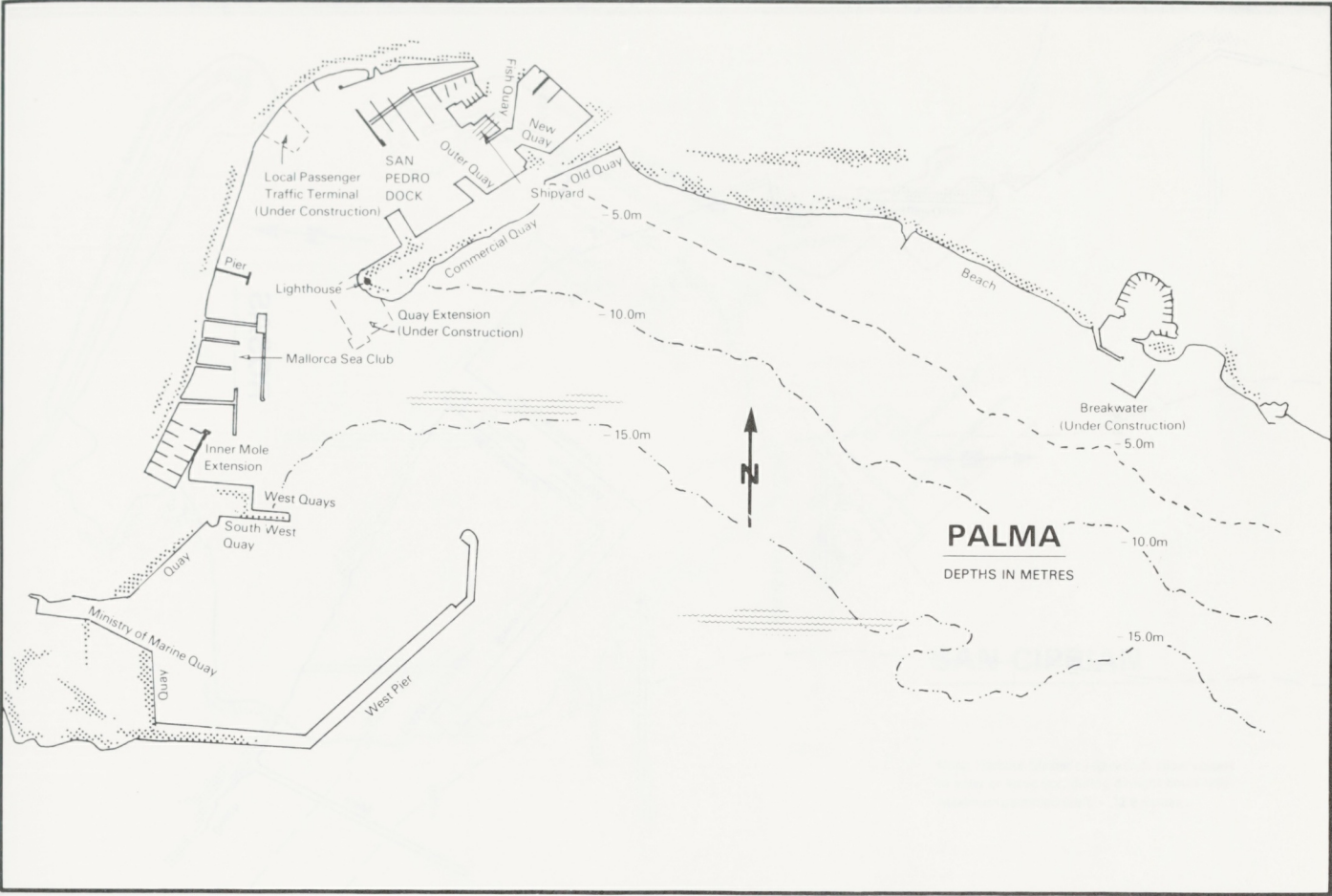
[illegible]

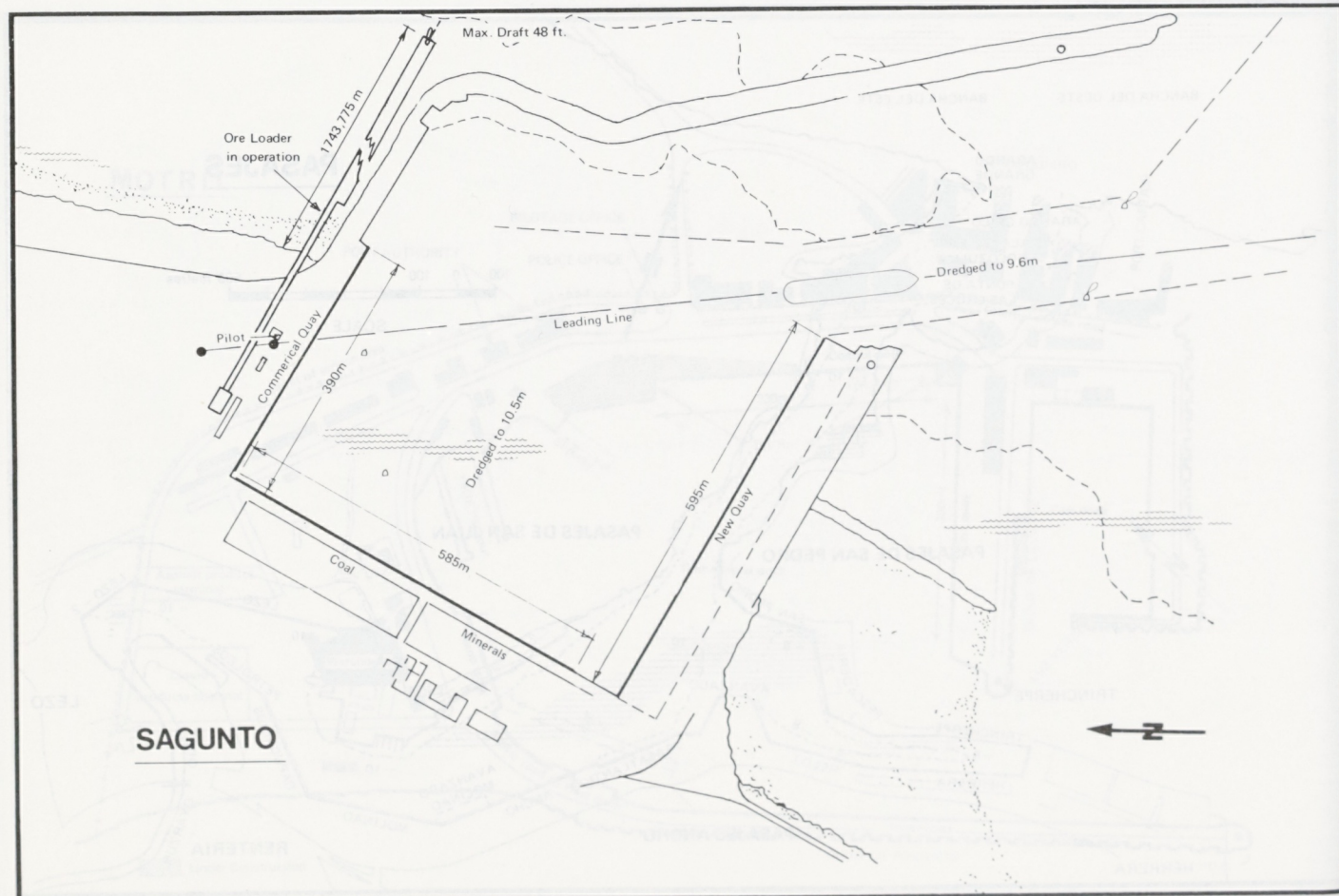
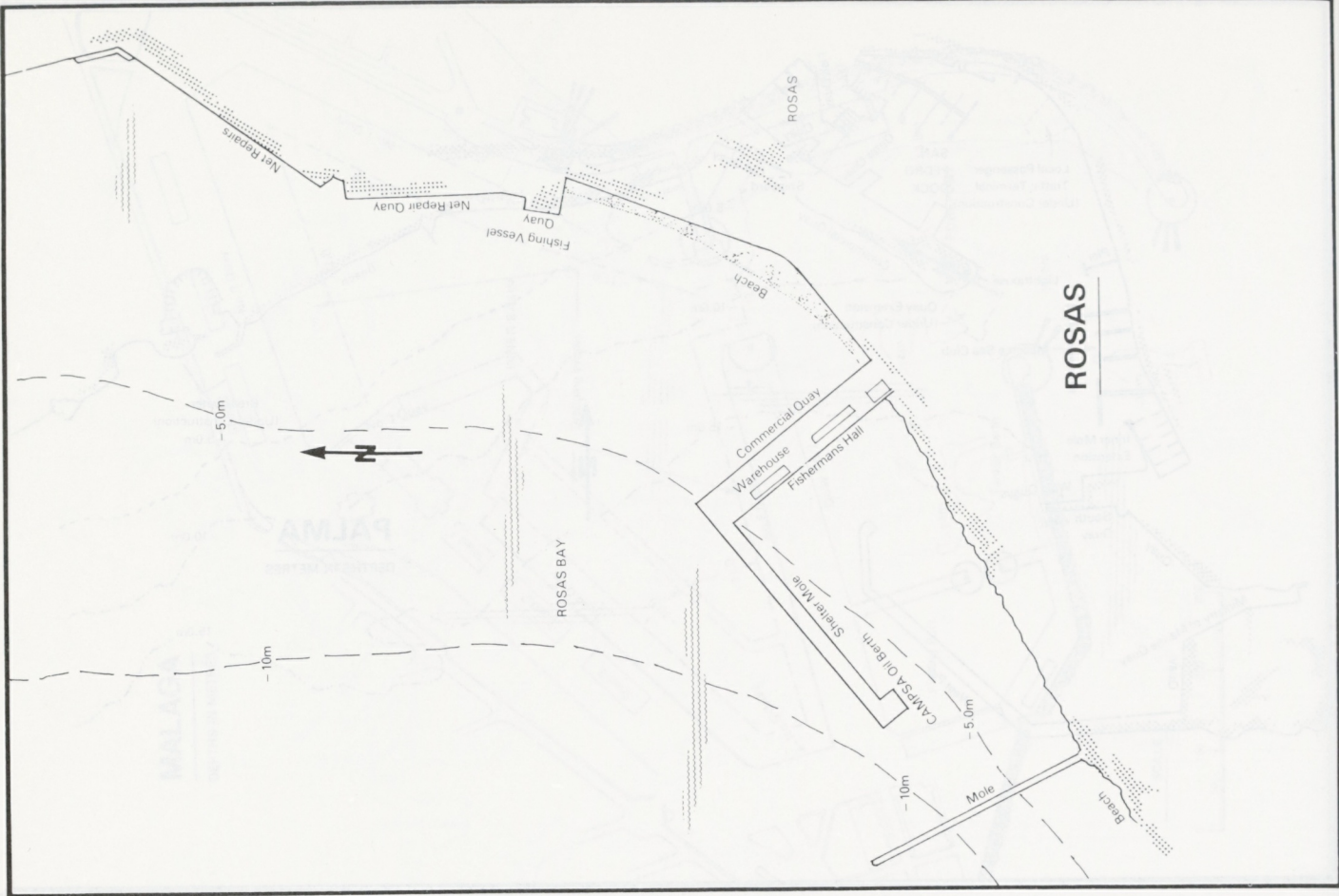


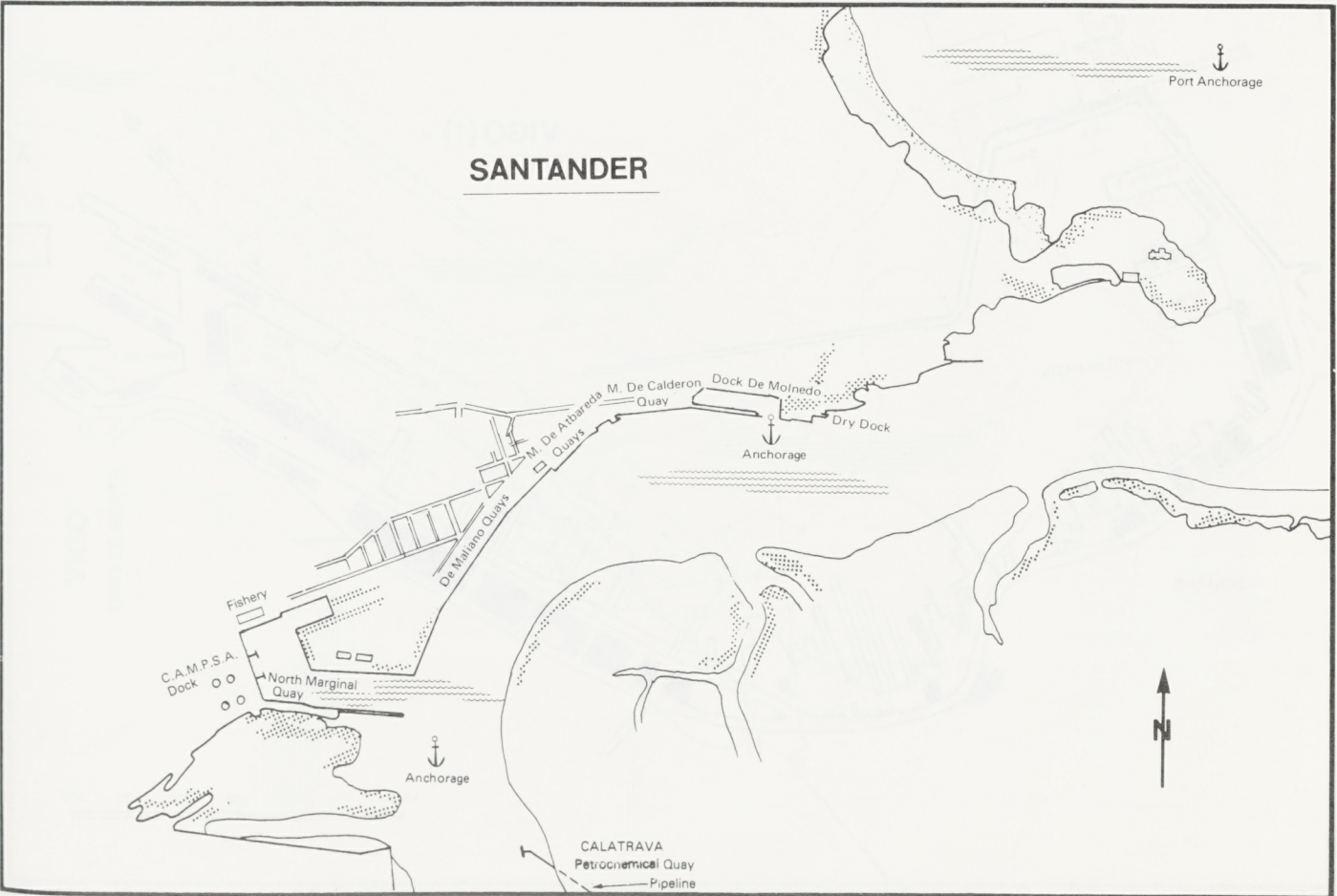
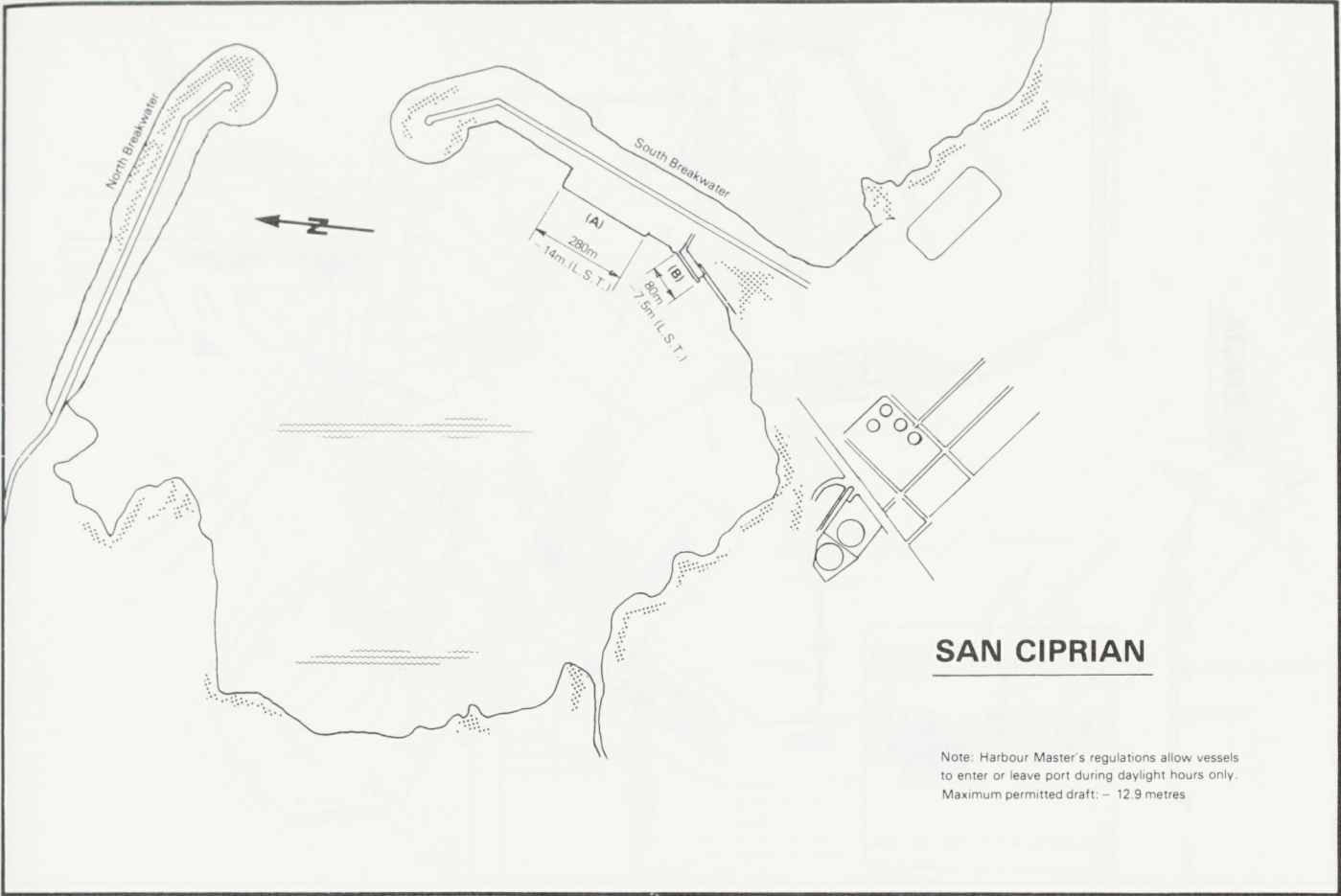


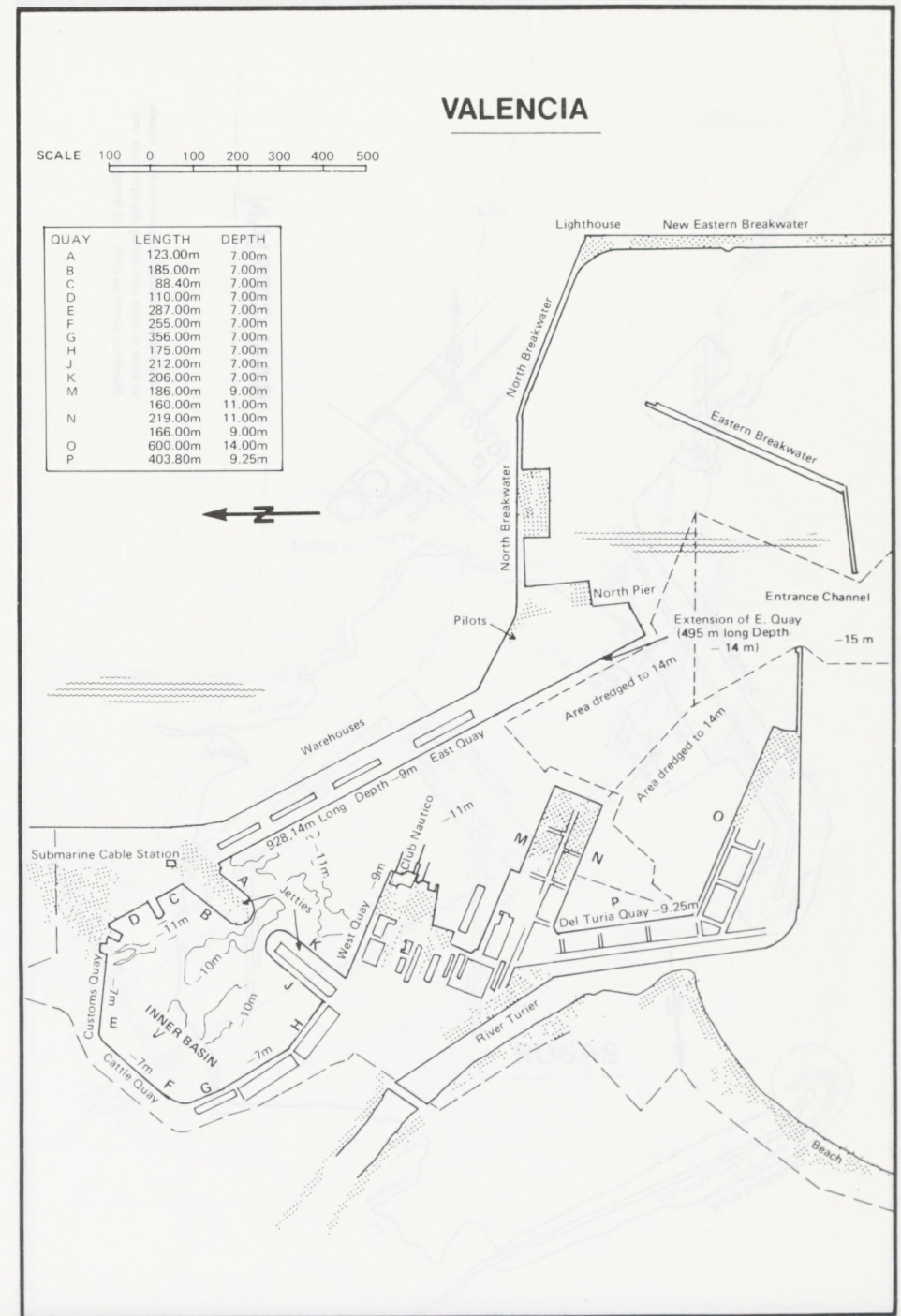
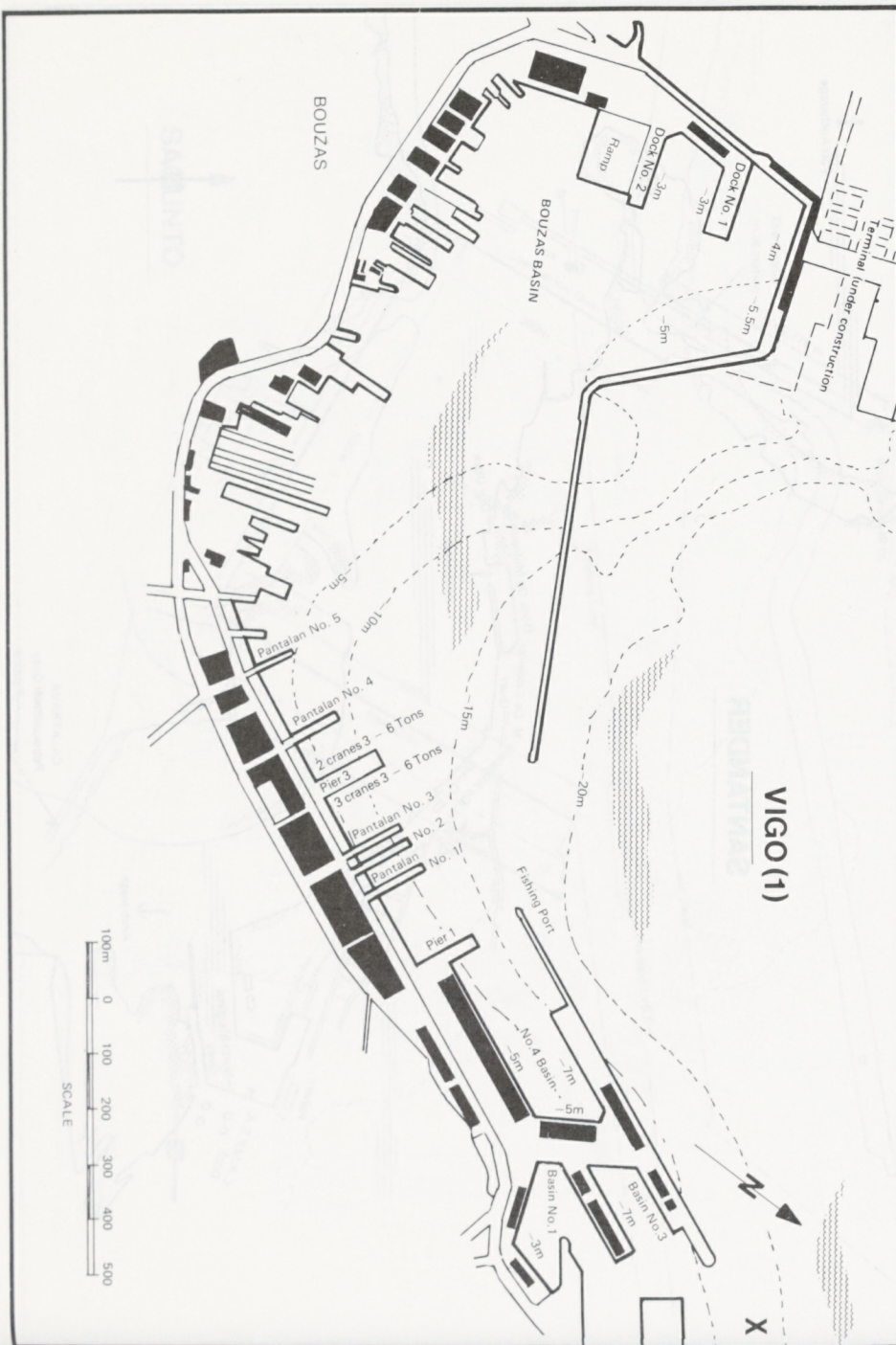


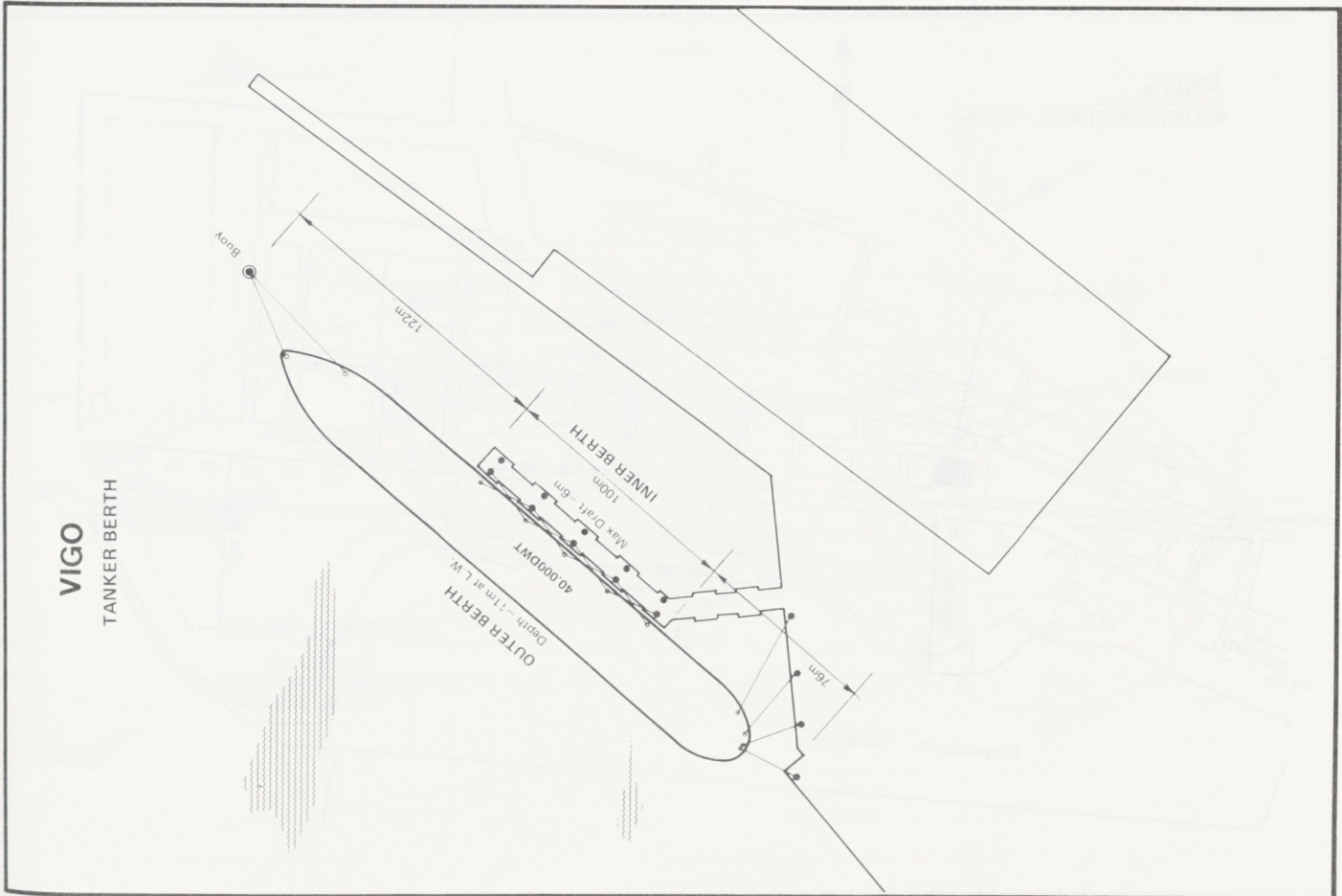
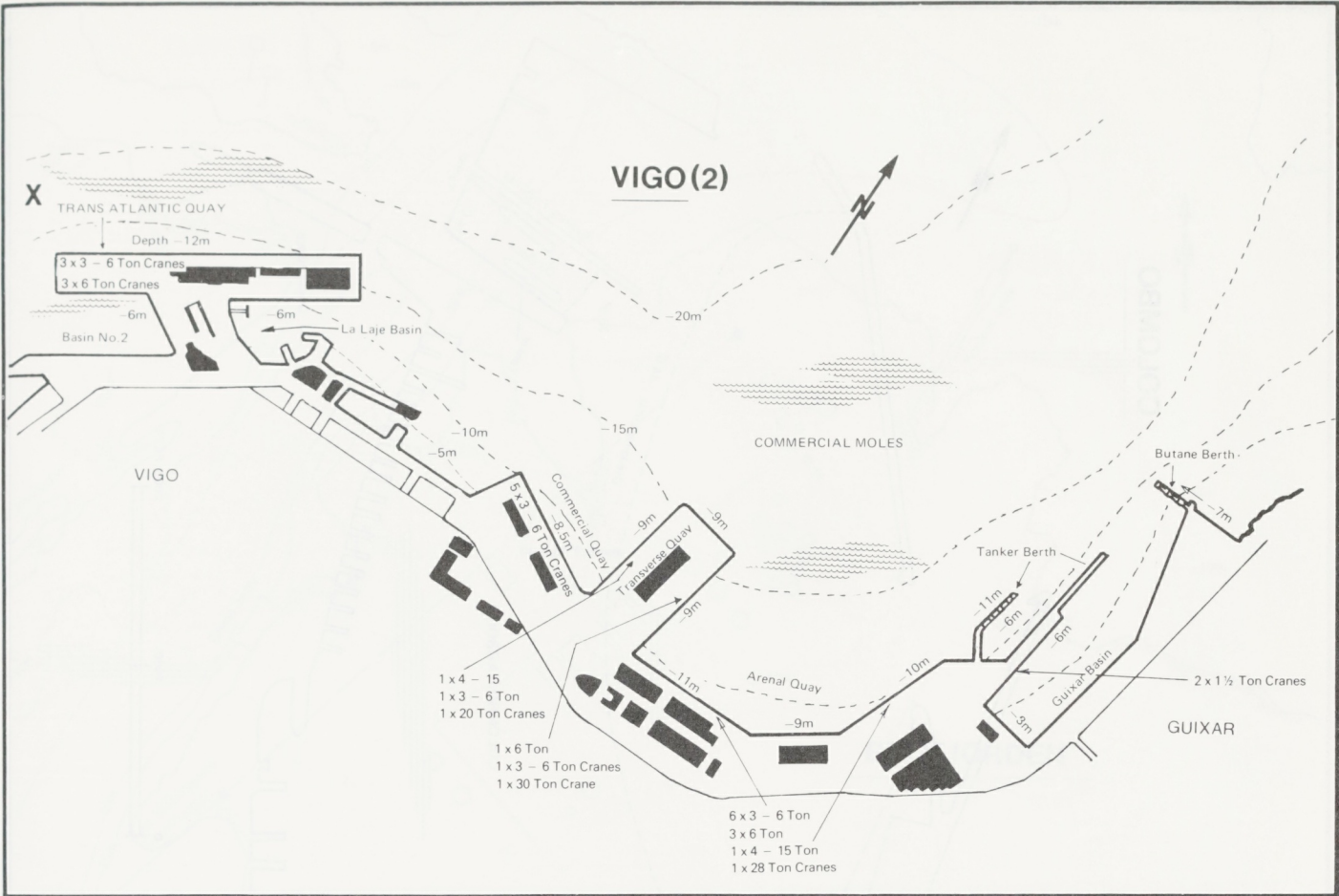


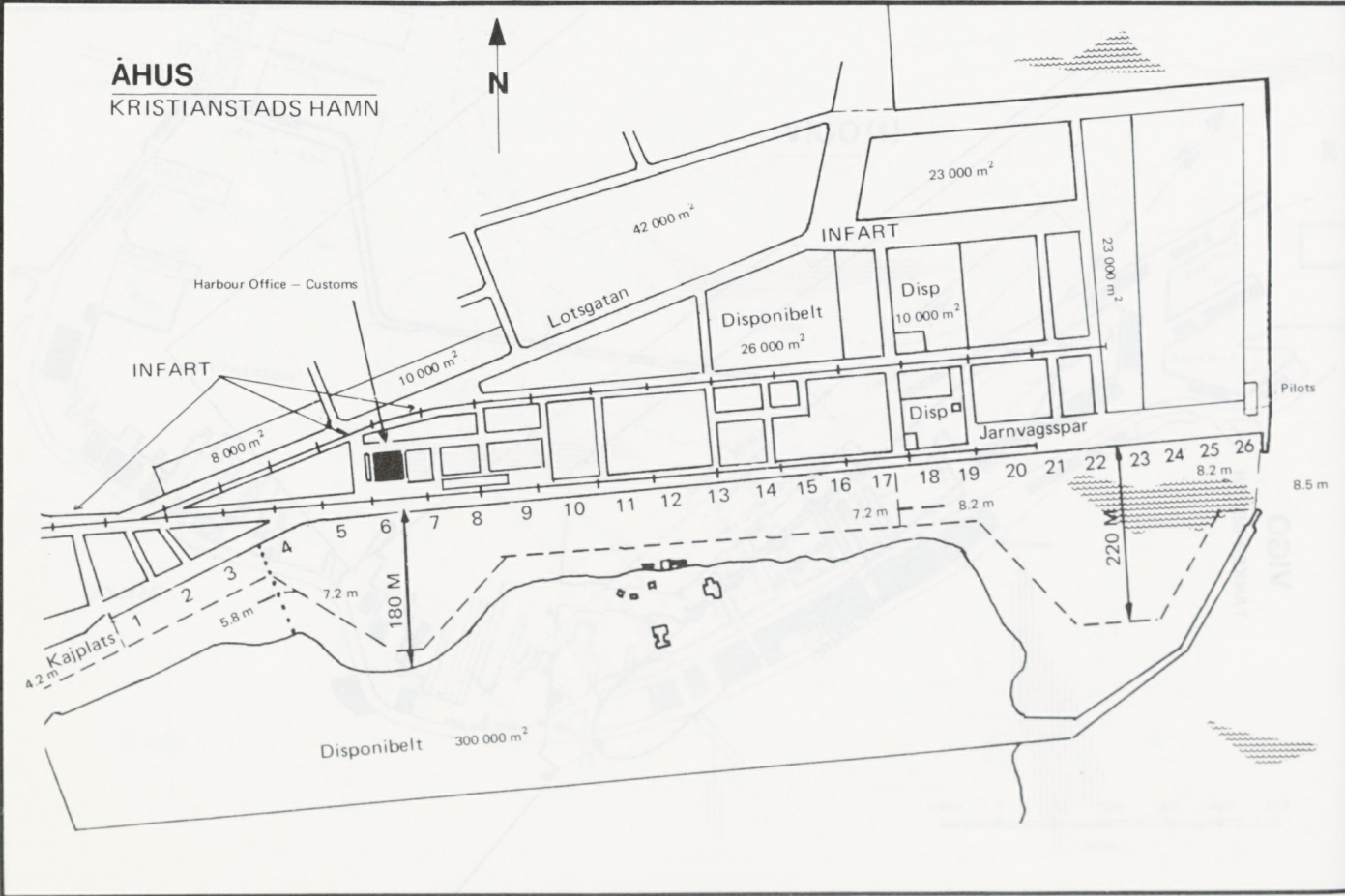
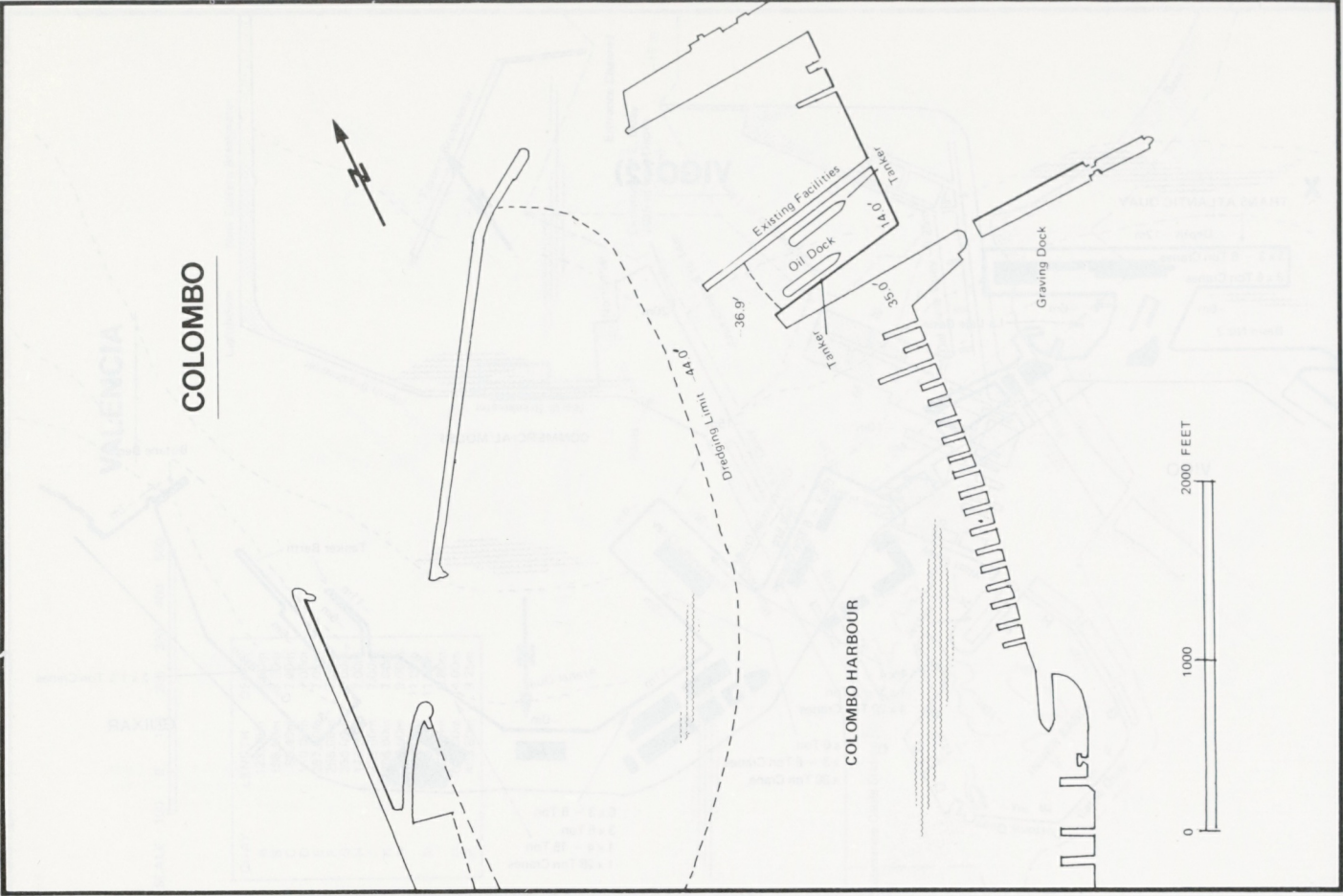


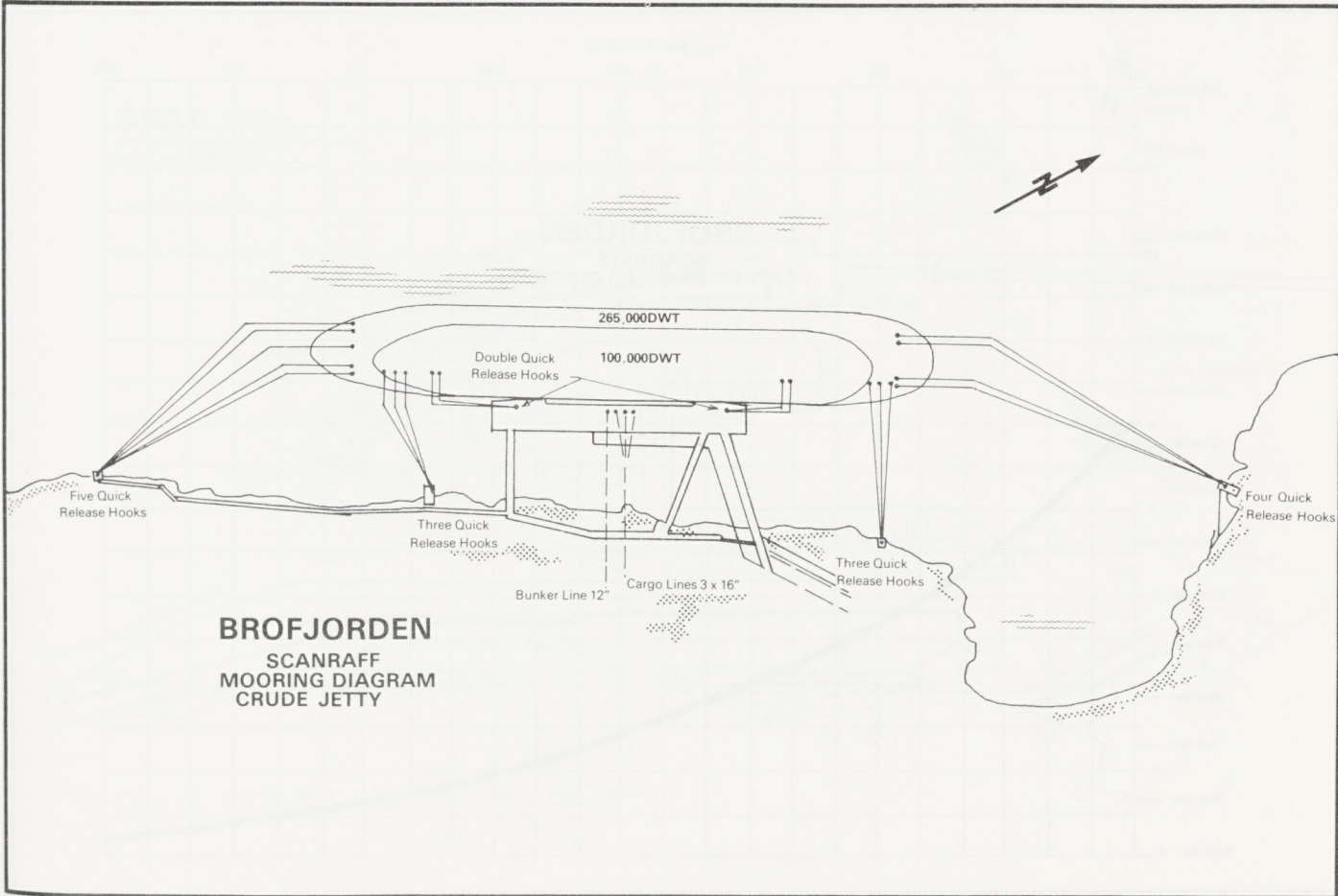
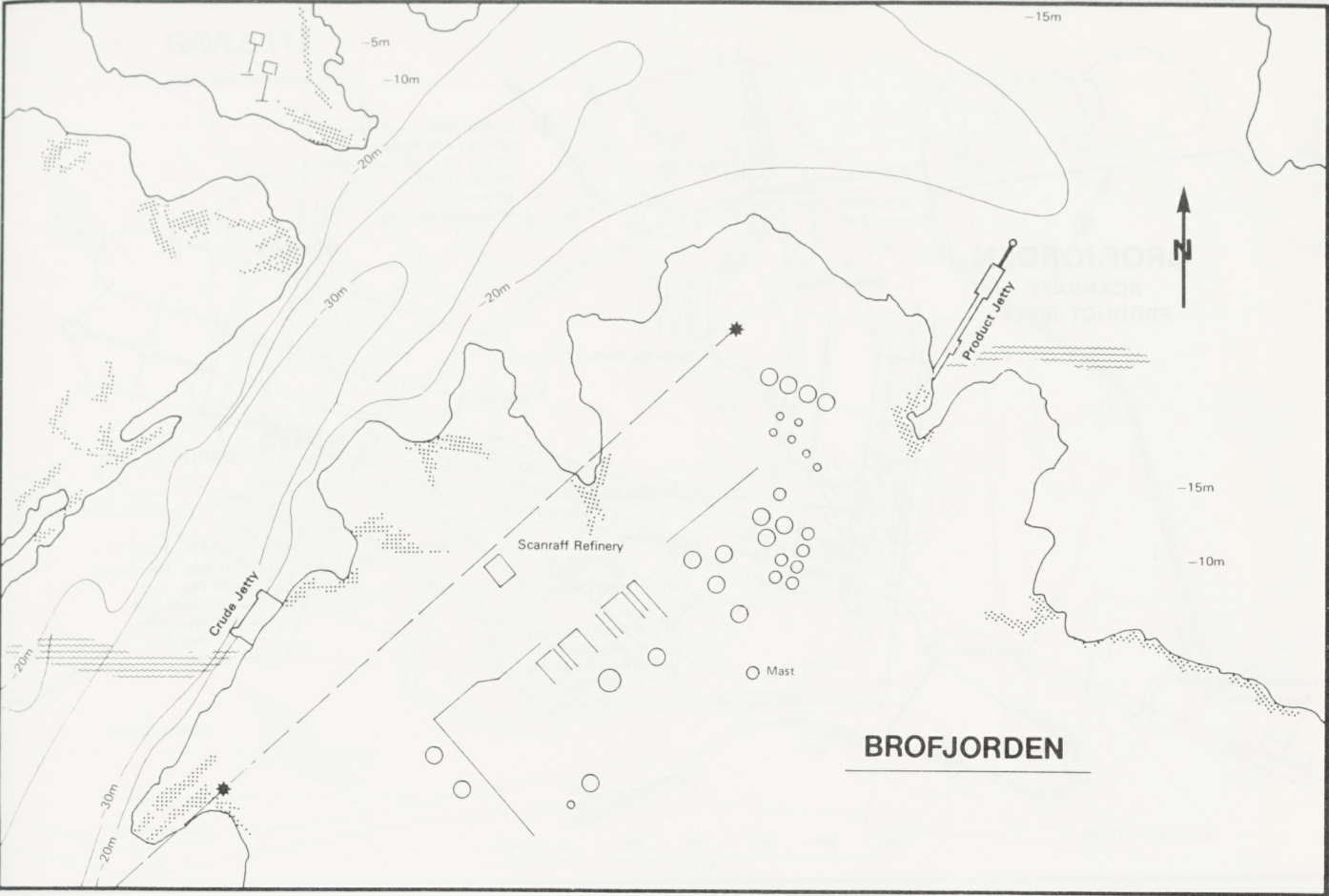


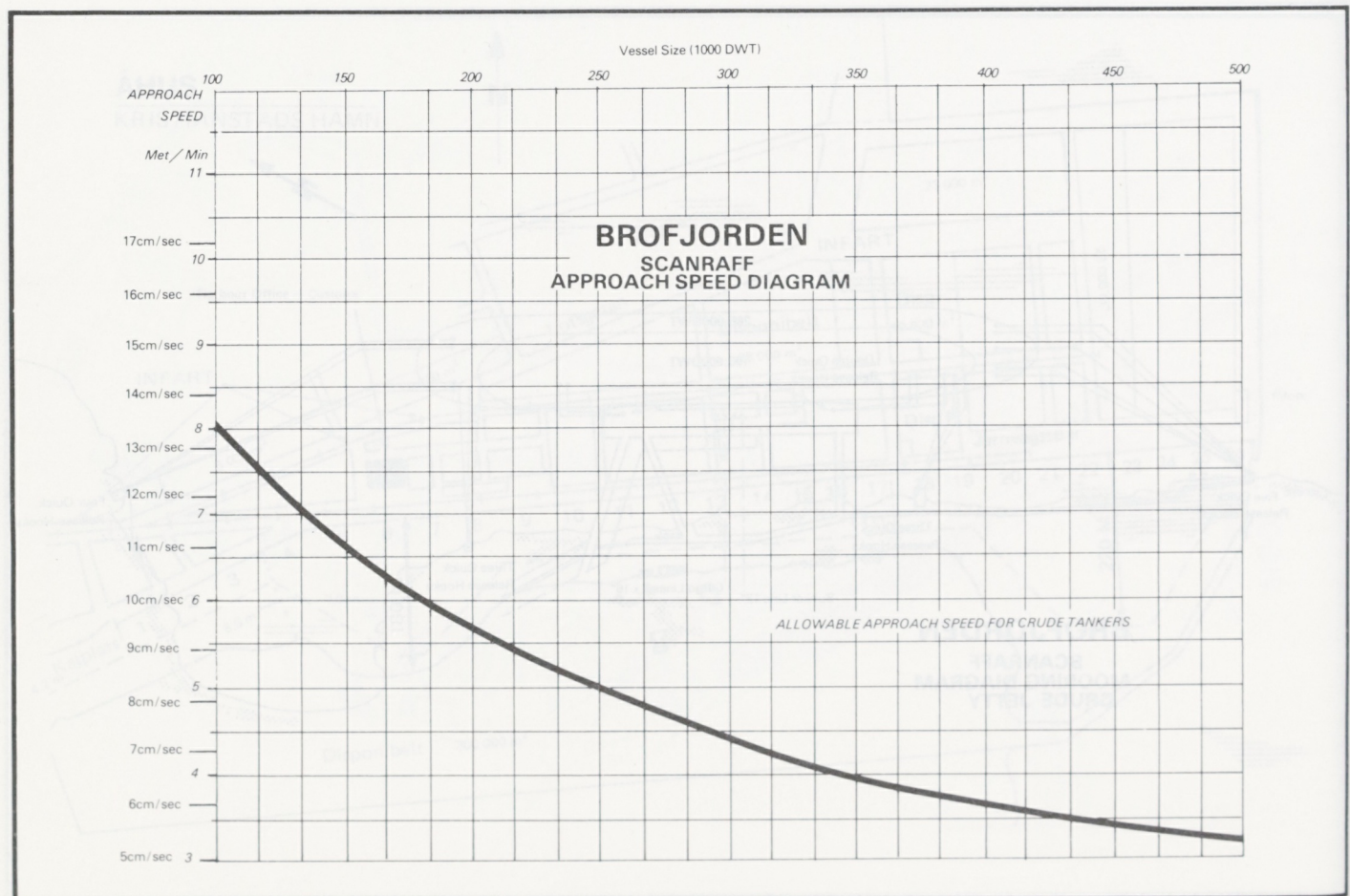
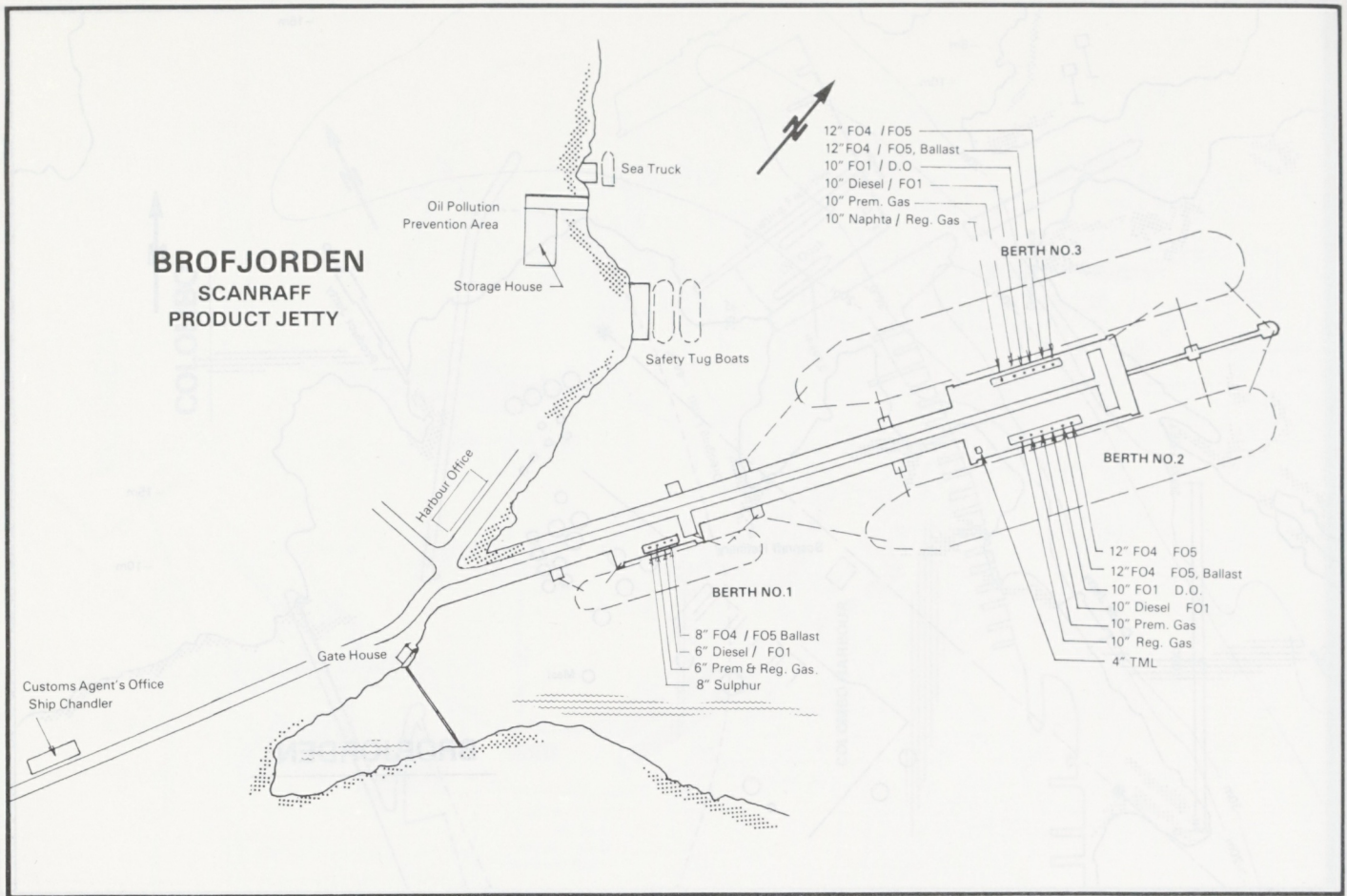






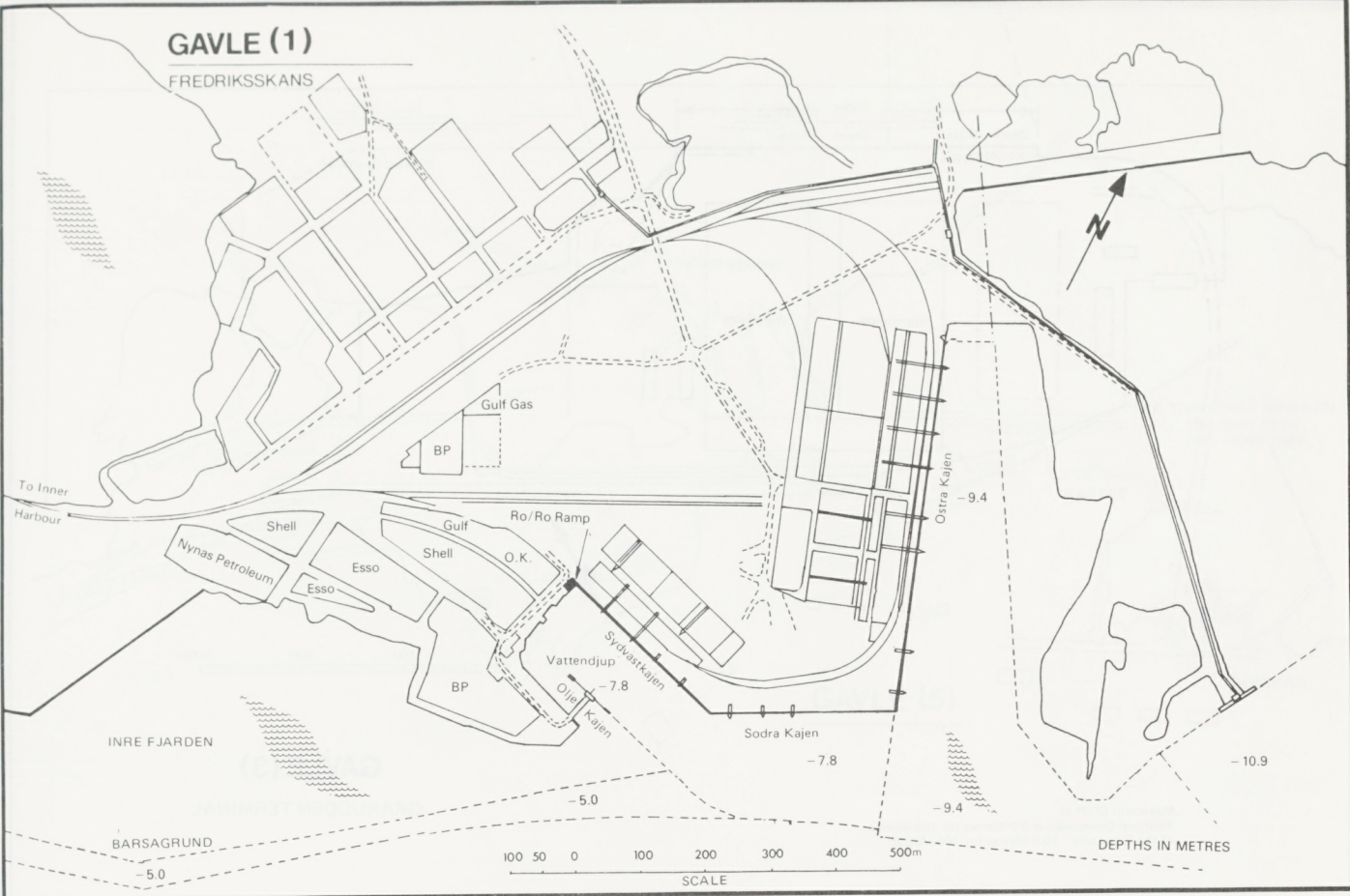






GAVLE (1)

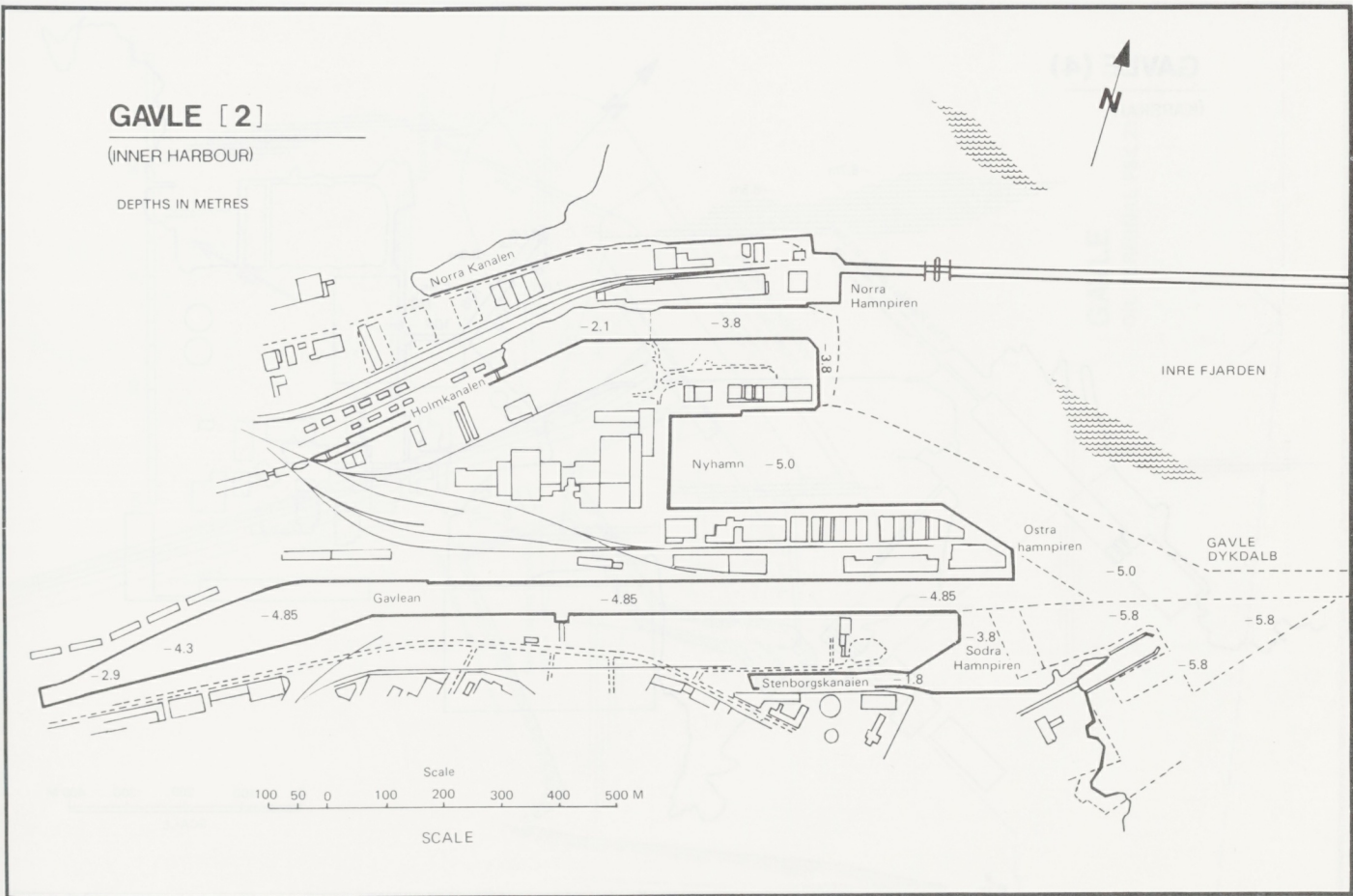
FREDRIKSSKANS

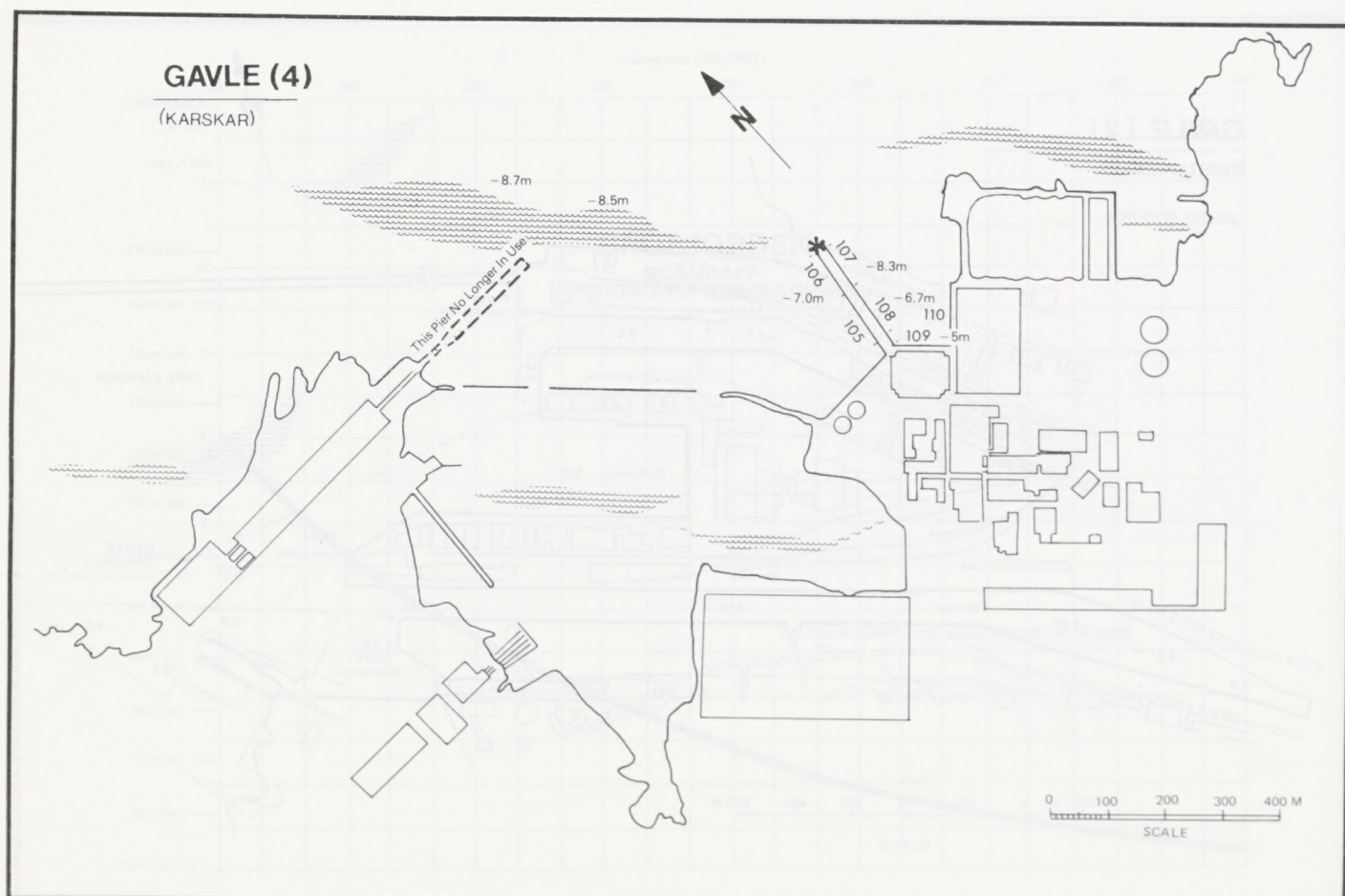
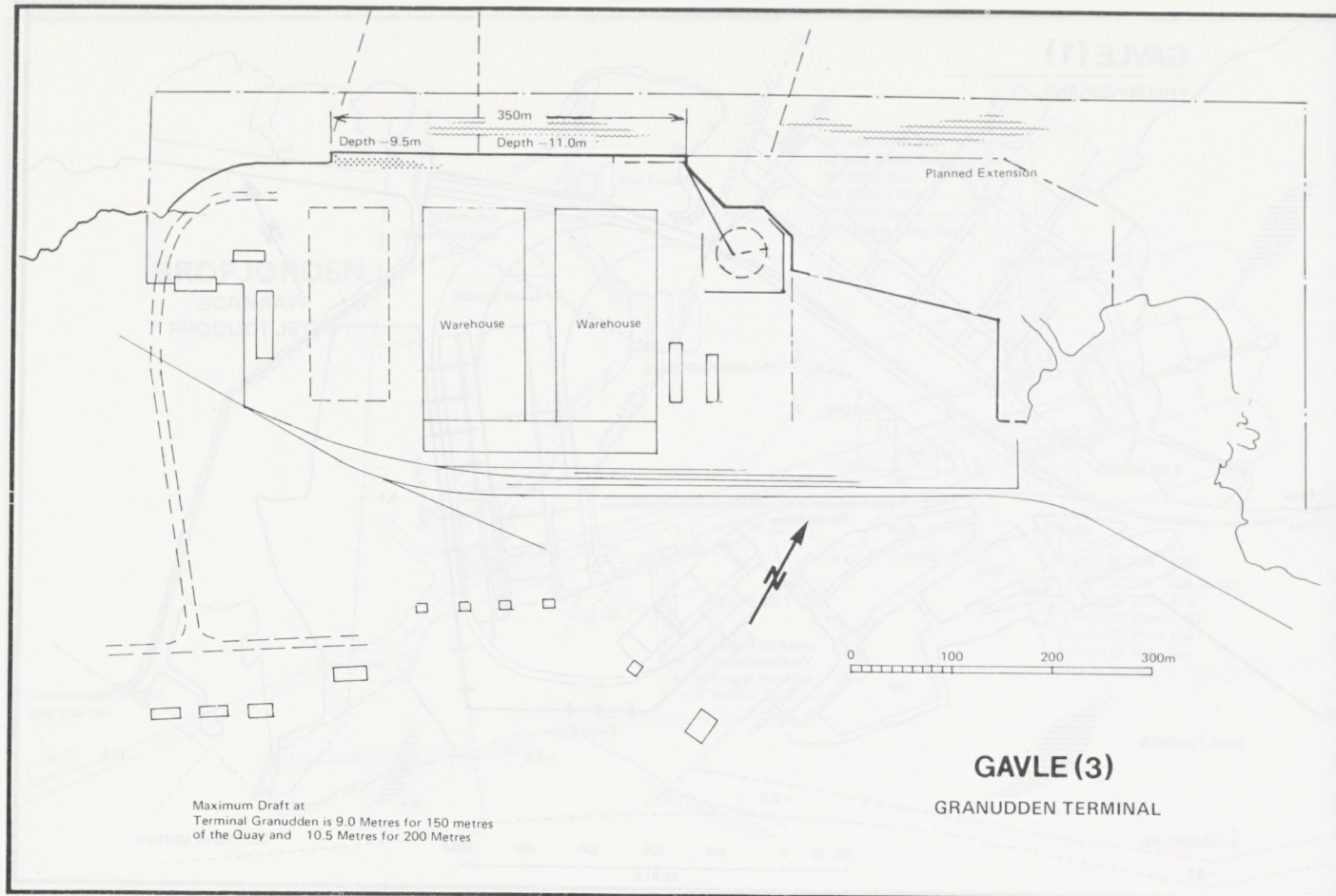


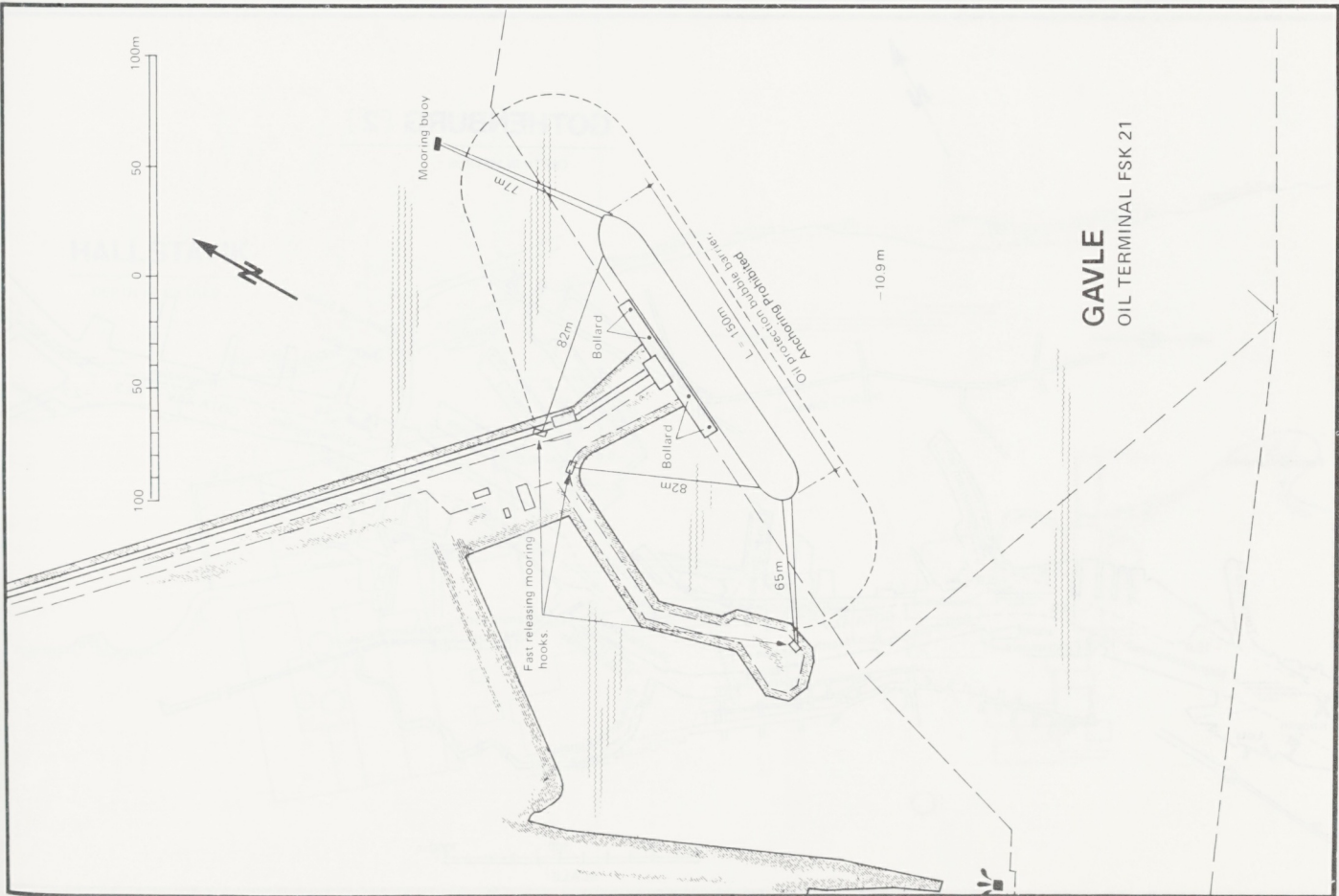
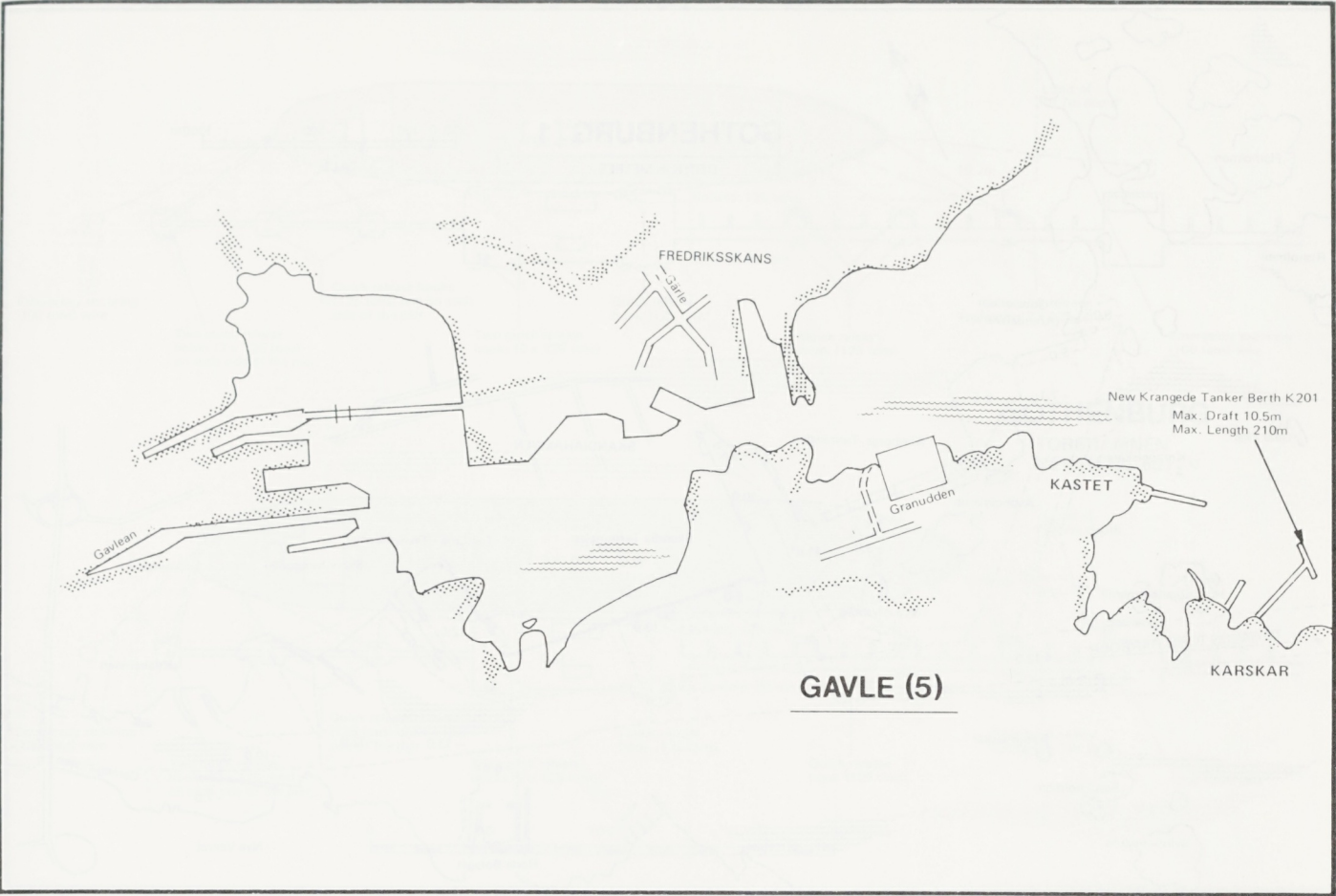
GAVLE [2]

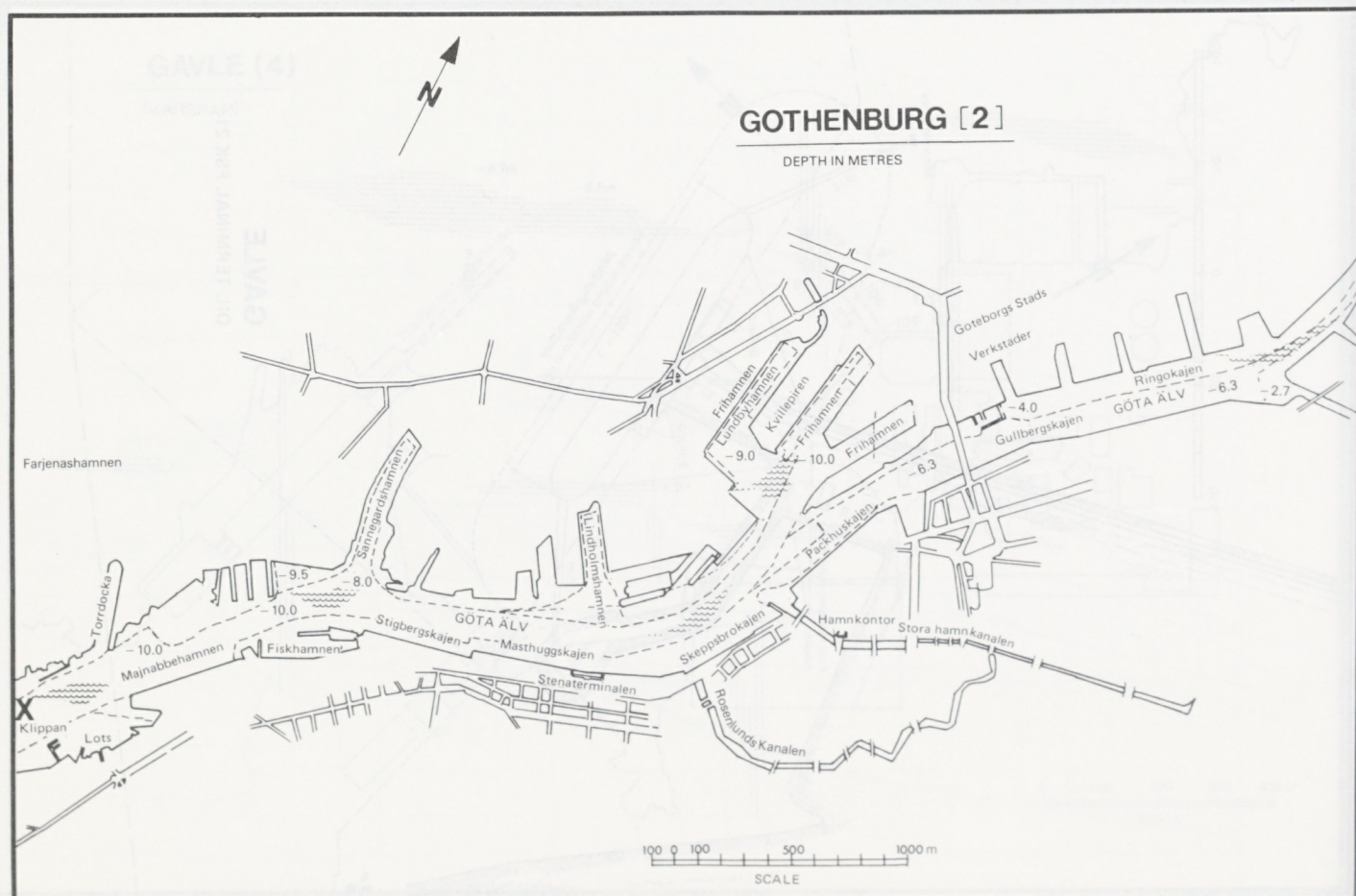
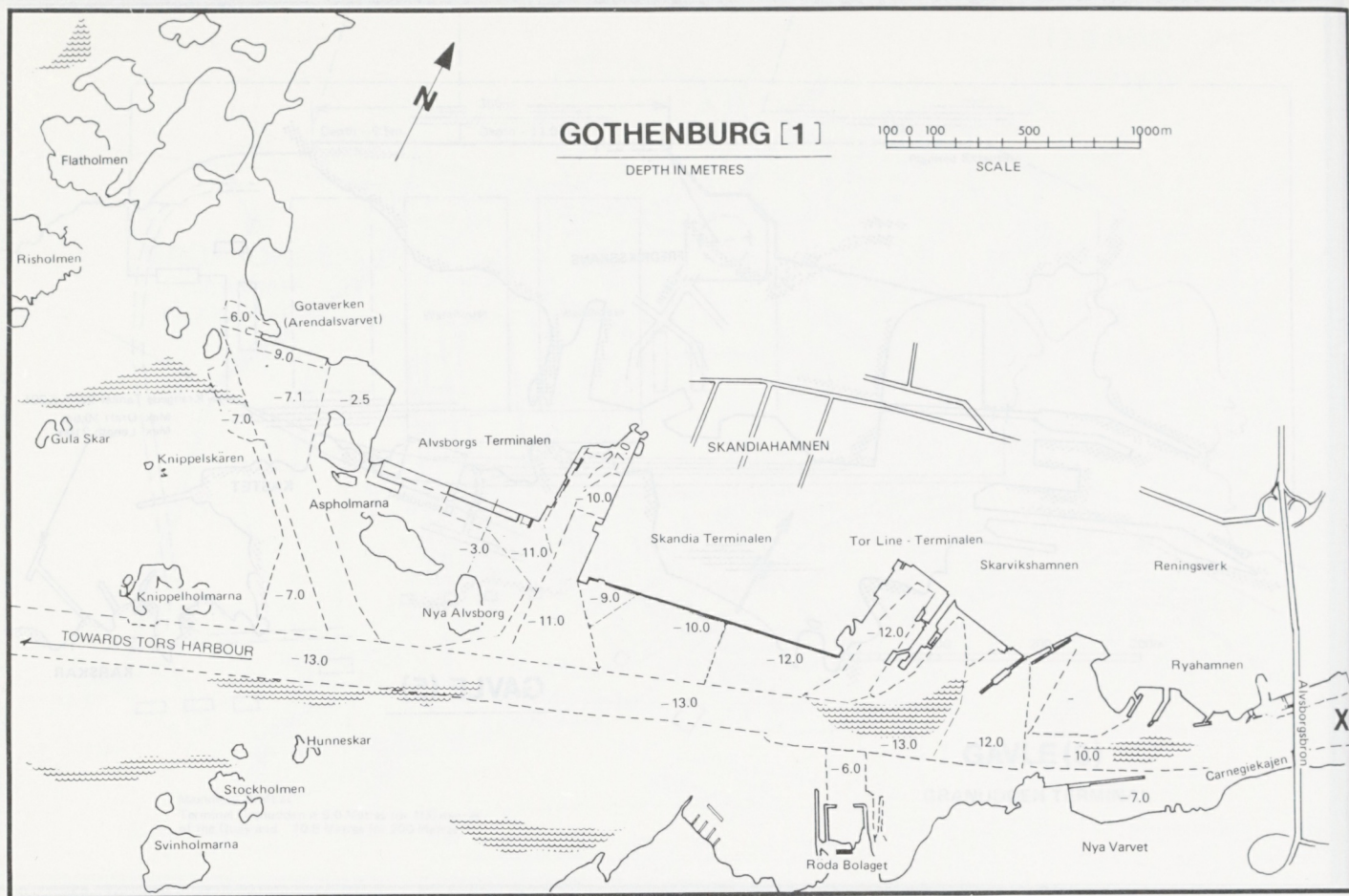
(INNER HARBOUR)

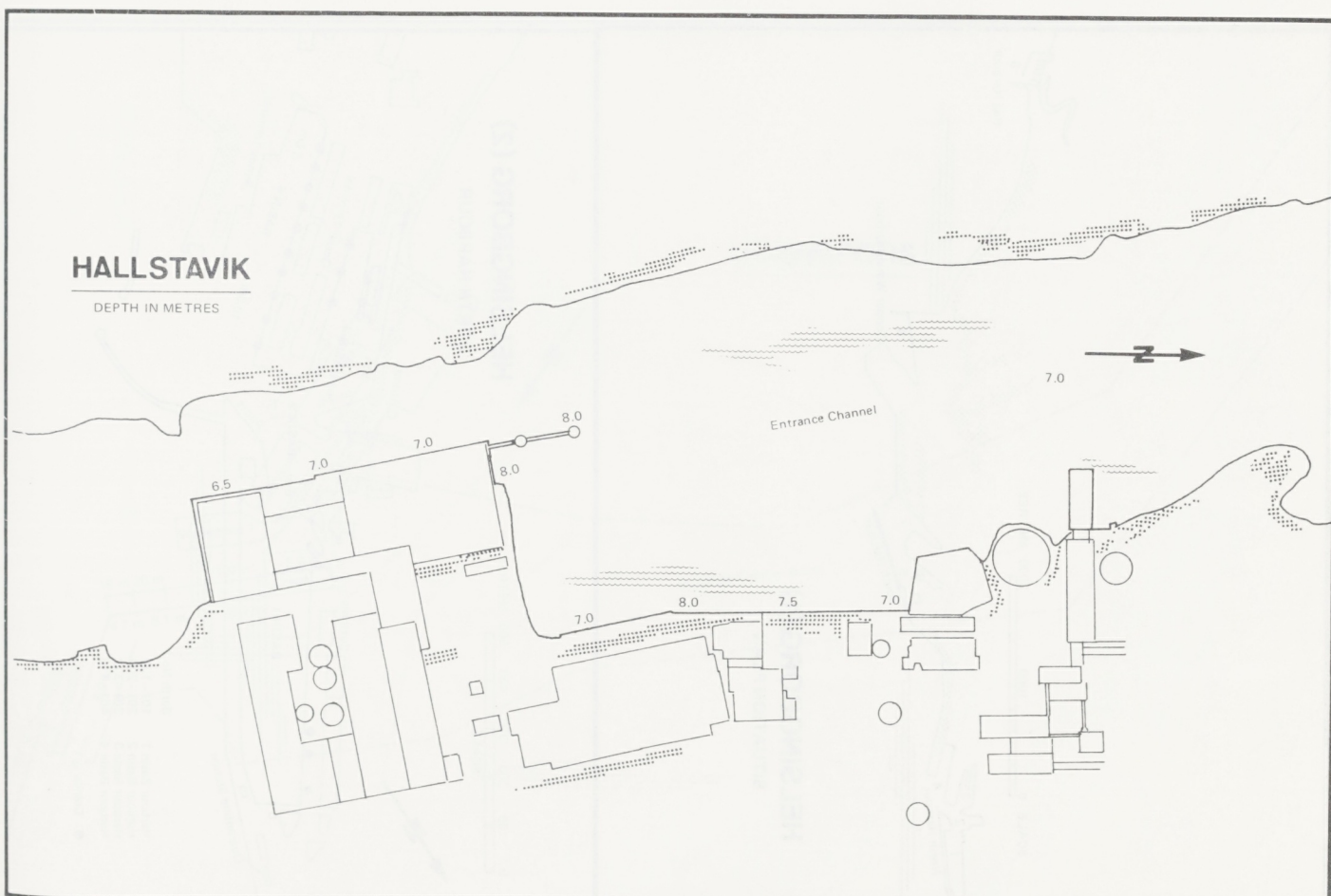
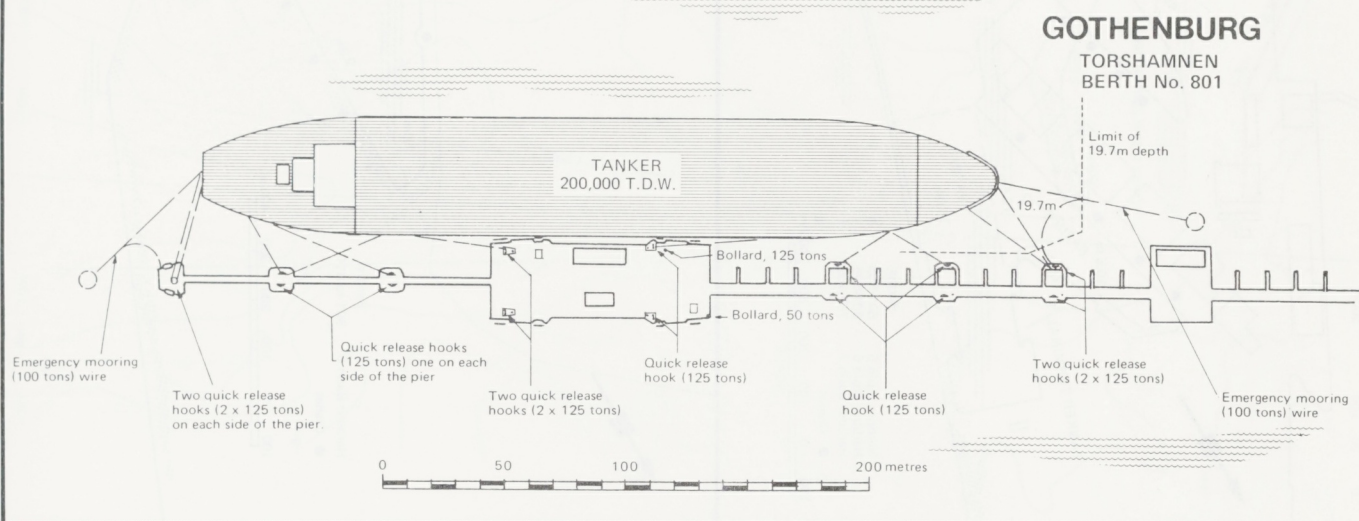
DEPTHS IN METRES

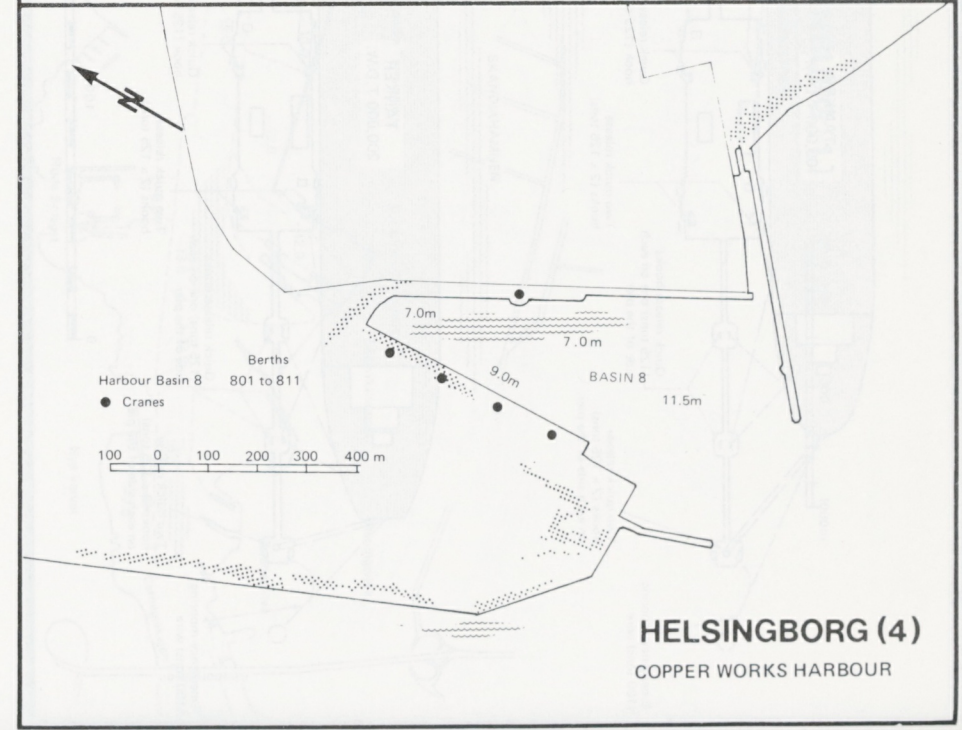
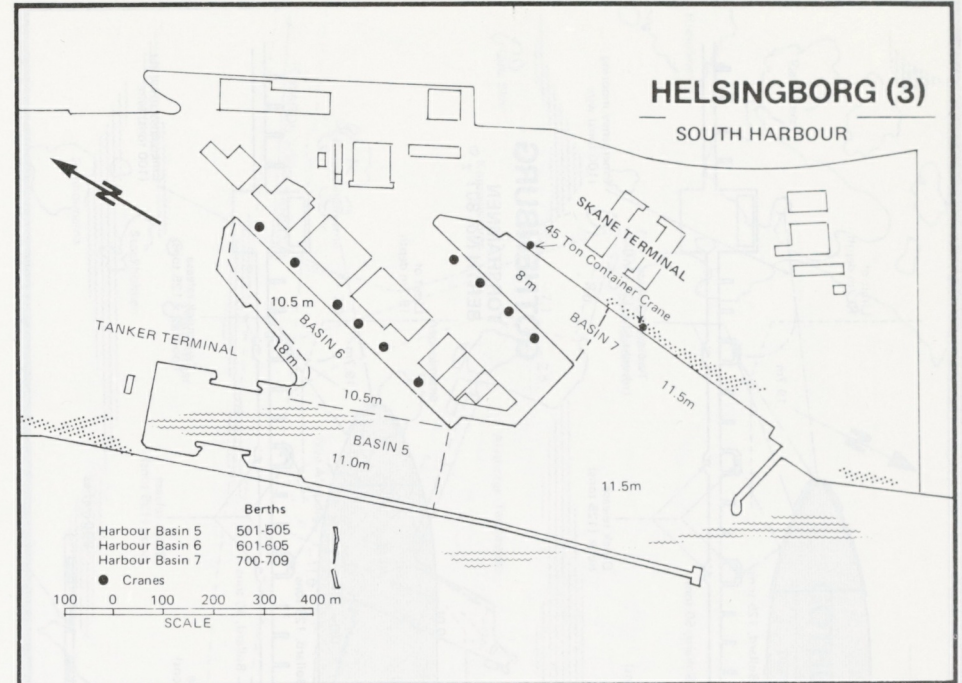
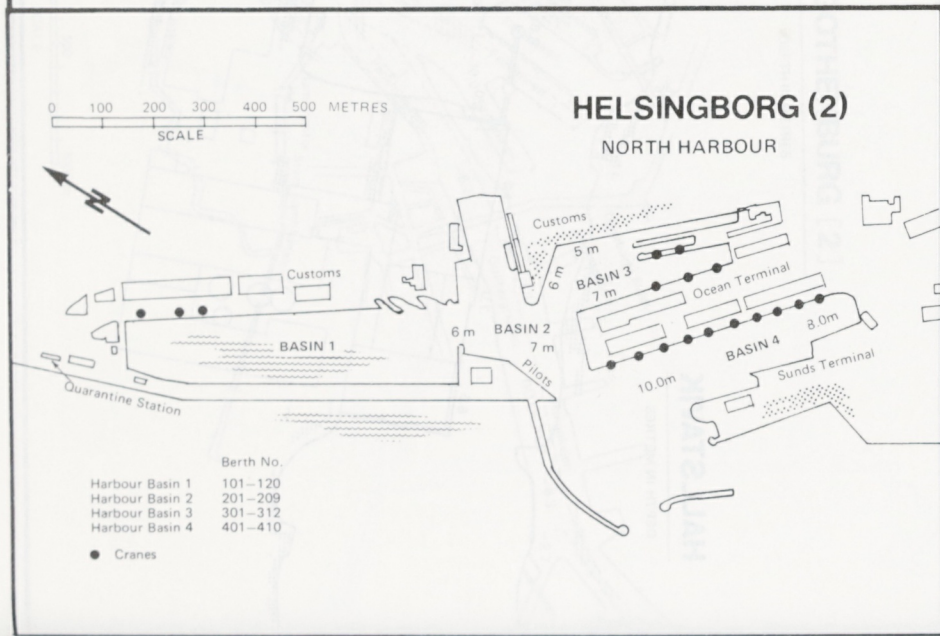
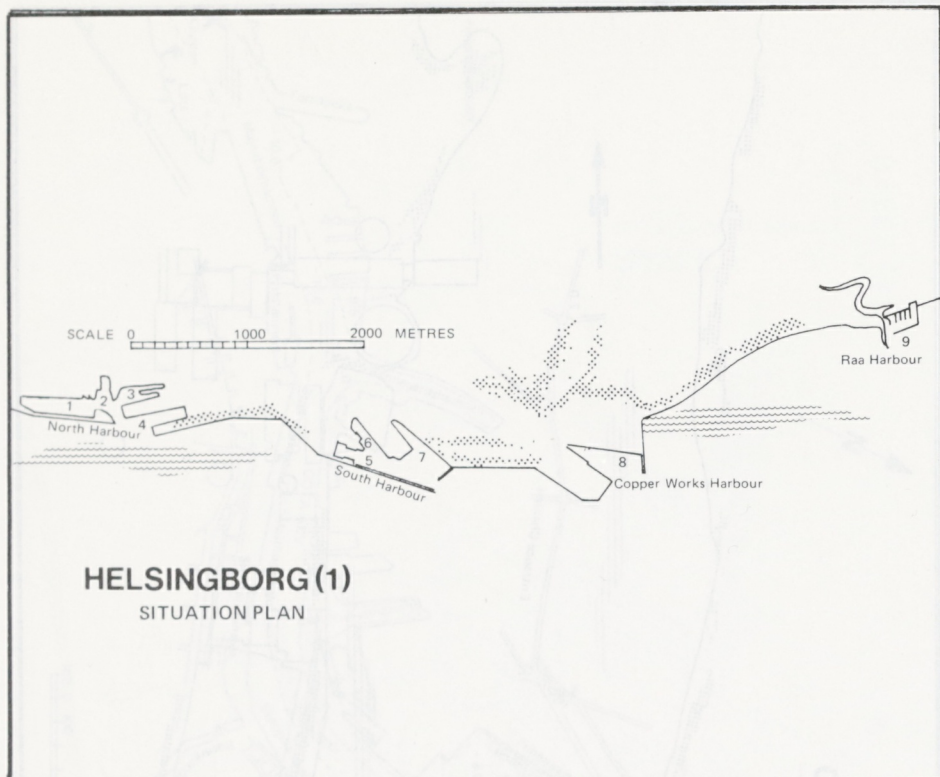


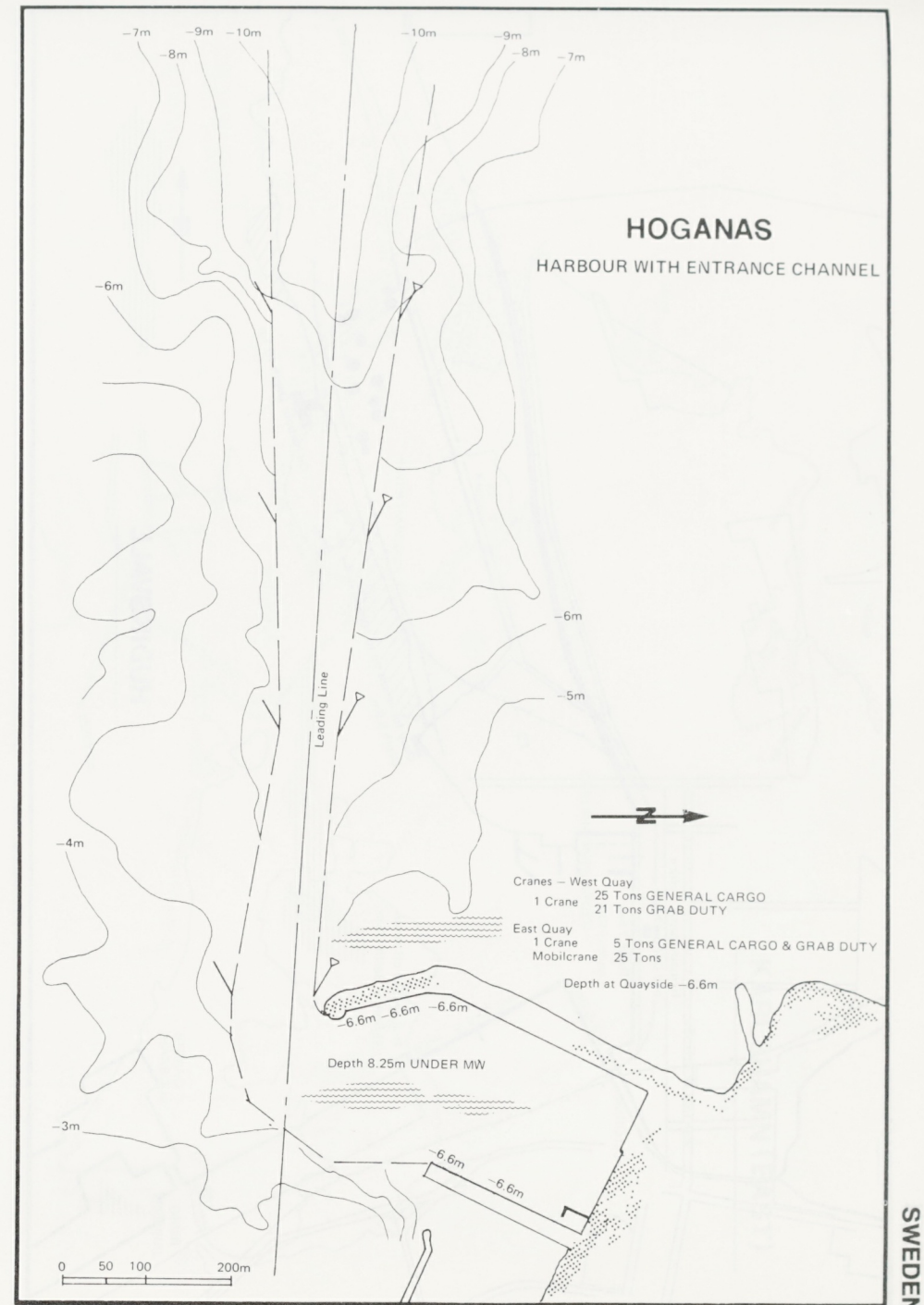
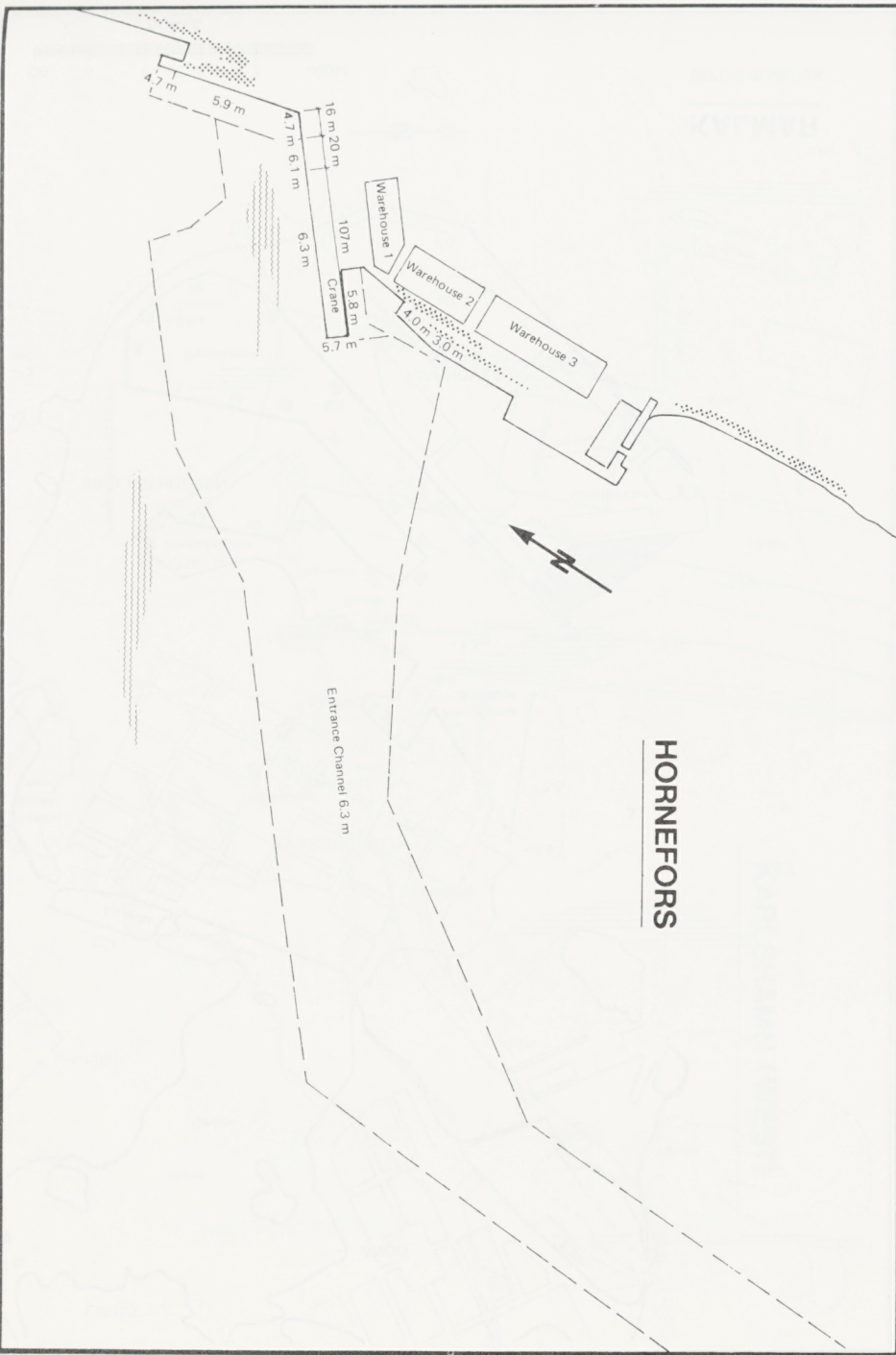


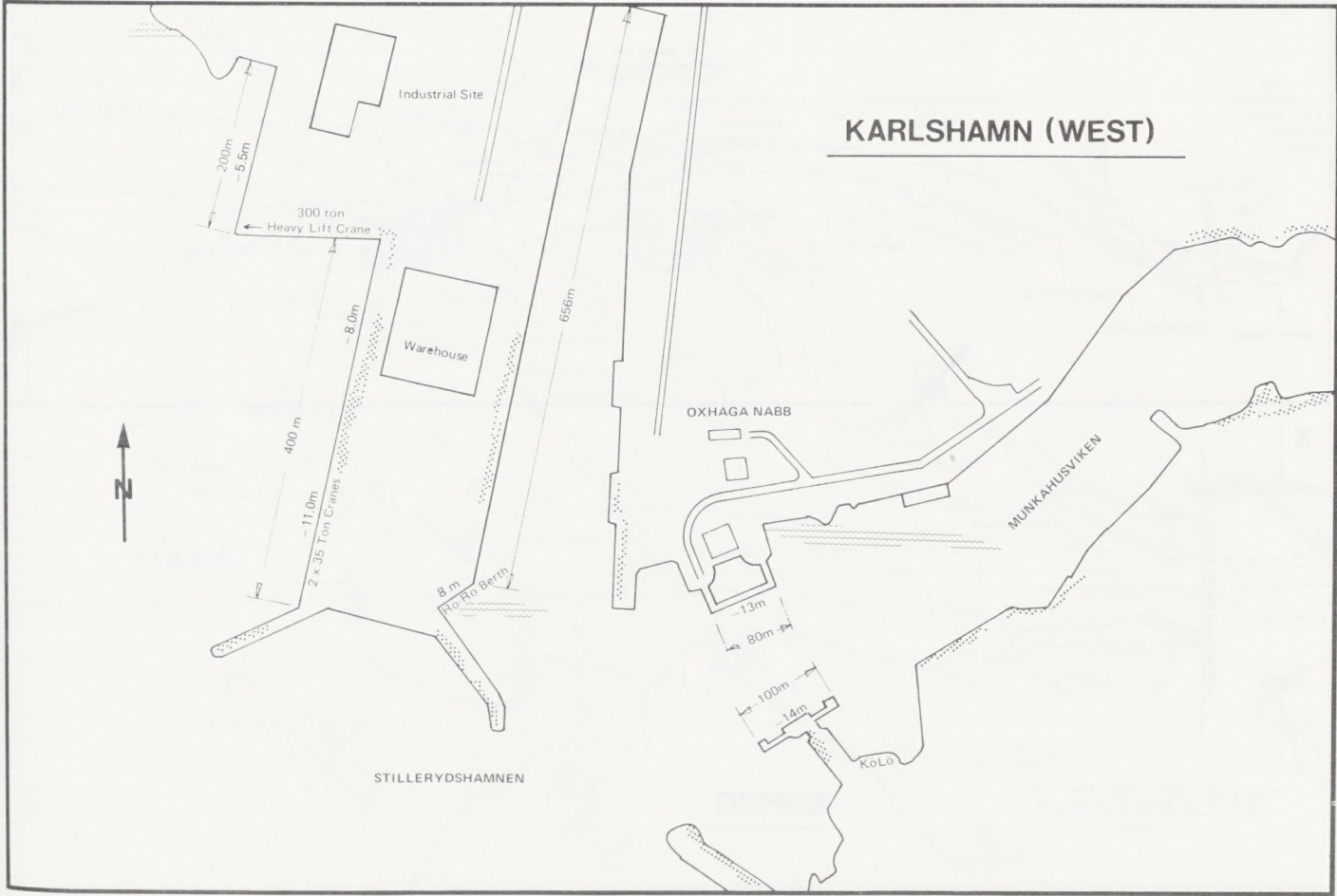
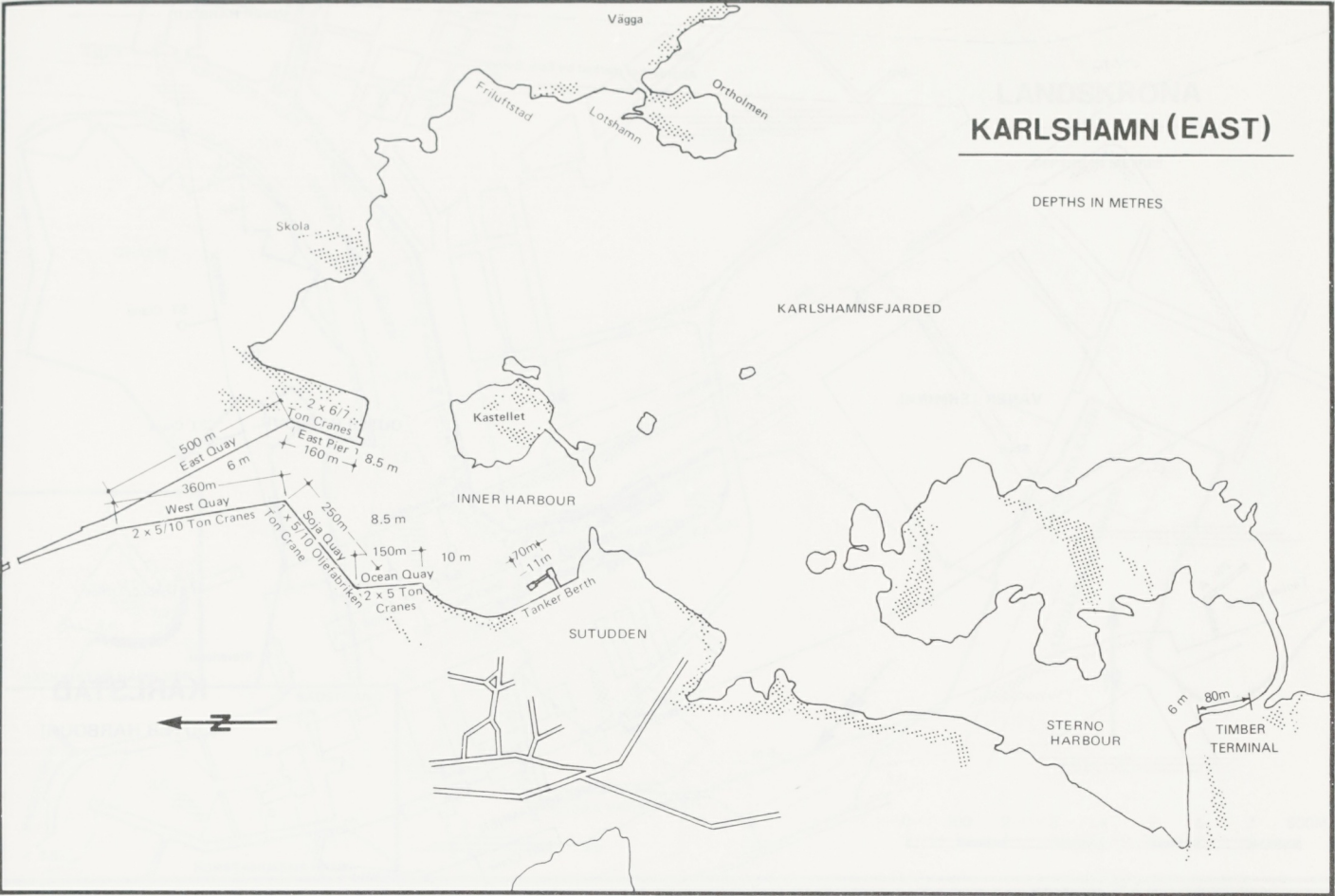


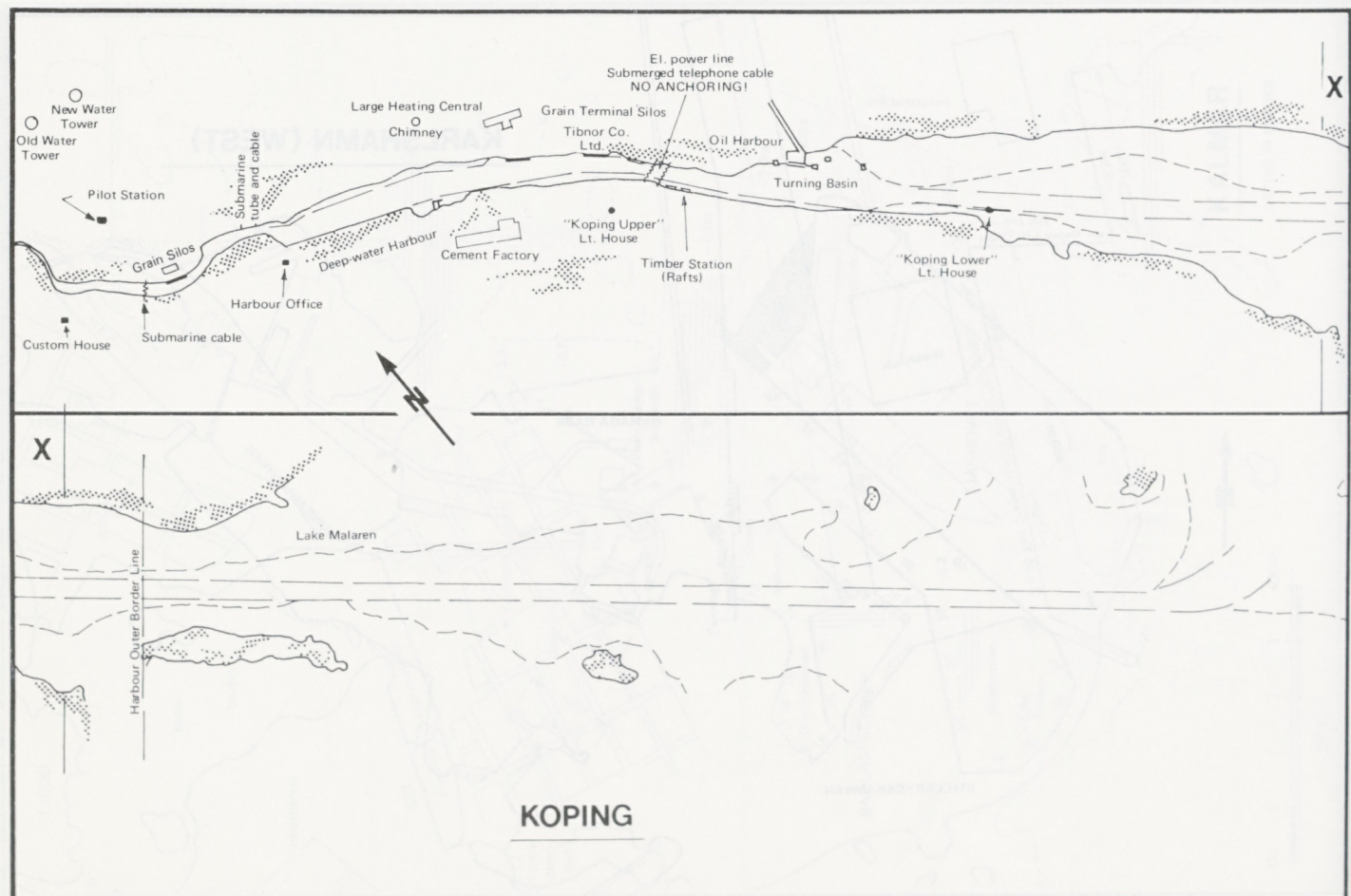
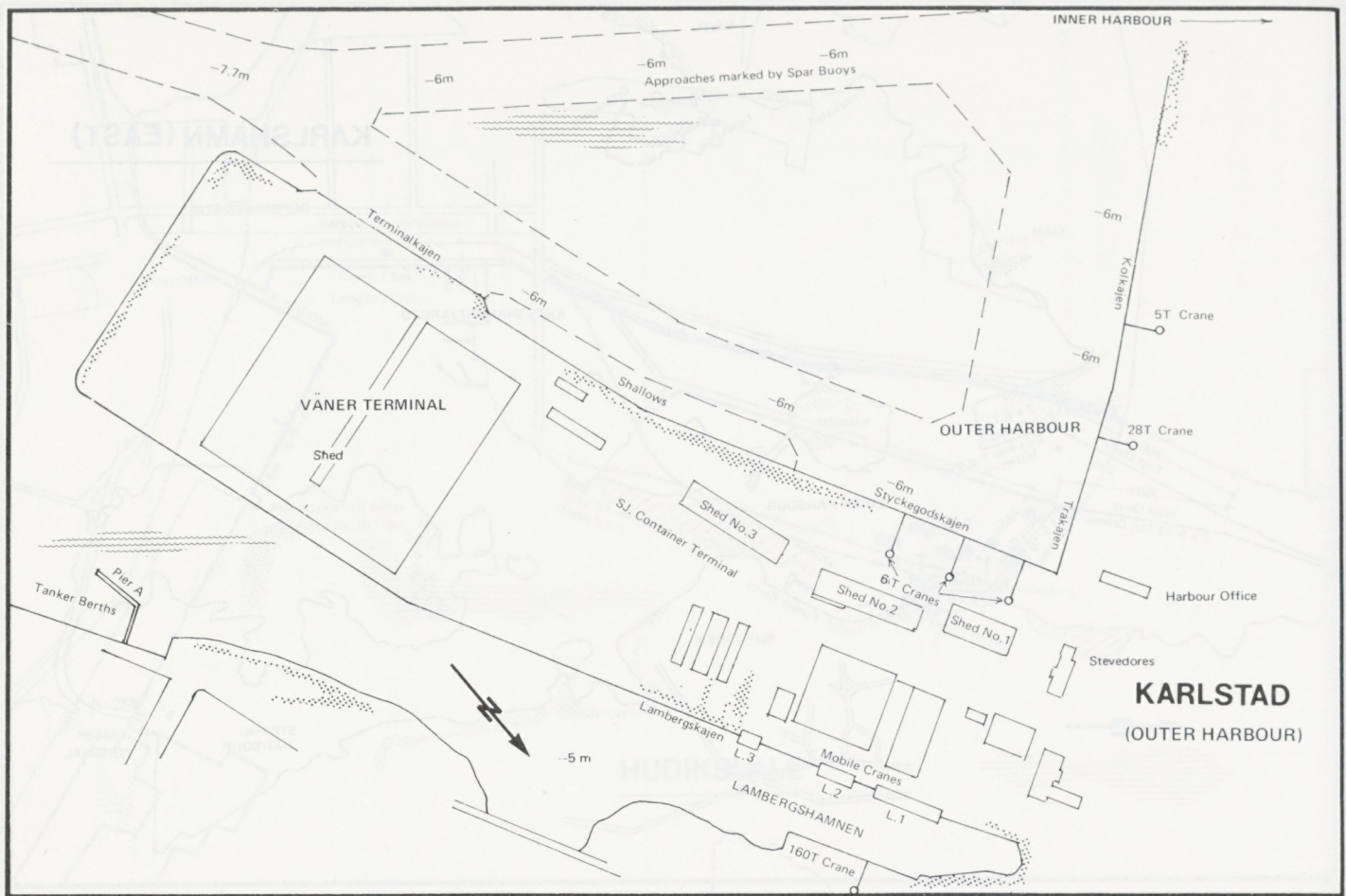


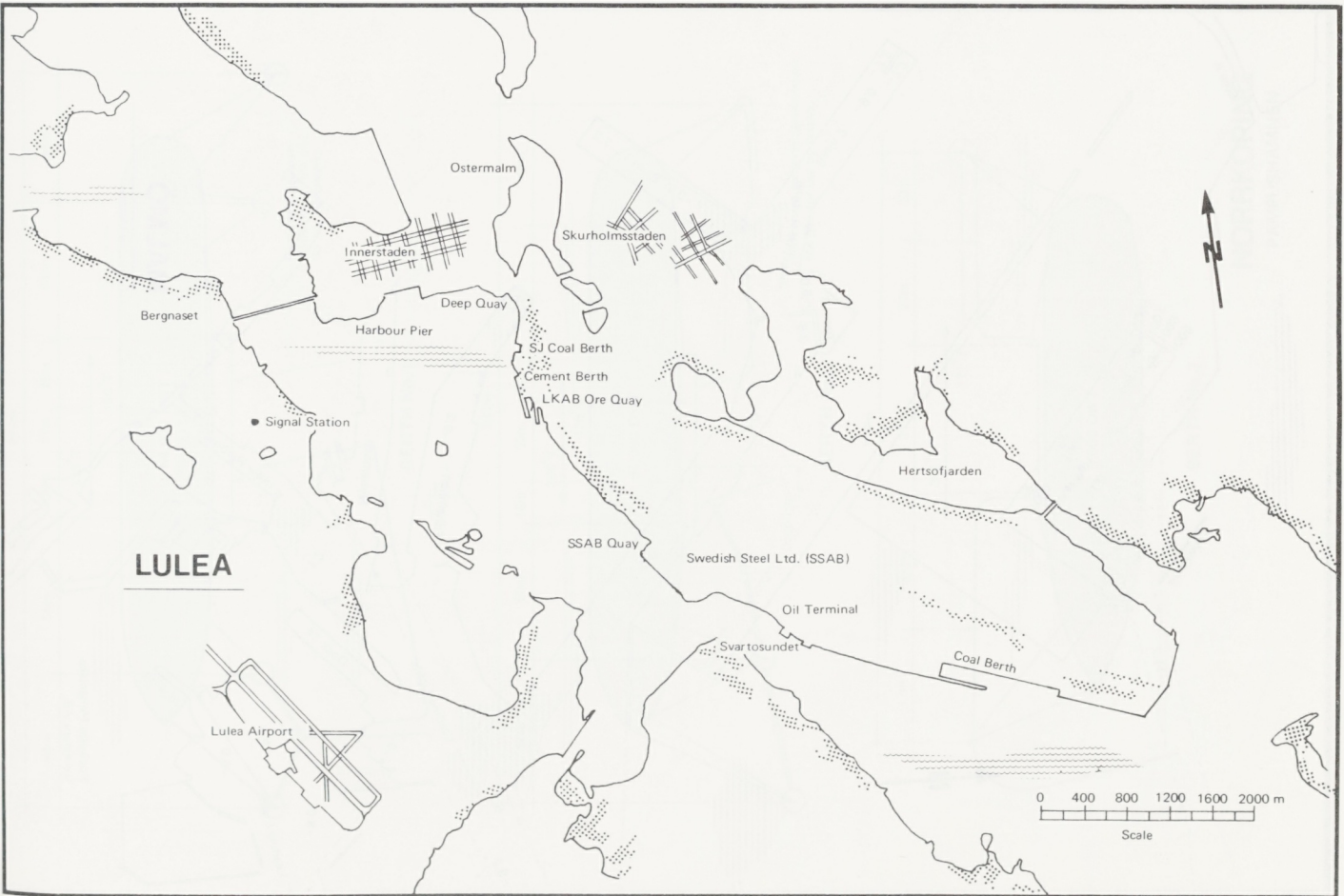
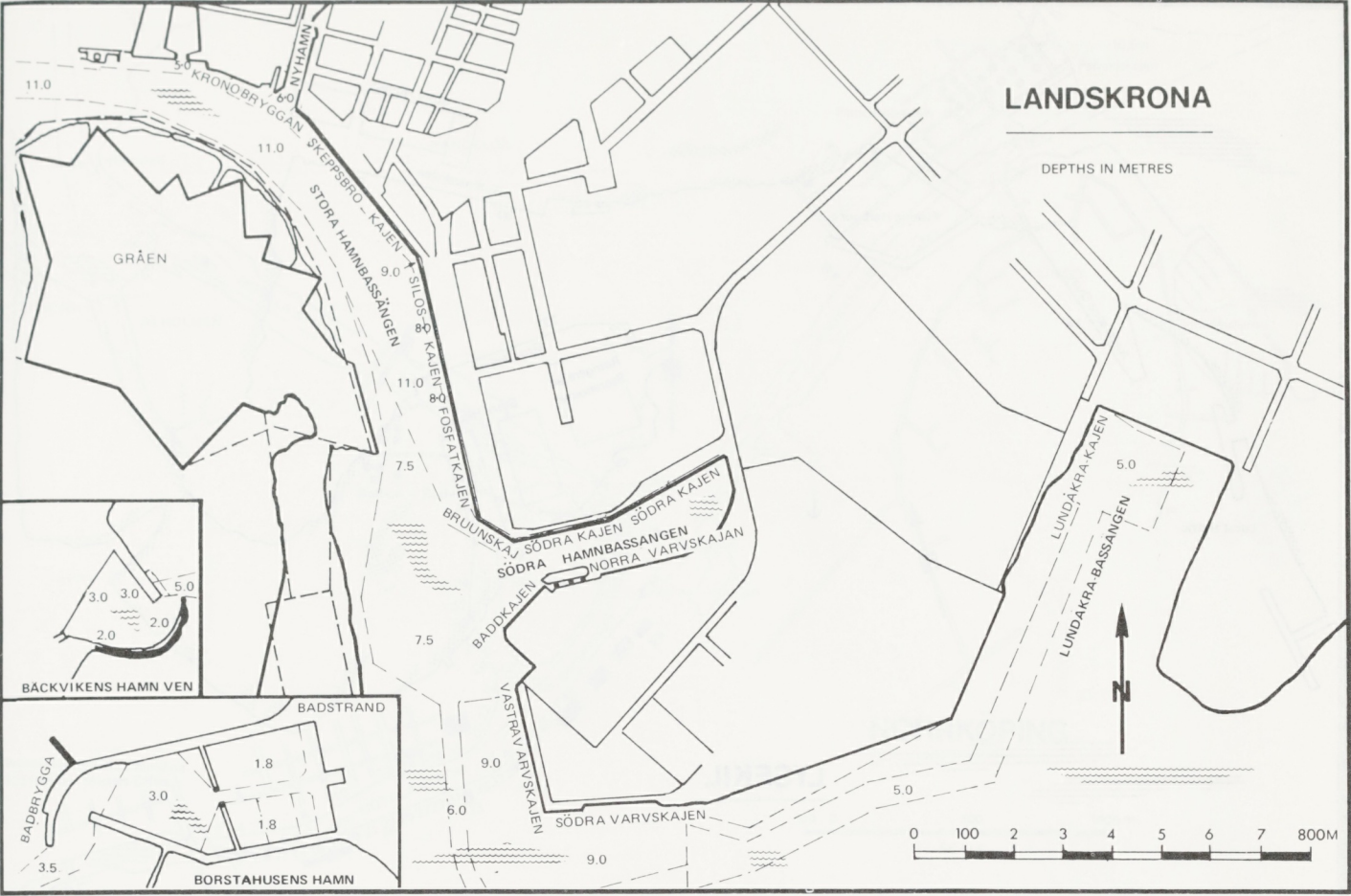


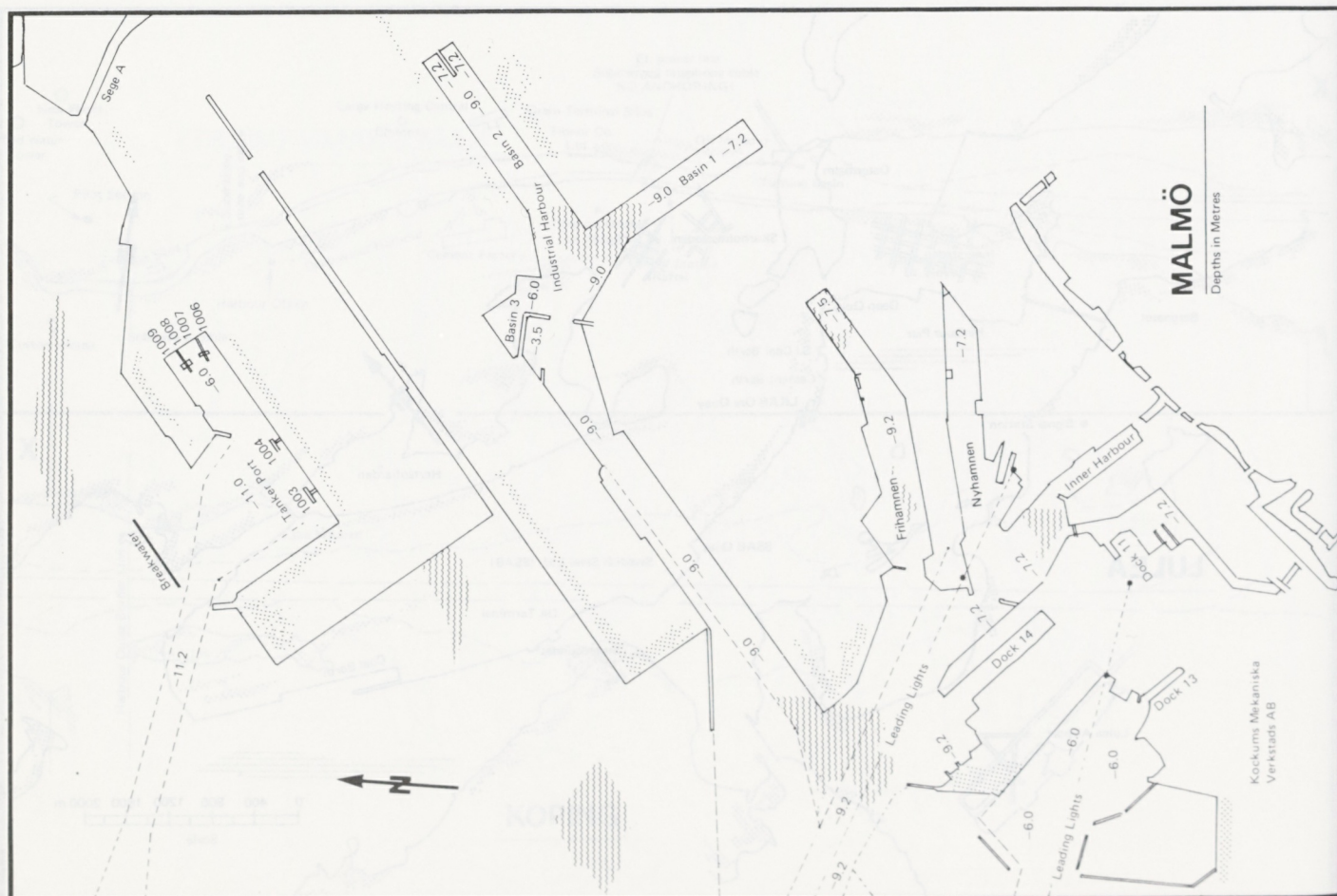


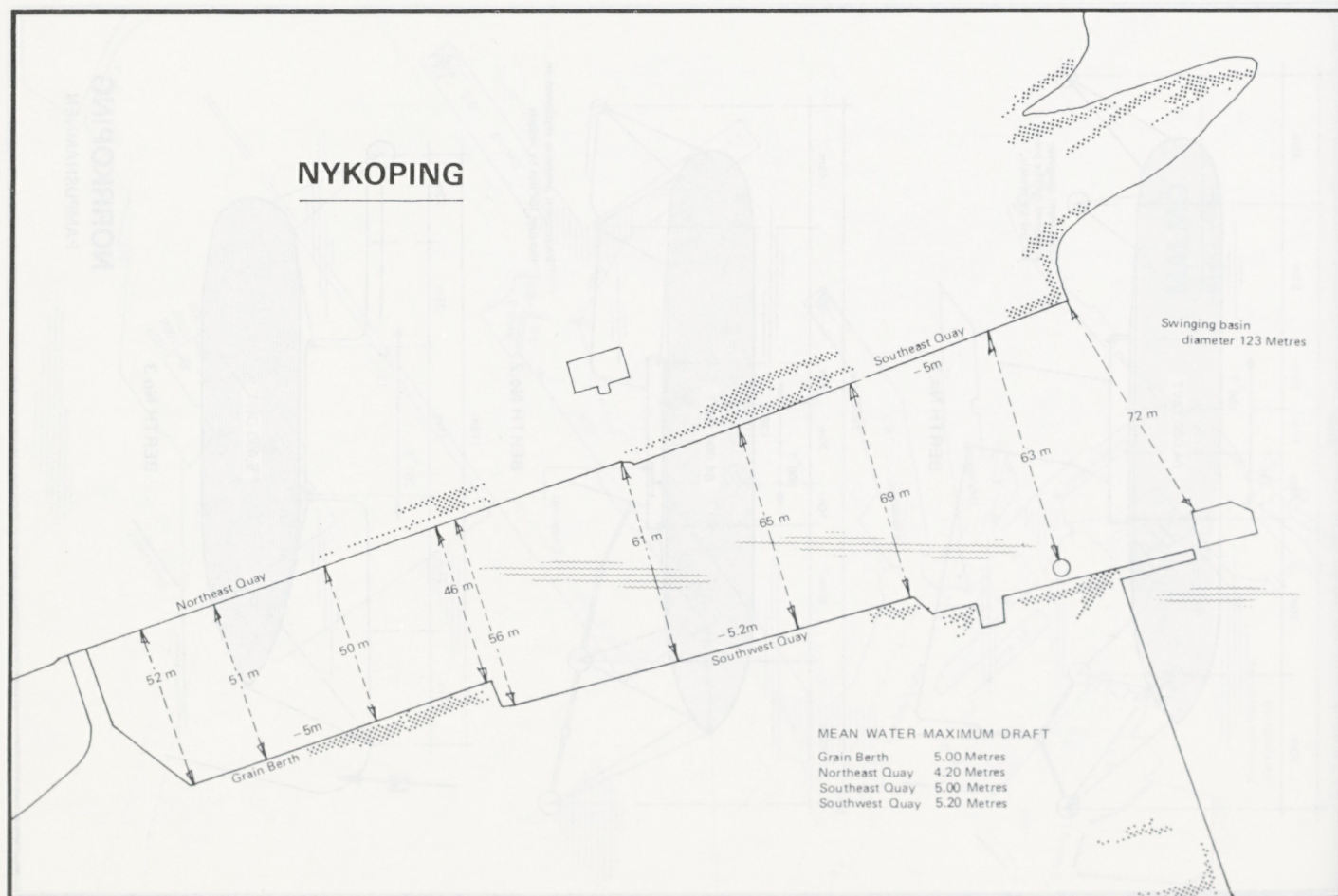
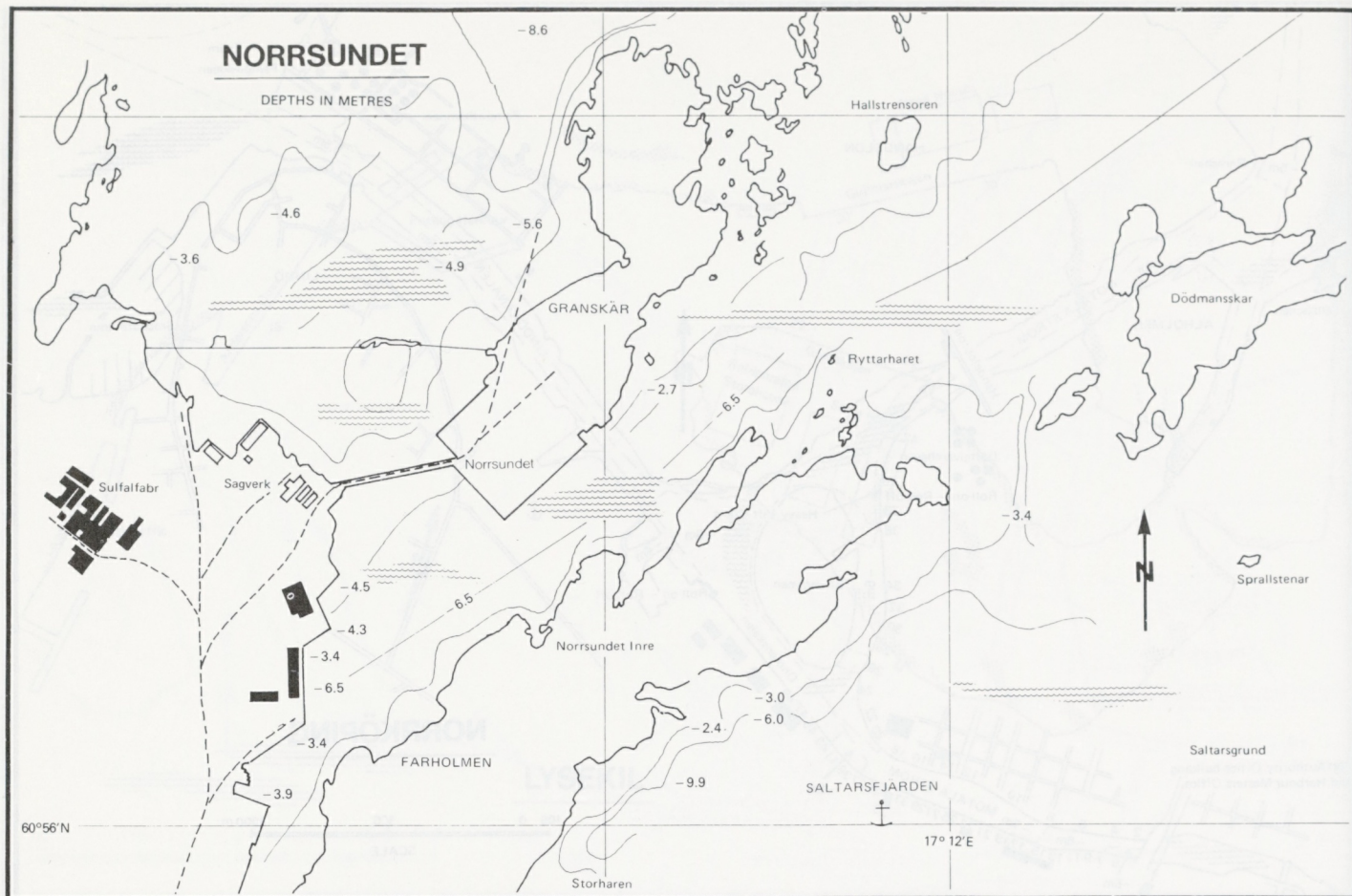




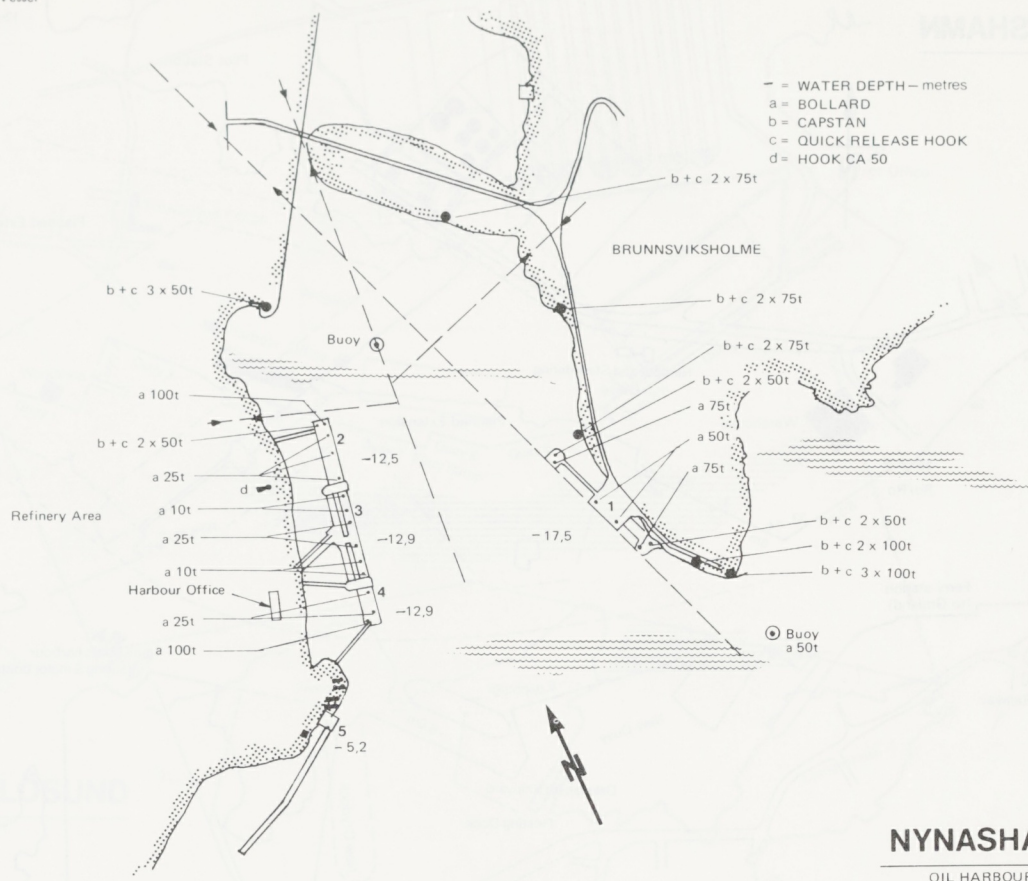








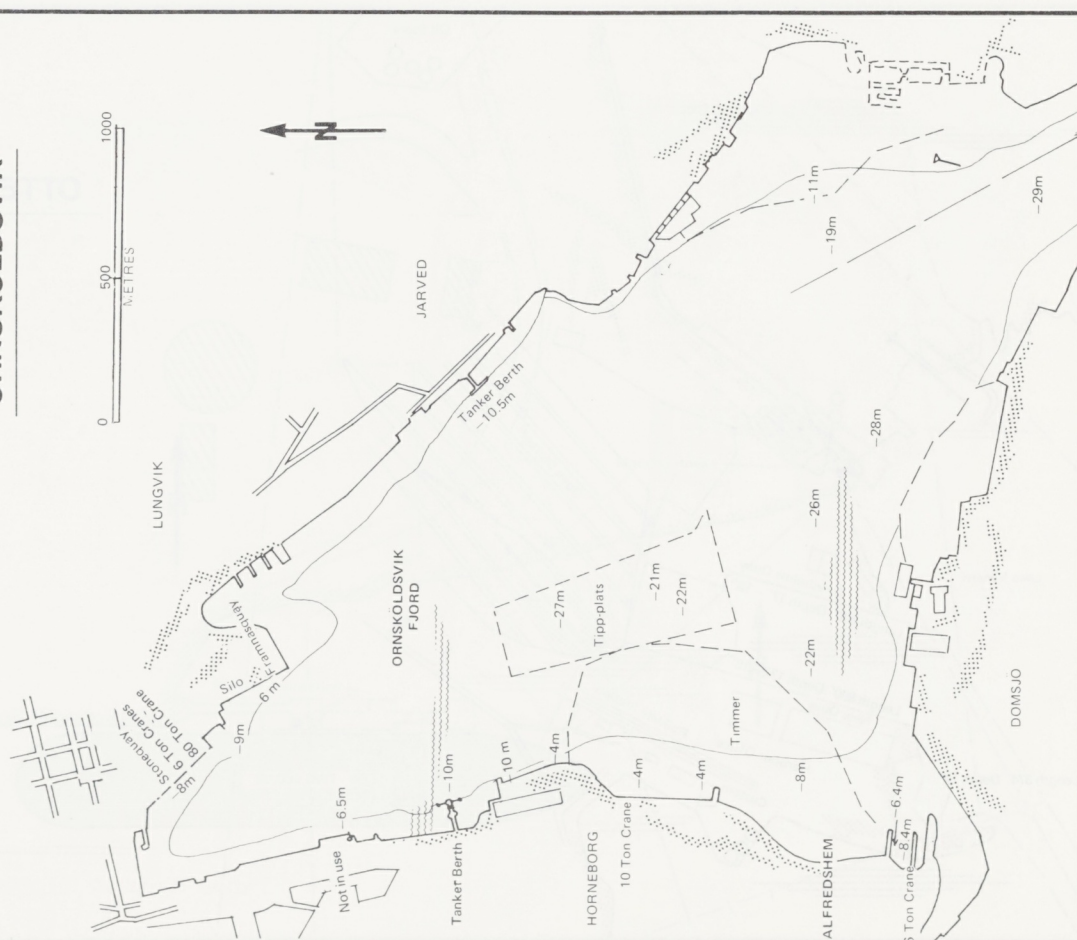
Berth No.	Max. length of Vessel
1	300m
2	110m
3	250m
4	120m
5	70m



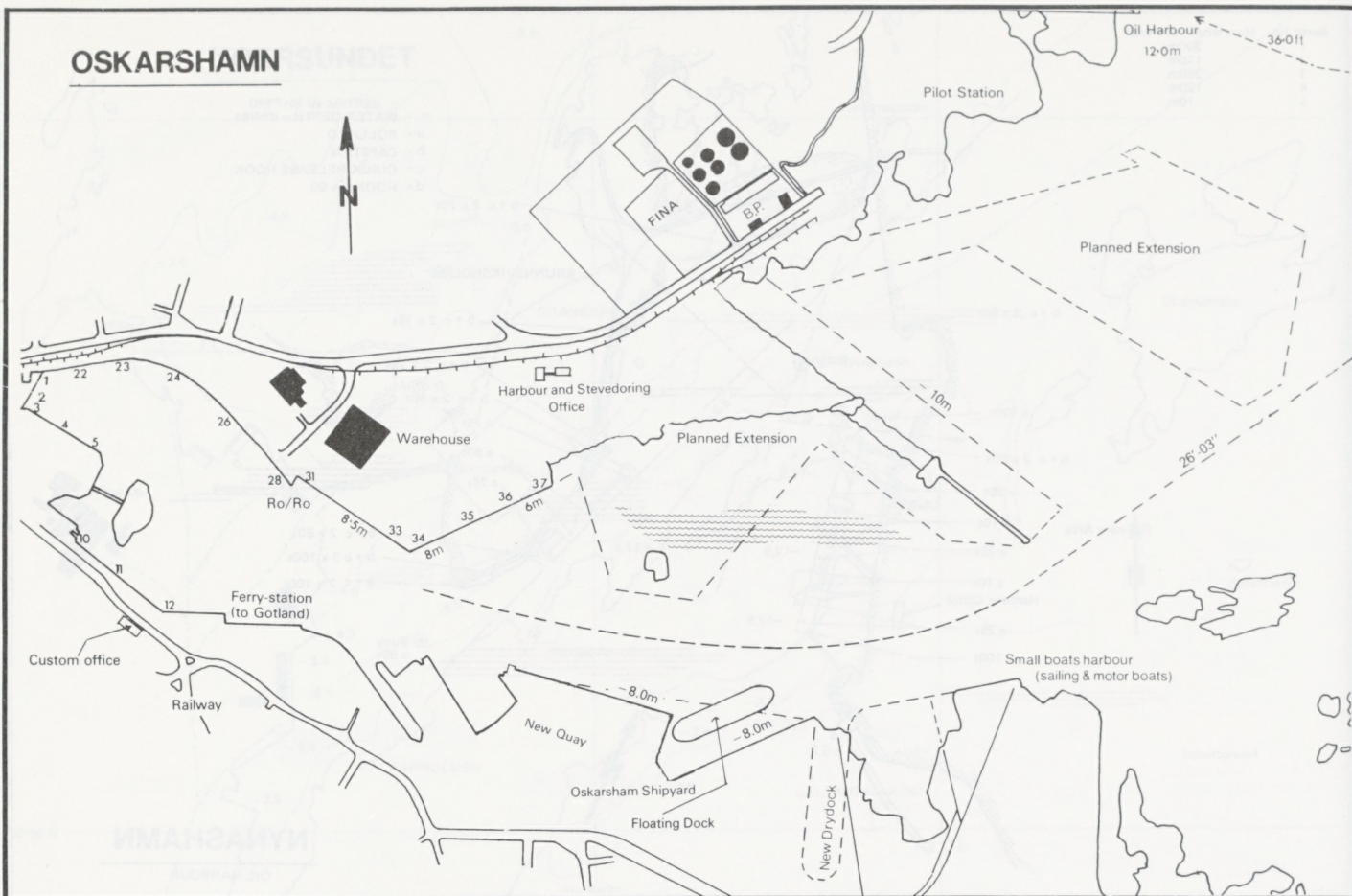
NYNASHAMN

OIL HARBOUR

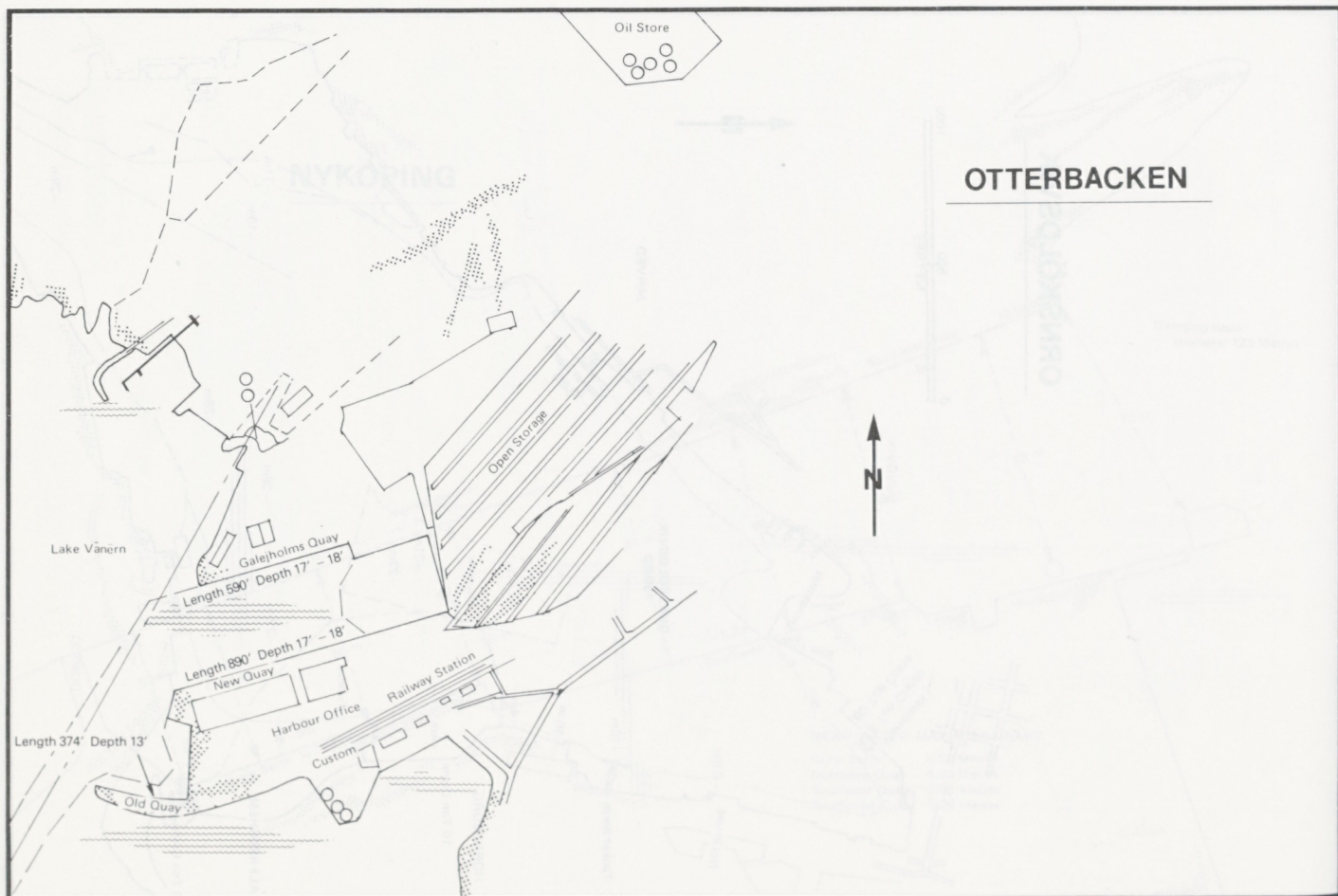
ORNSKÖLD SVIK

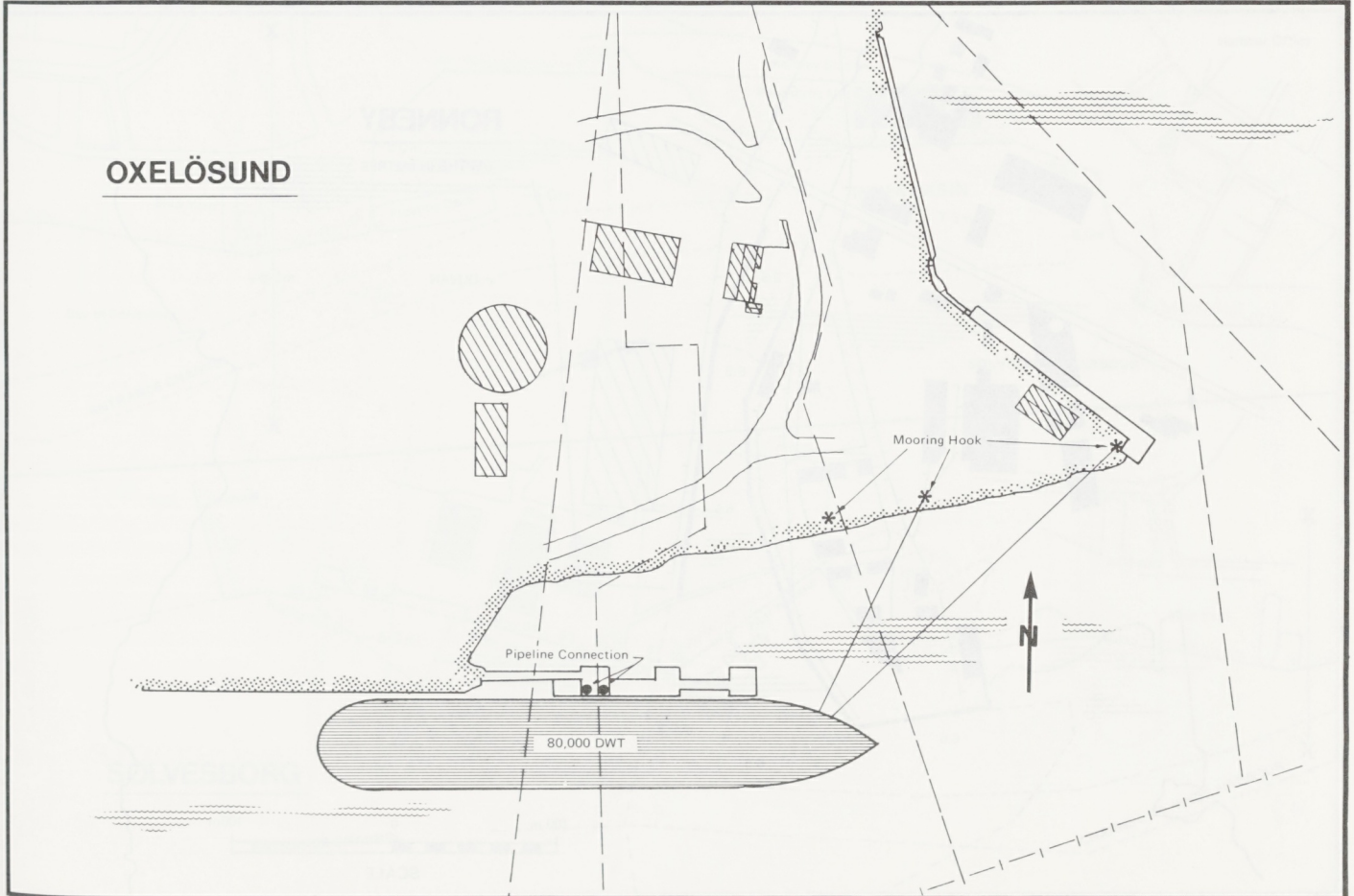
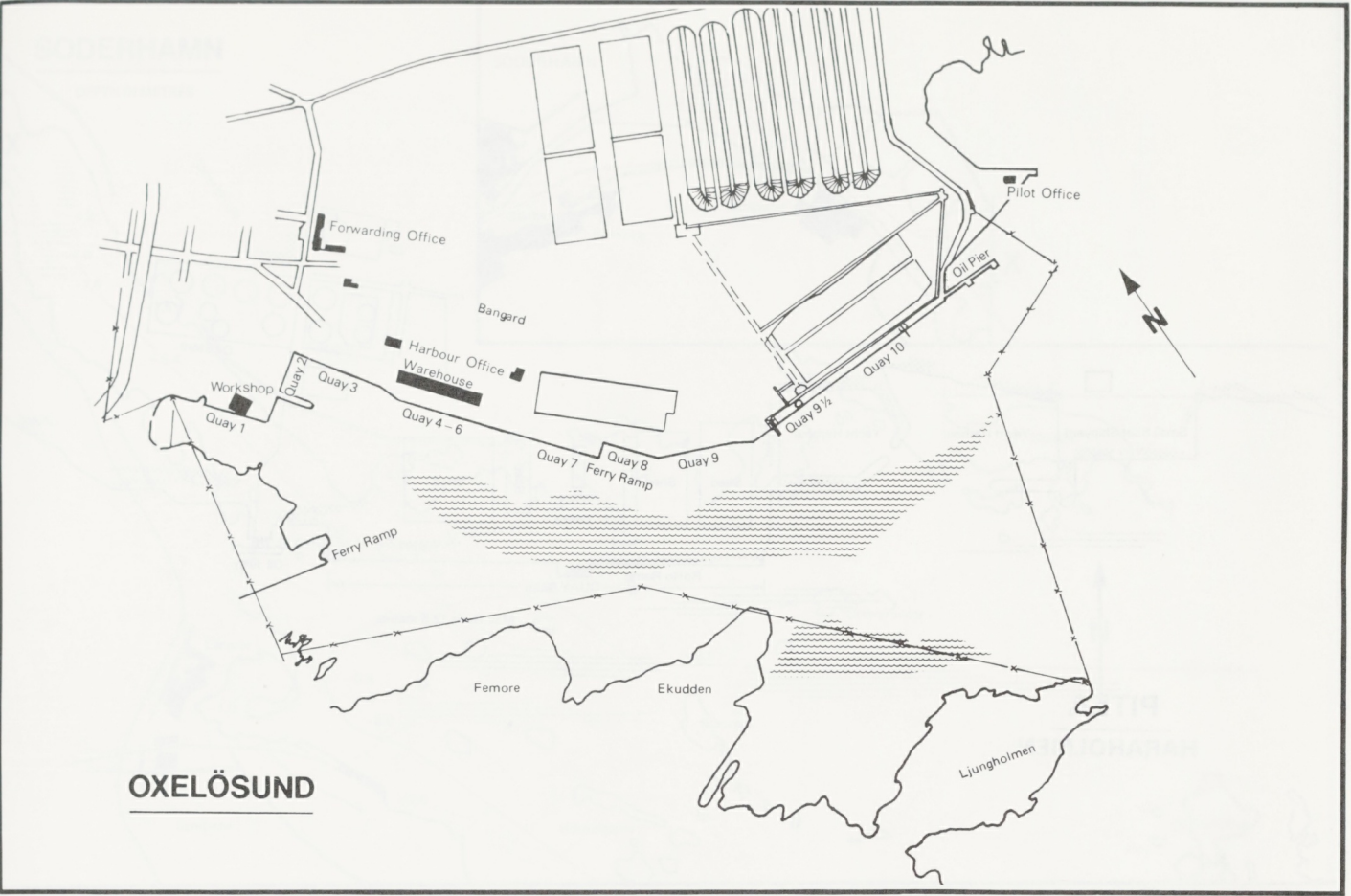


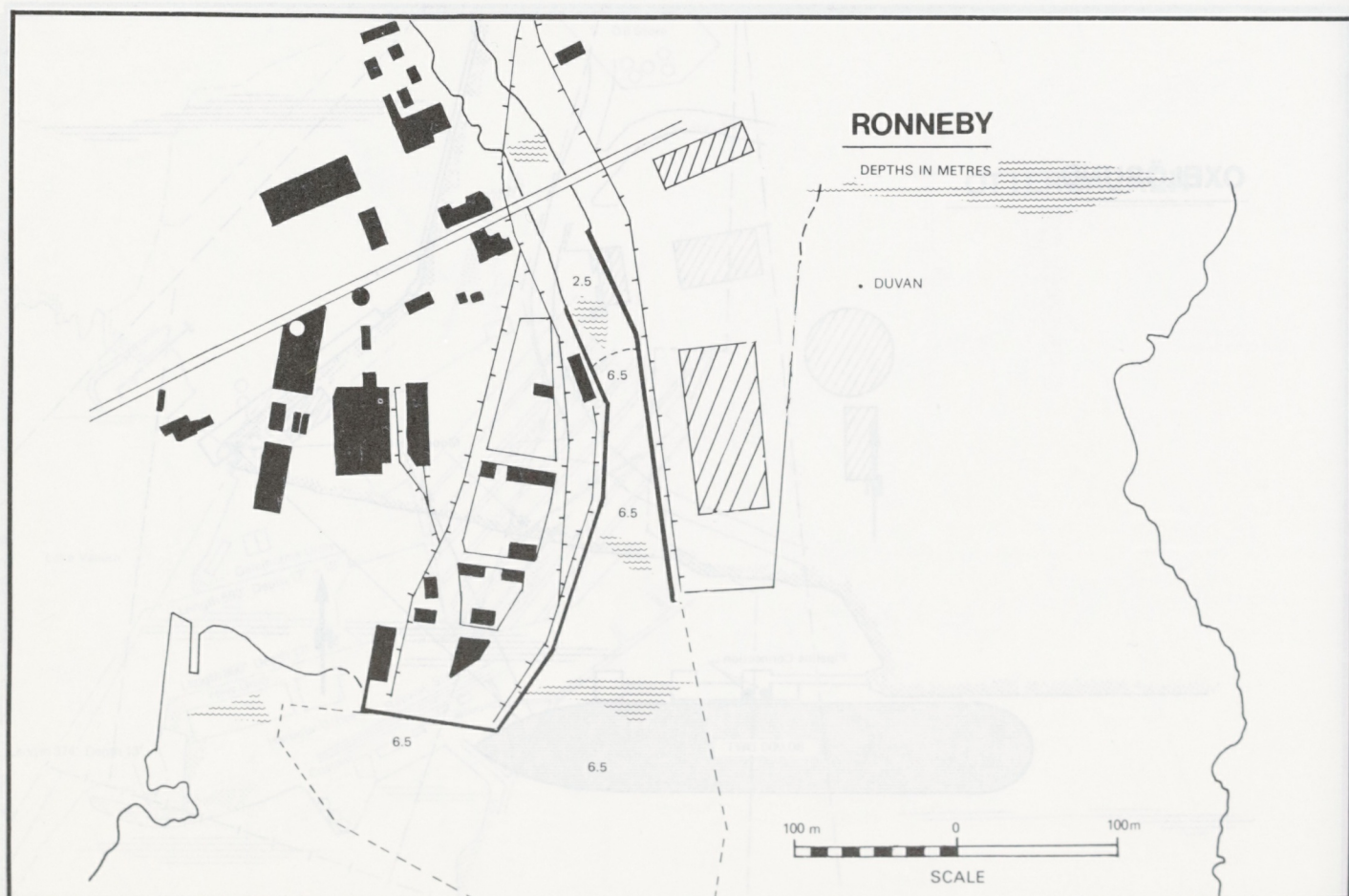
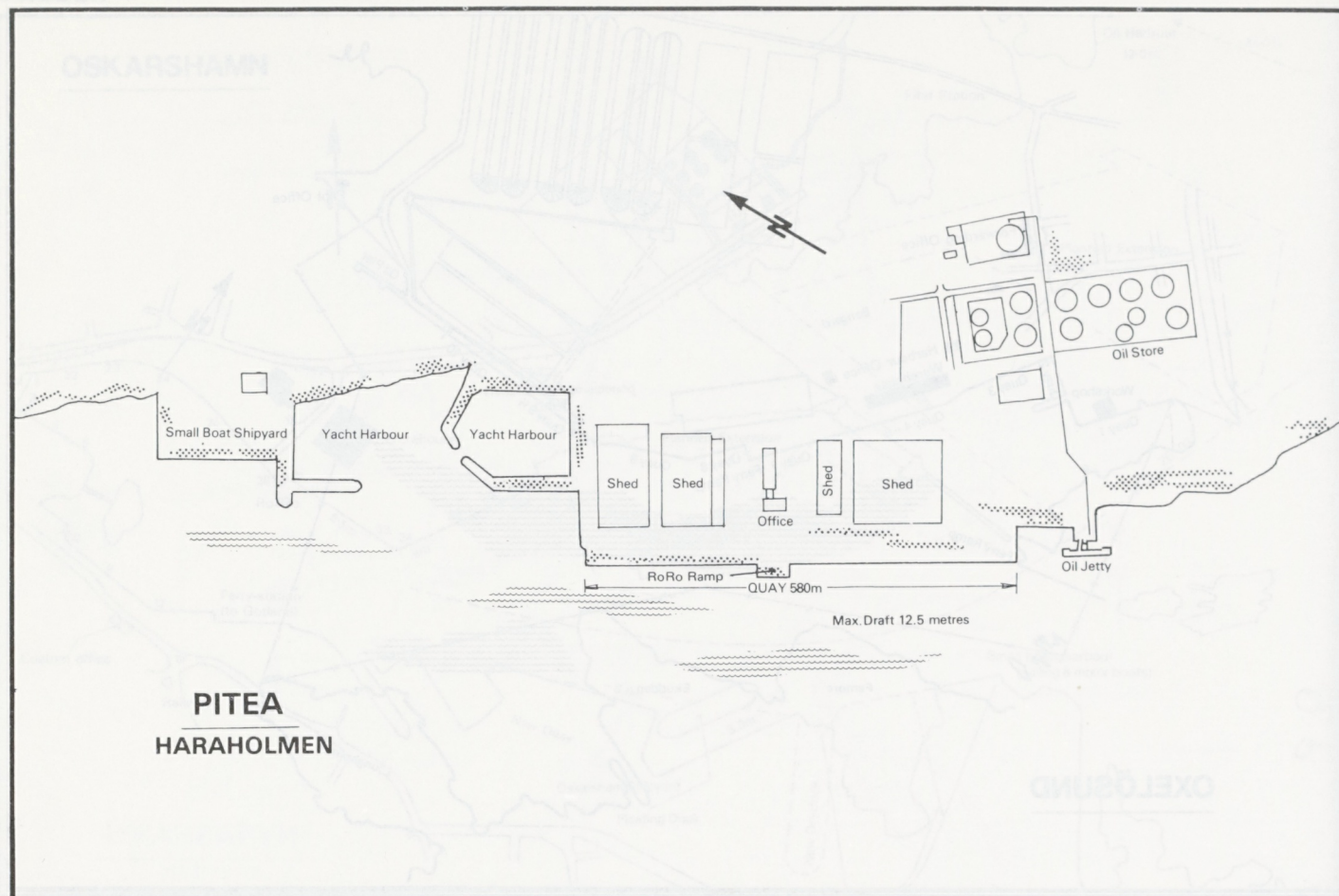
OSKARSHAMN

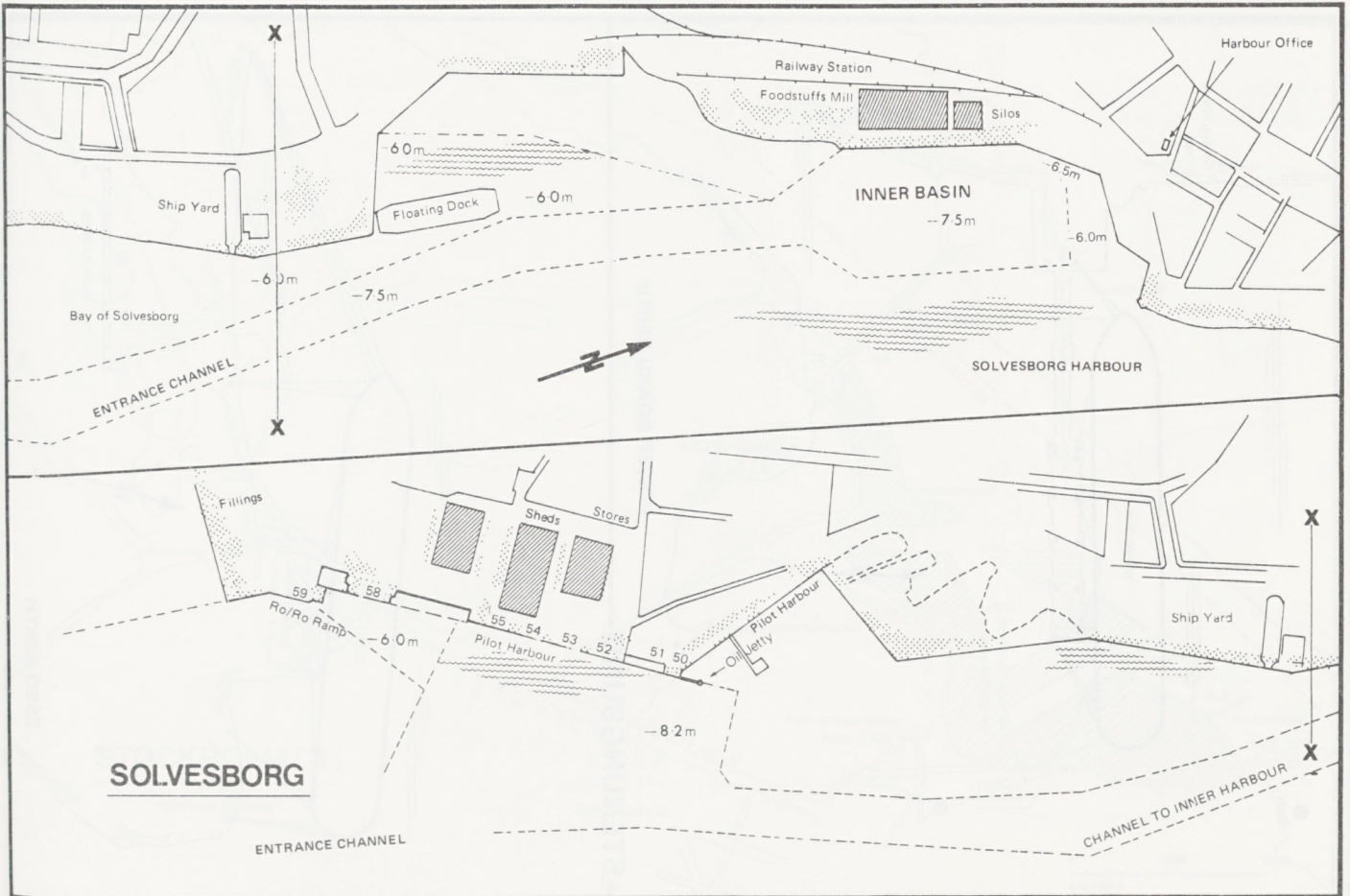
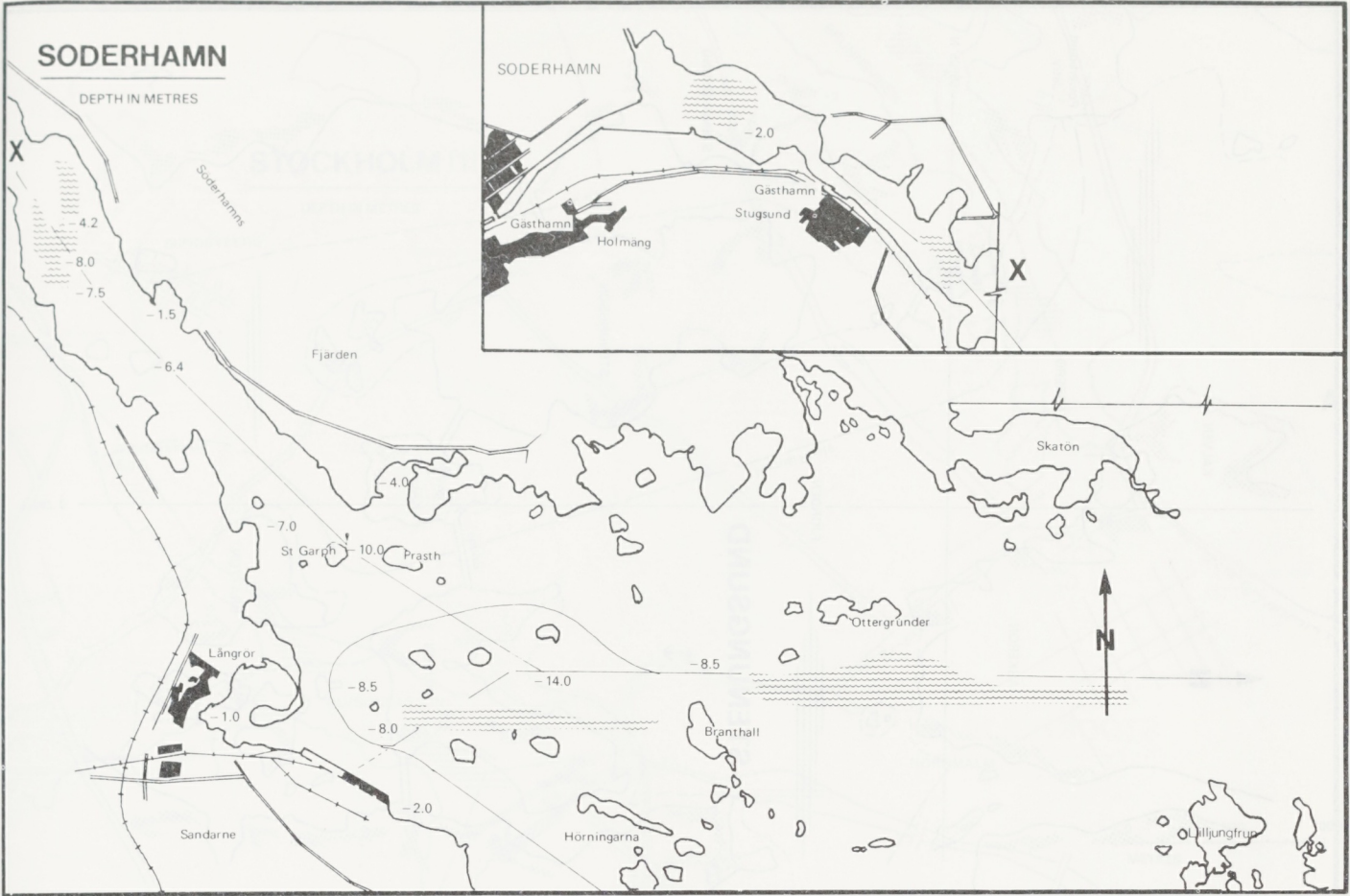


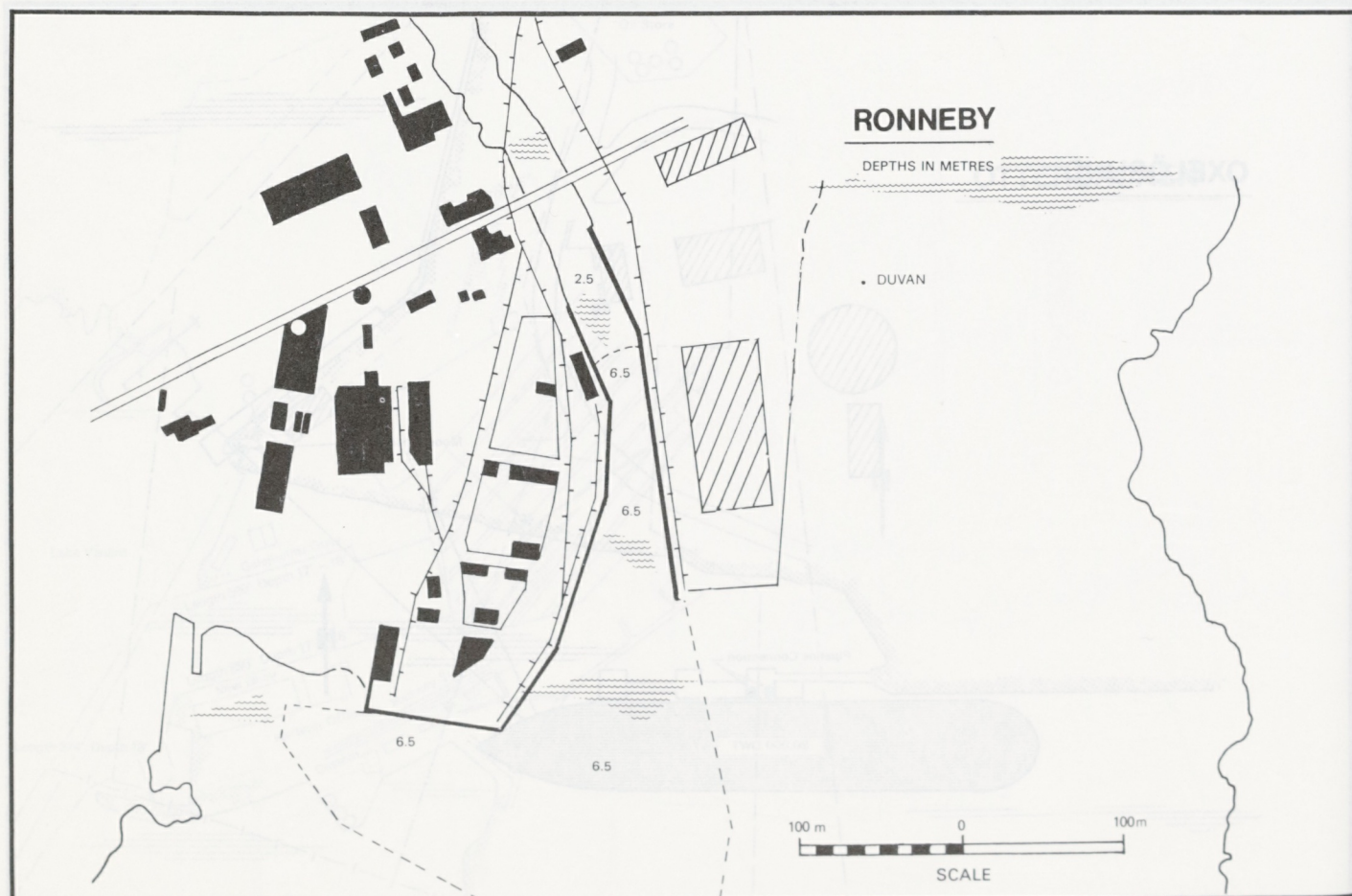
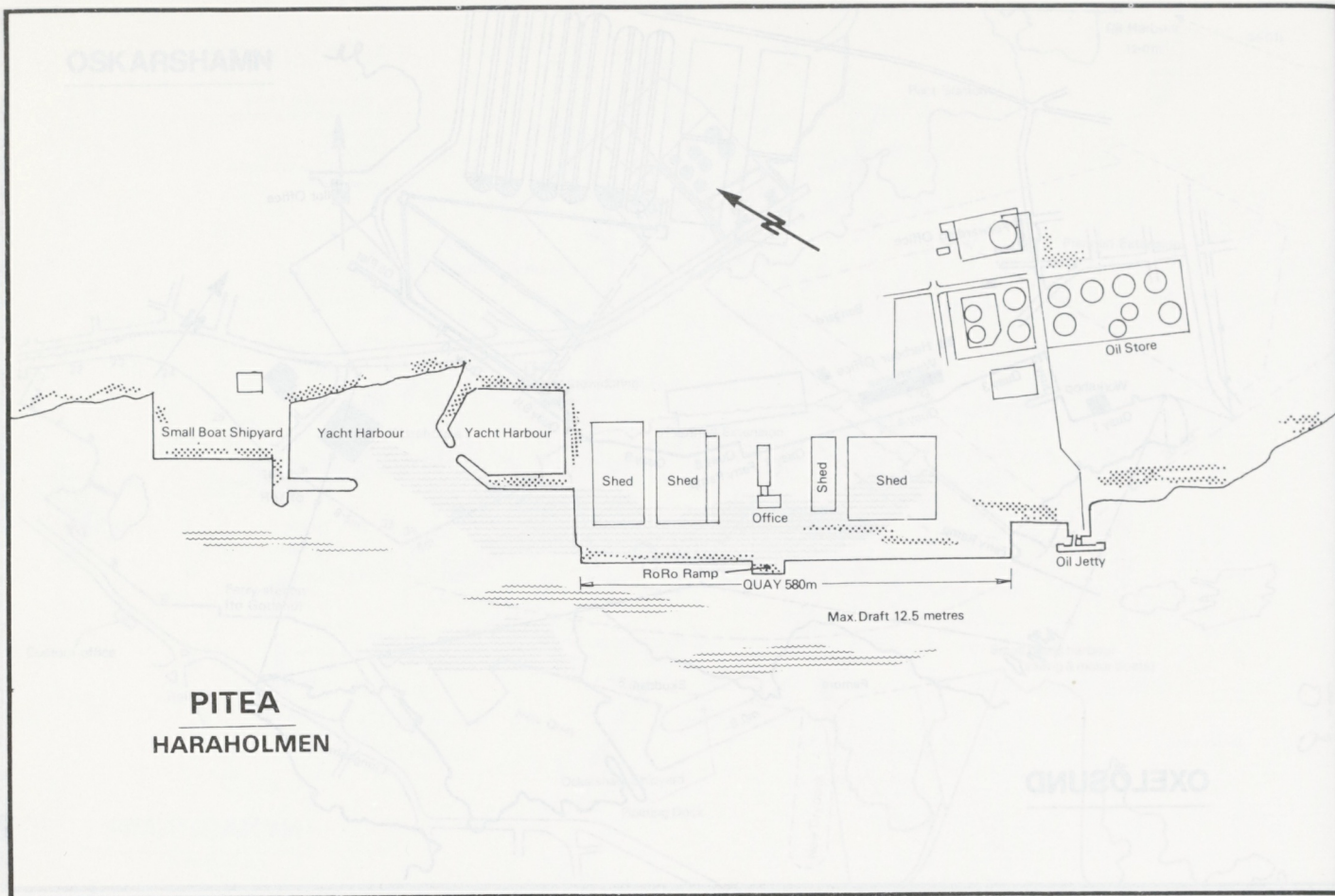
OTTERBACKEN

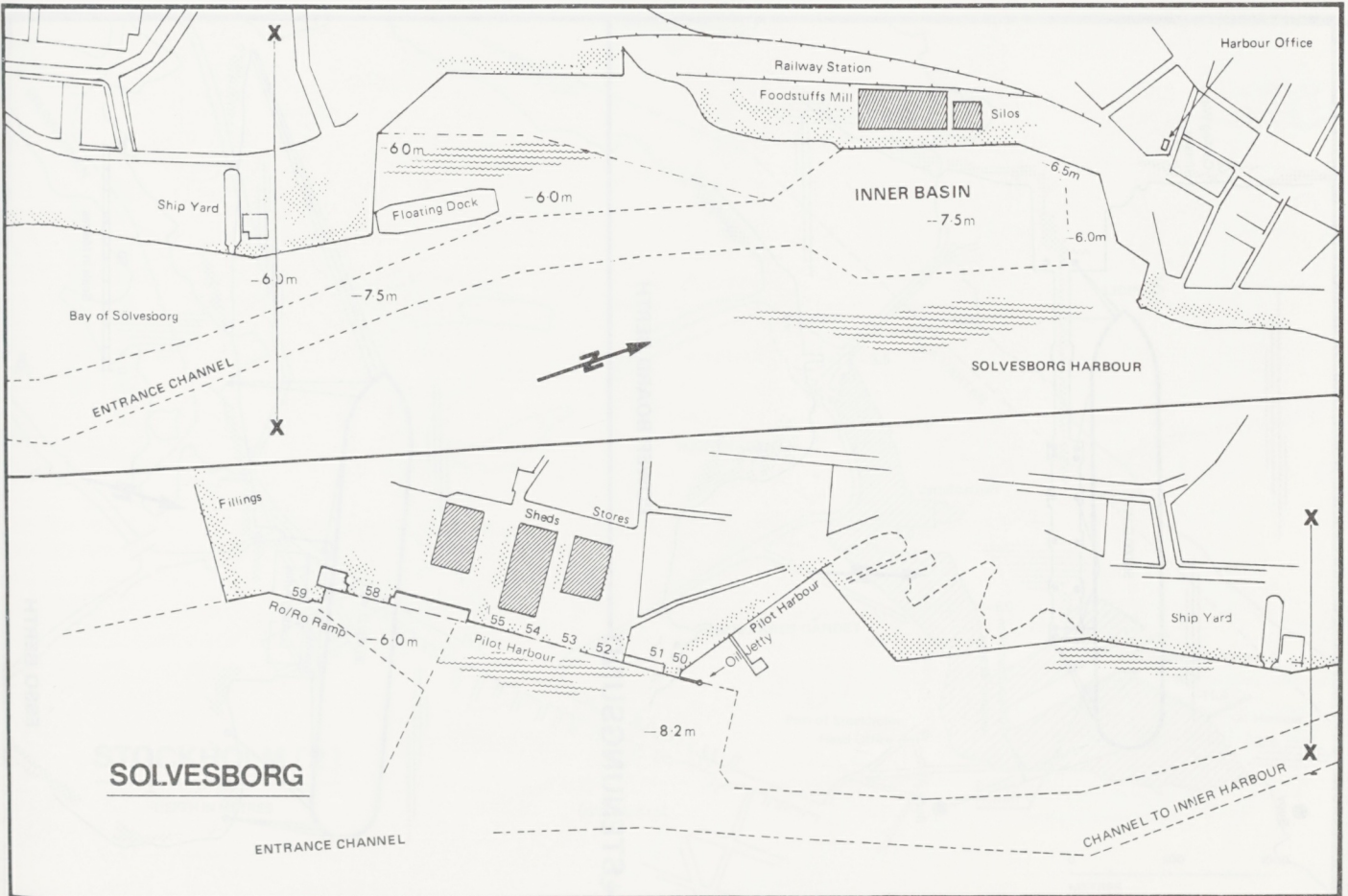
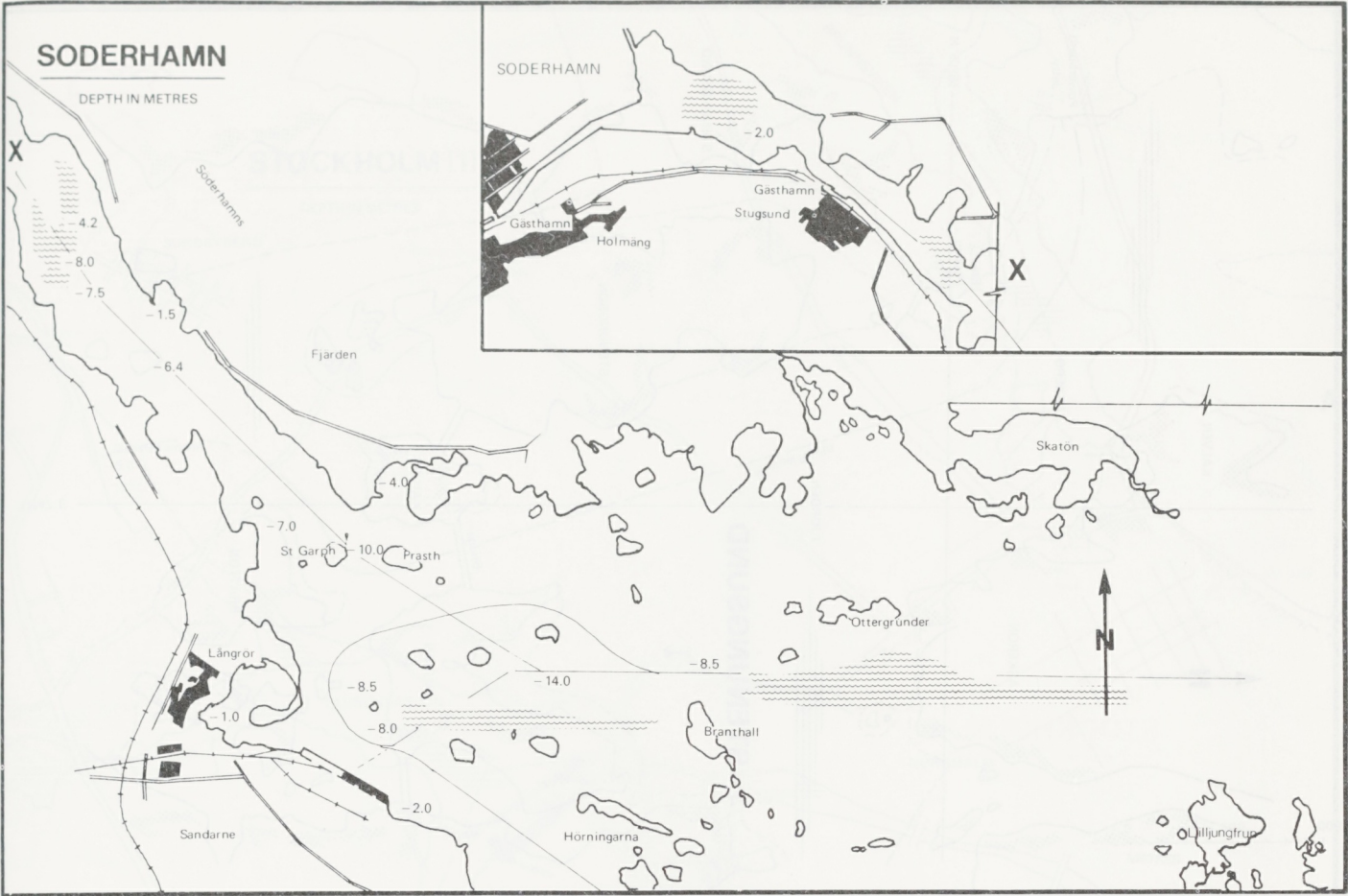


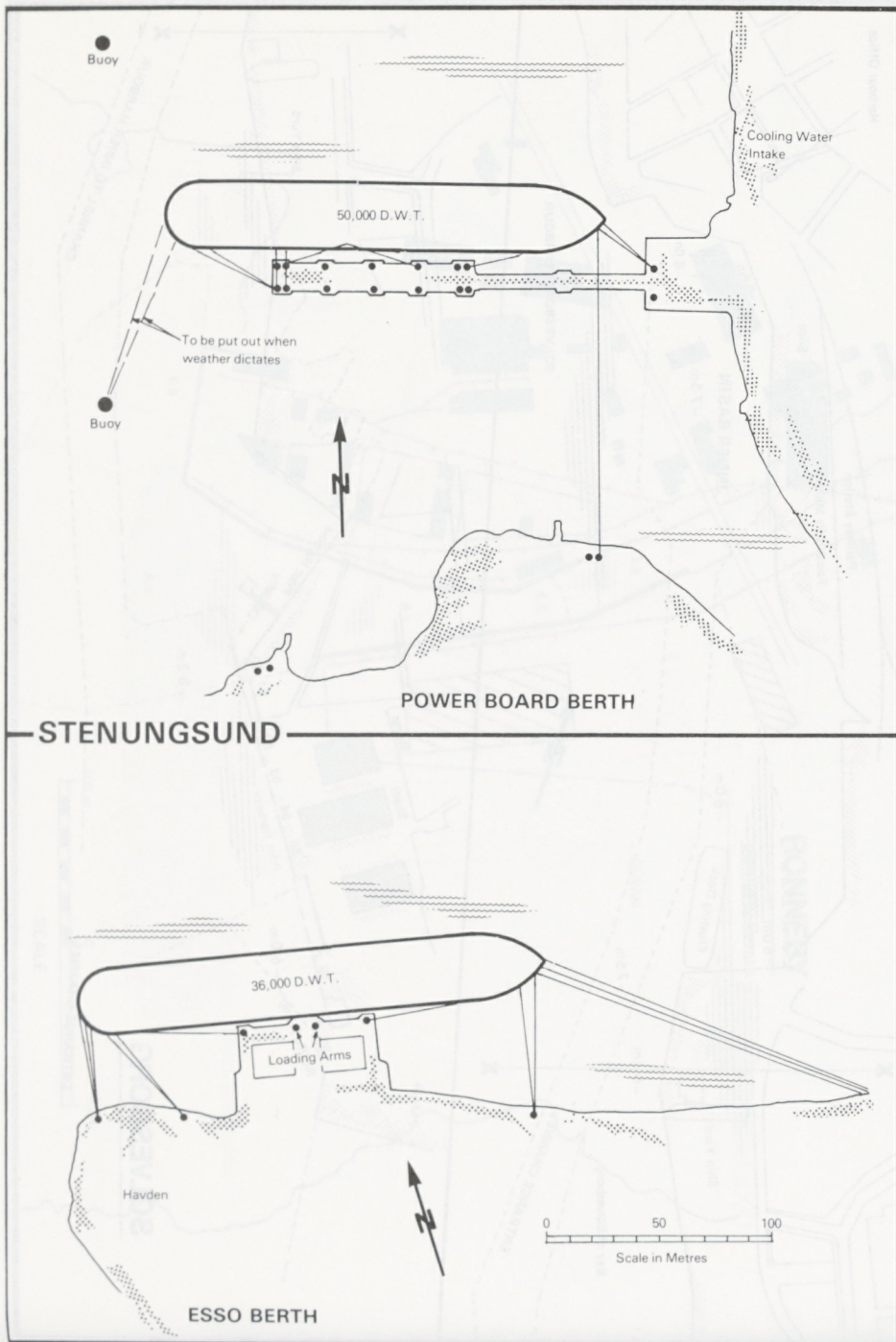
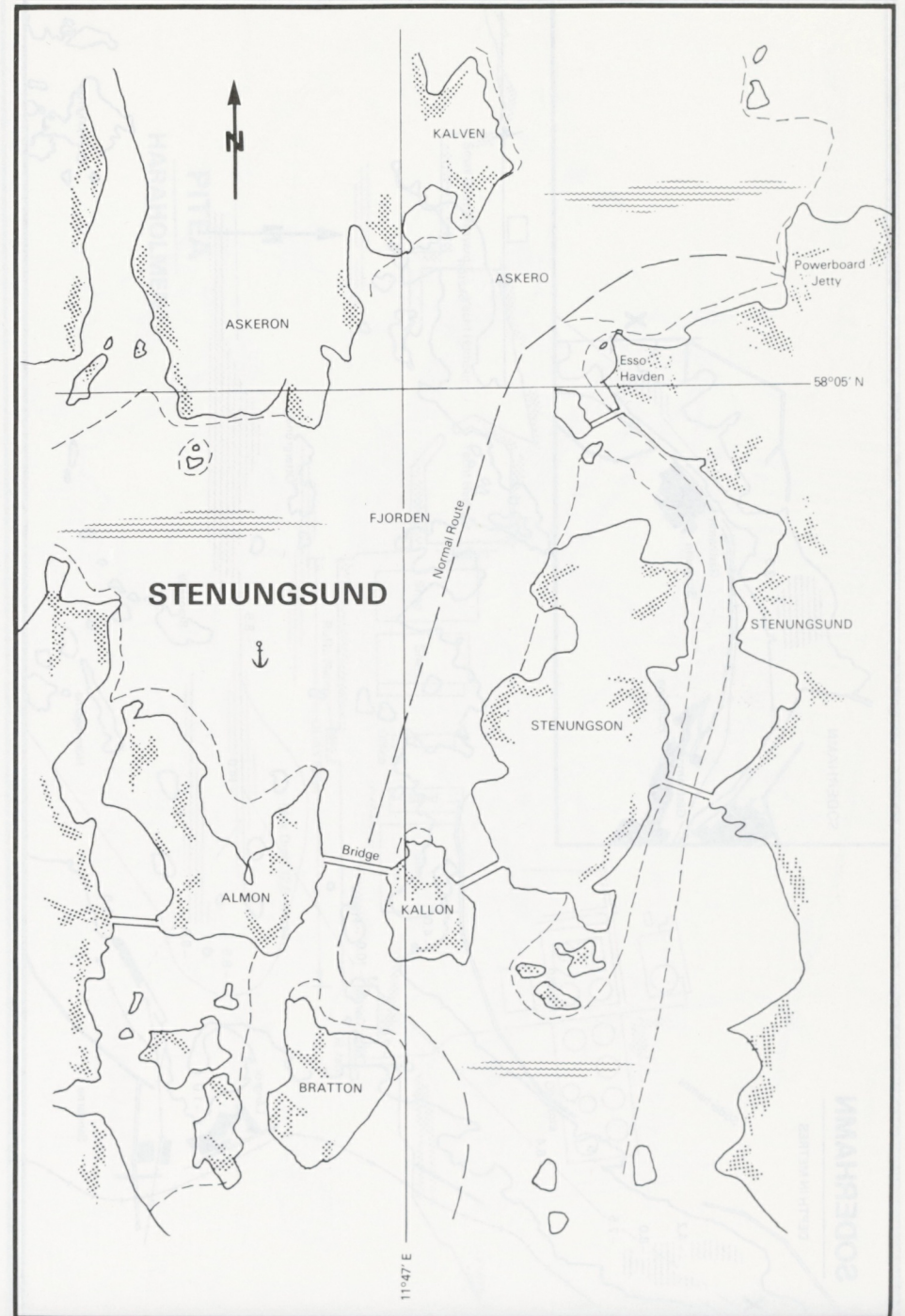












STOCKHOLM [1]

DEPTH IN METRES

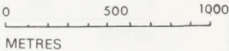
SUNDBYBERG

Ballstahamnen
- 5.0

ULVSUNDASJÖN

Hornbergs Strand
- 4.1
- 6.6

NORRMALM



B

A

STOCKHOLM [2]

DEPTH IN METRES

BRUNNSVIKEN

LIDINGÖ

HJORTHAGEN

LILLA VÄRTAN
- 3.5
- 11.0

Vartahamnen
- 8.0

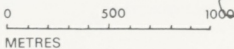
LADUGÅRDS GÅRDET

Port of Stockholm
Head Office

ÖSTERMALM

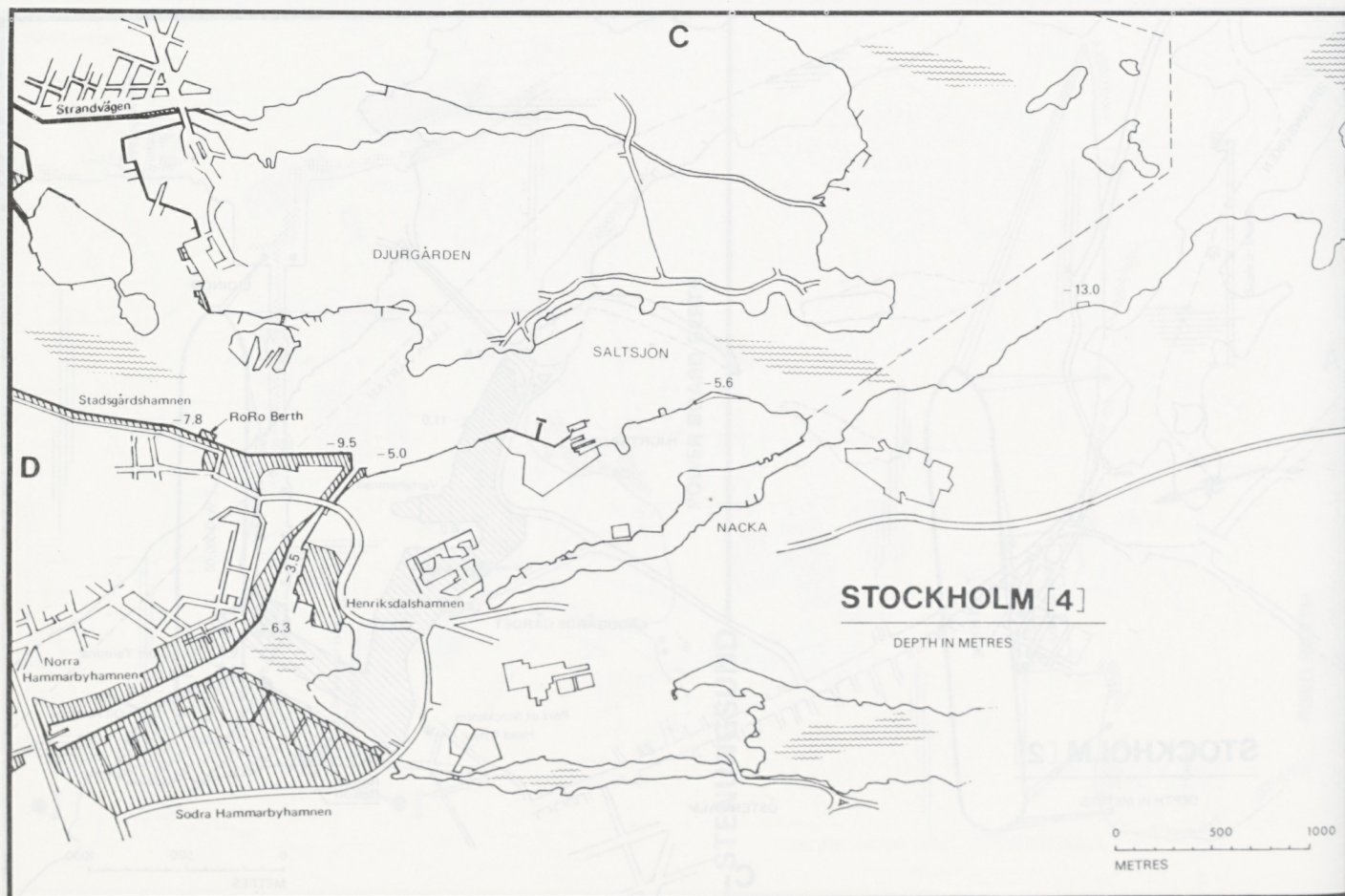
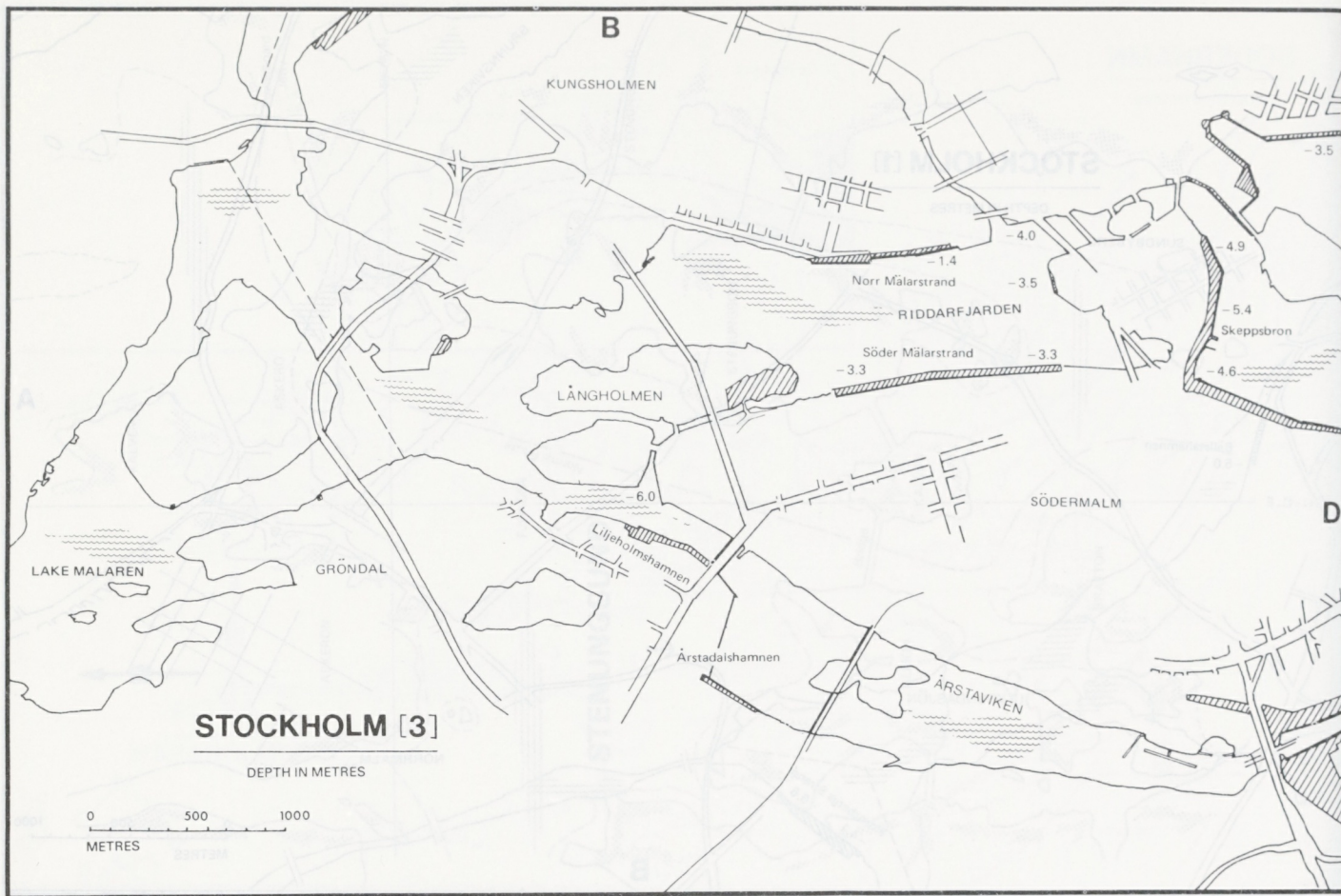
Free Port
Container Terminal
- 10.9
- 11.9
Oil Harbour
- 10.9

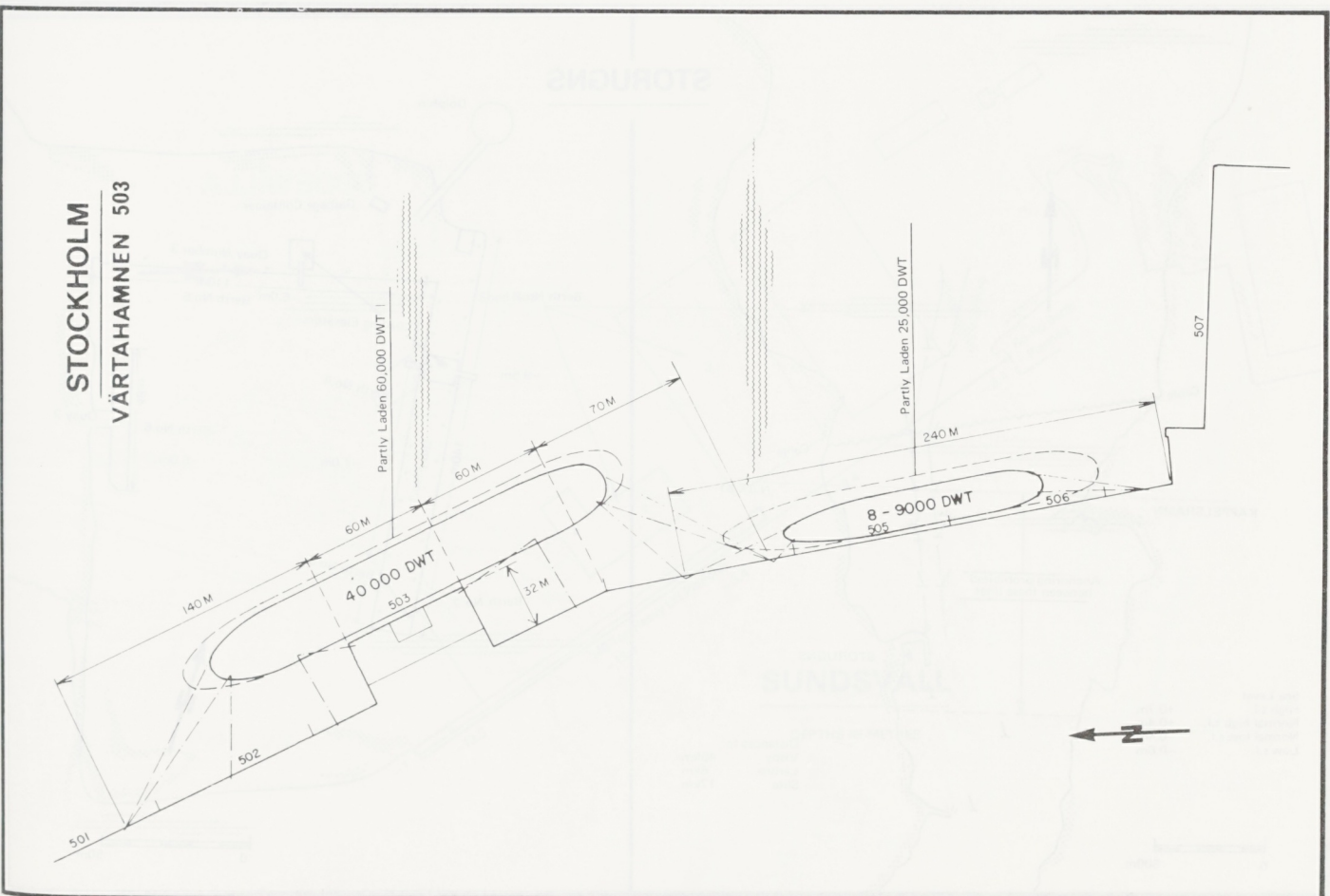
Roll on
Roll off

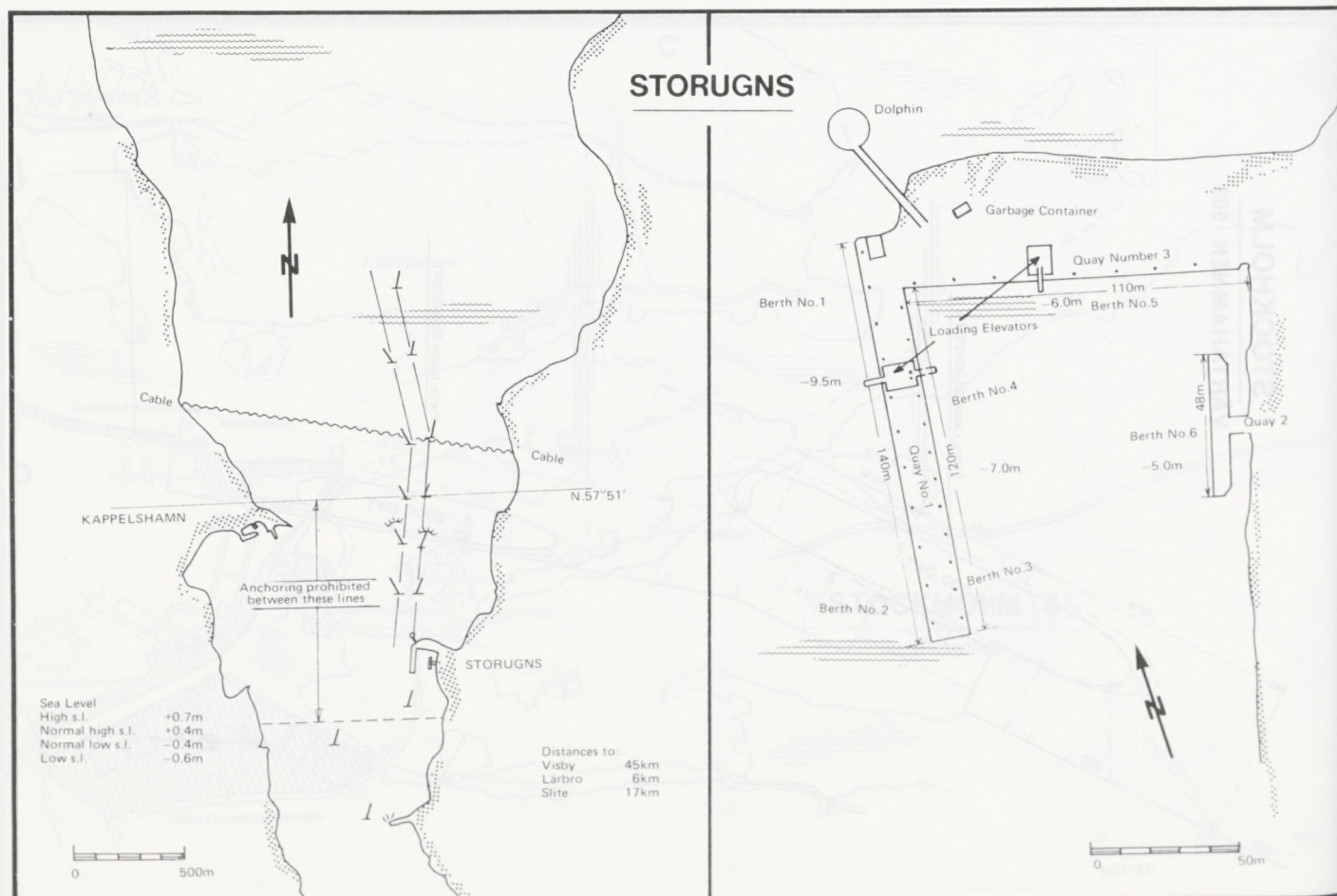
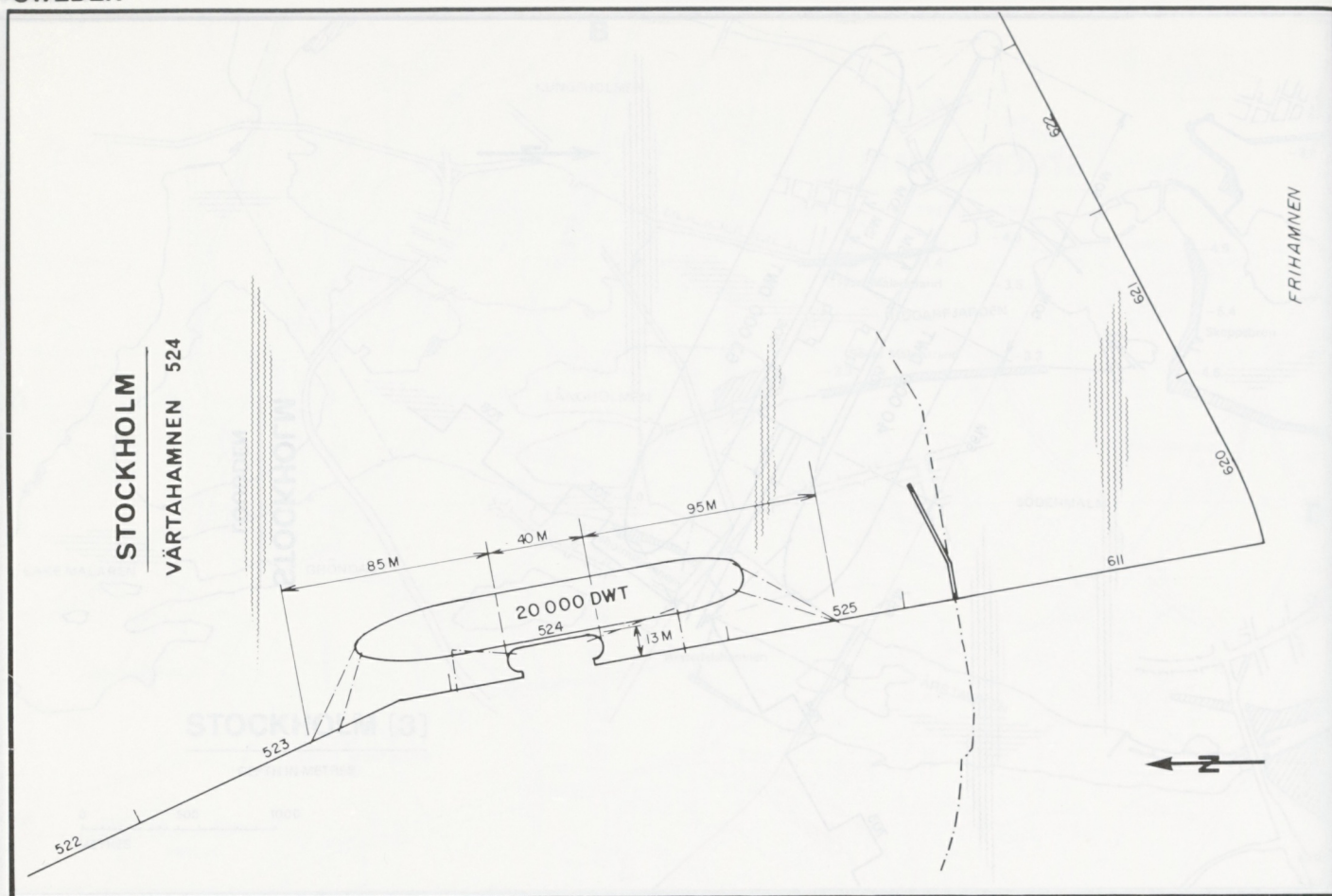


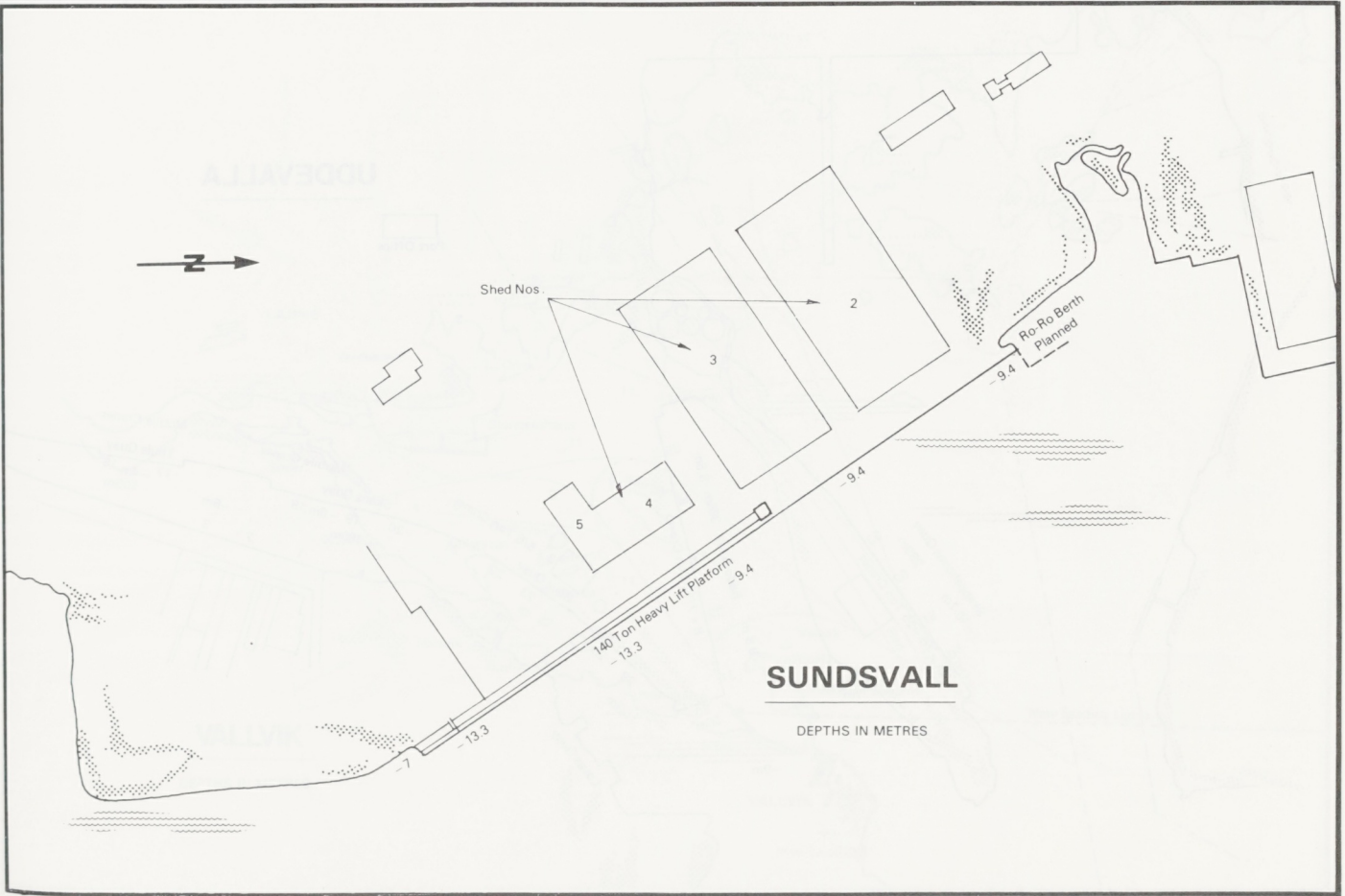
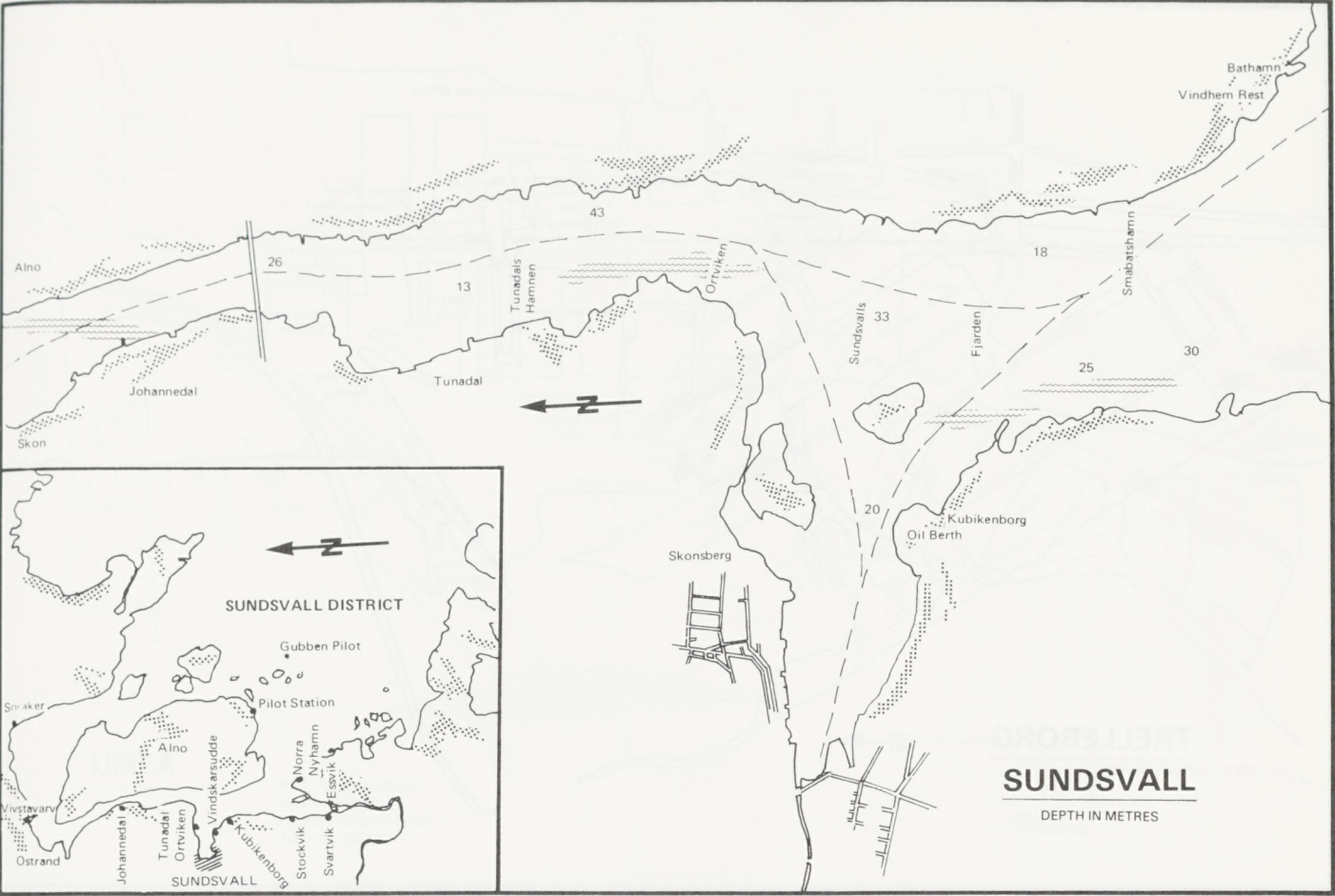
C

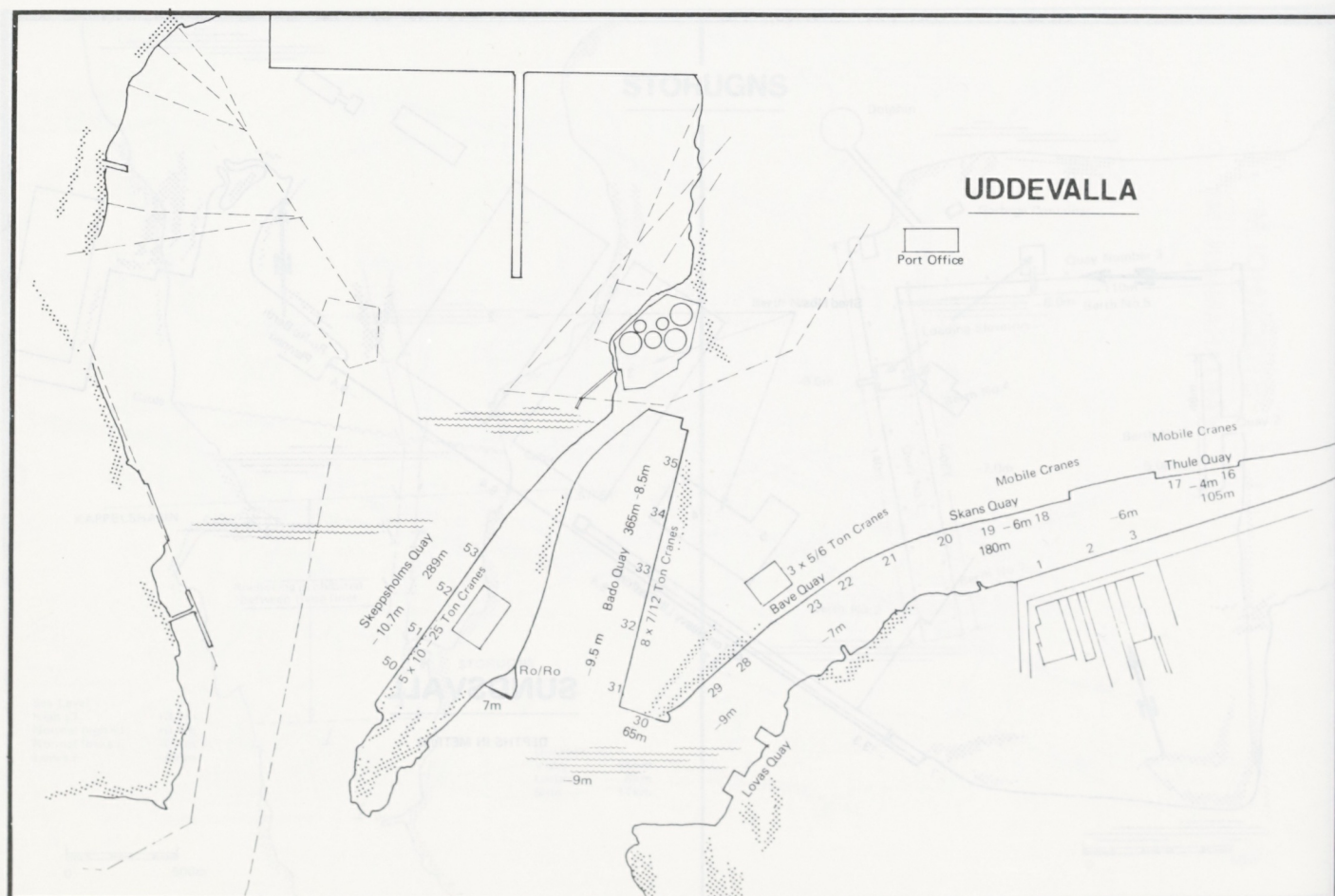
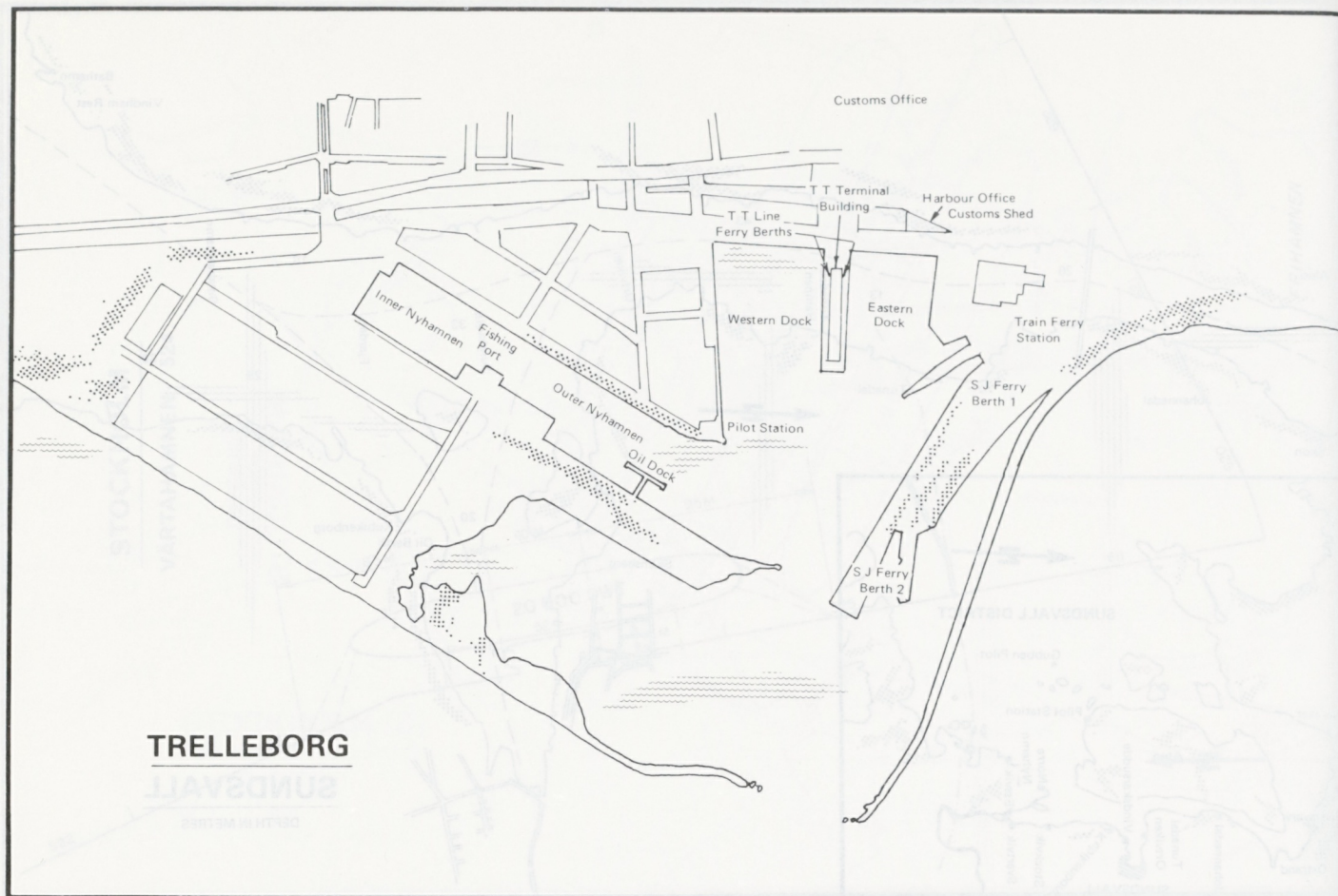
A

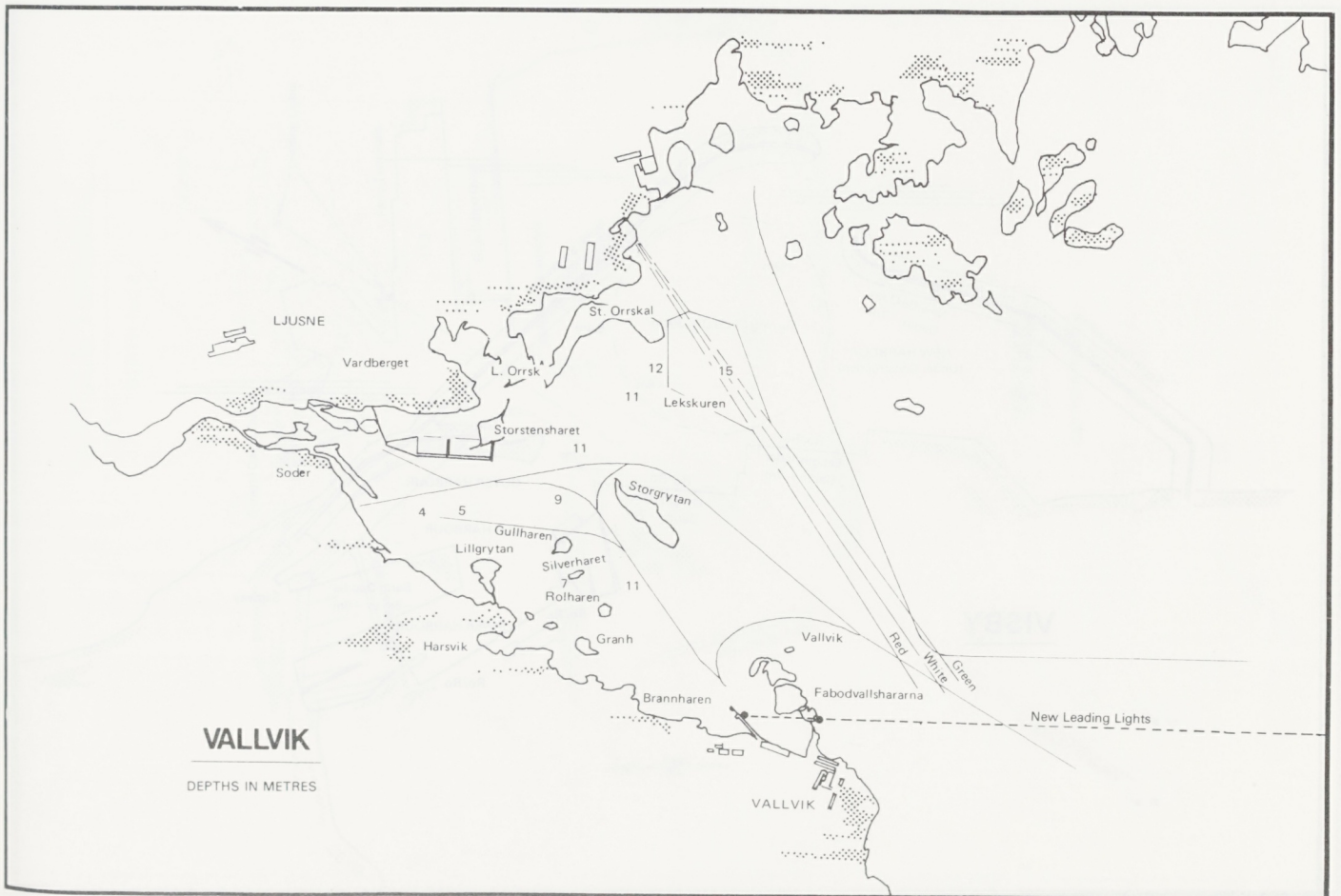
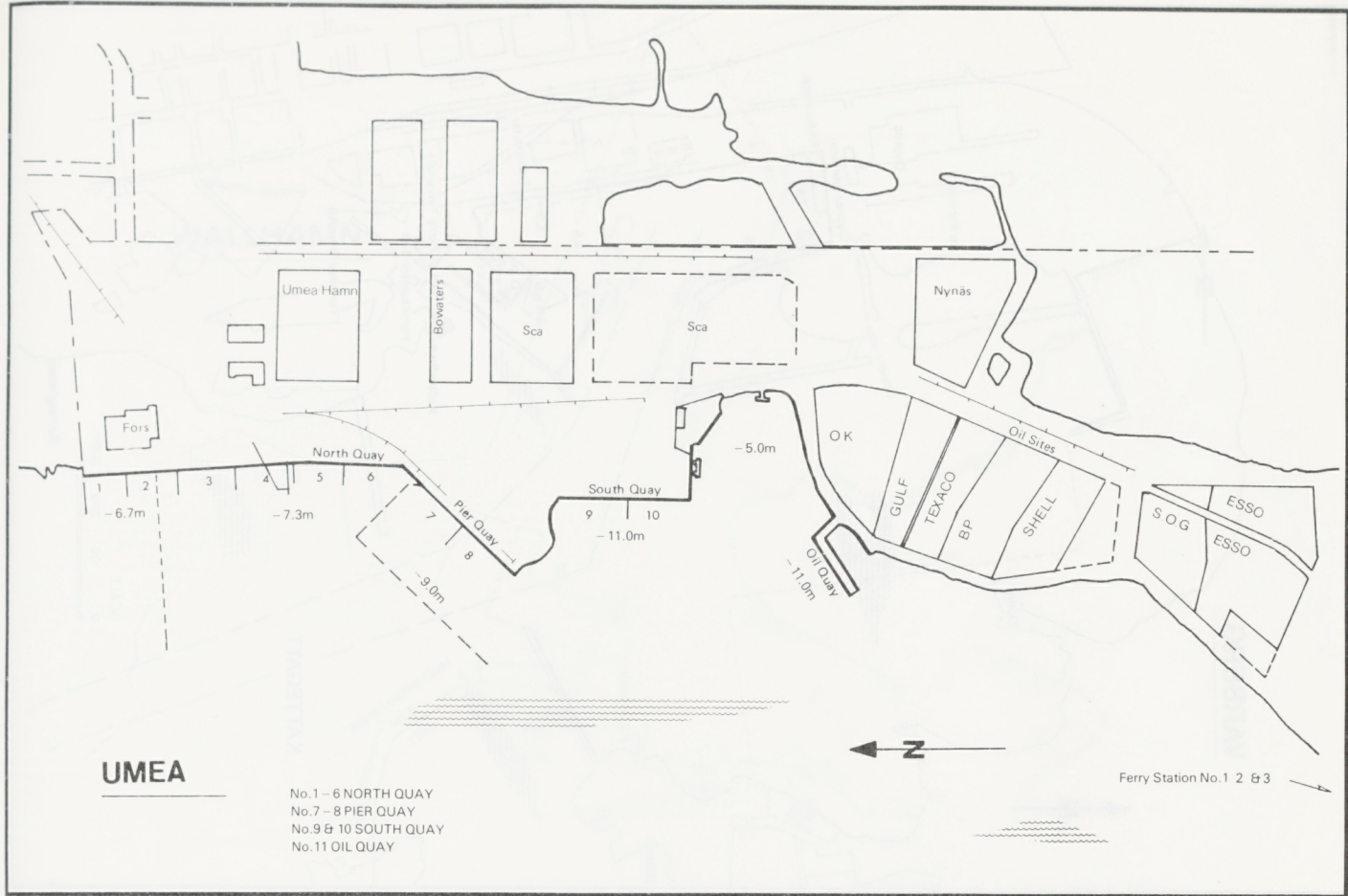


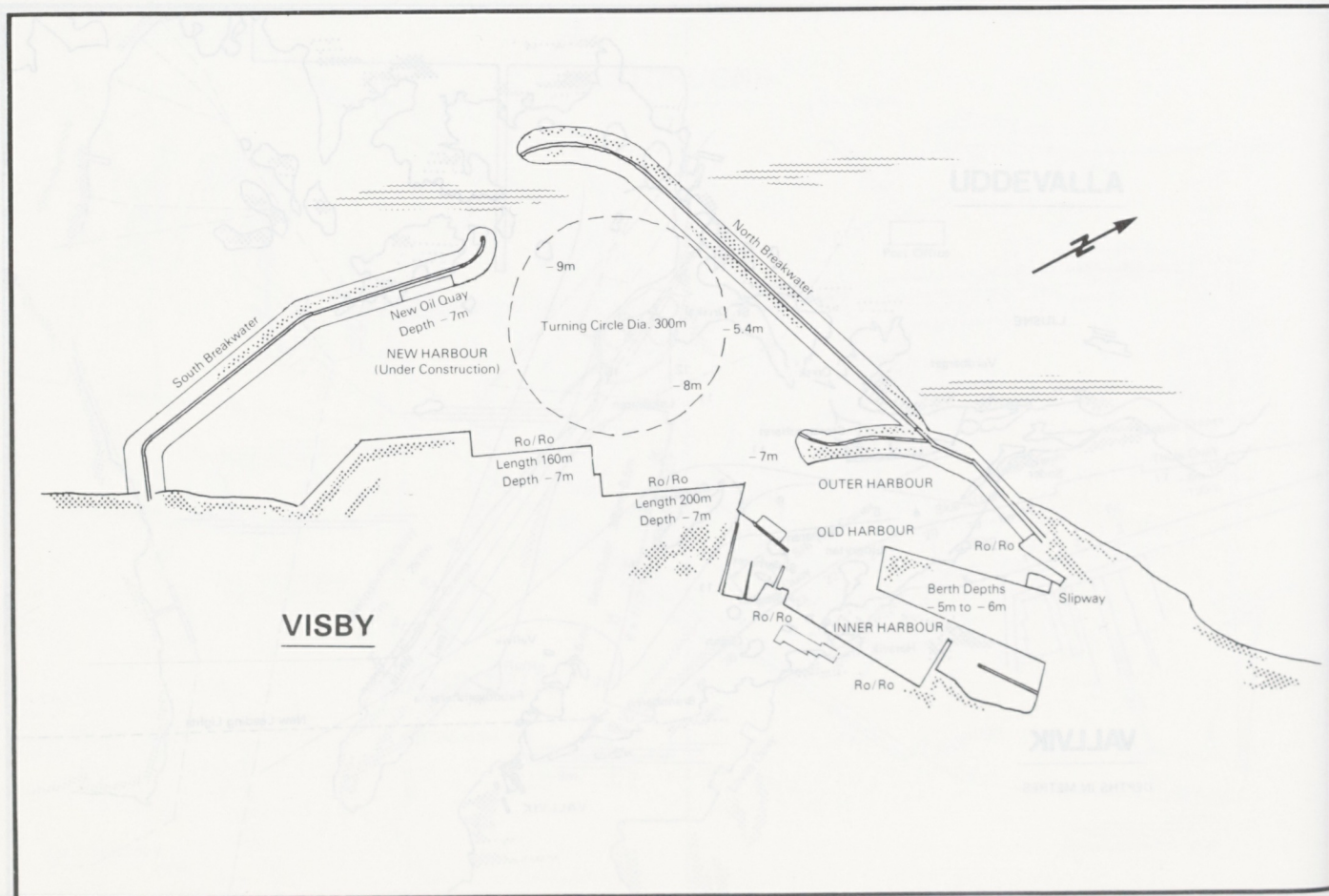


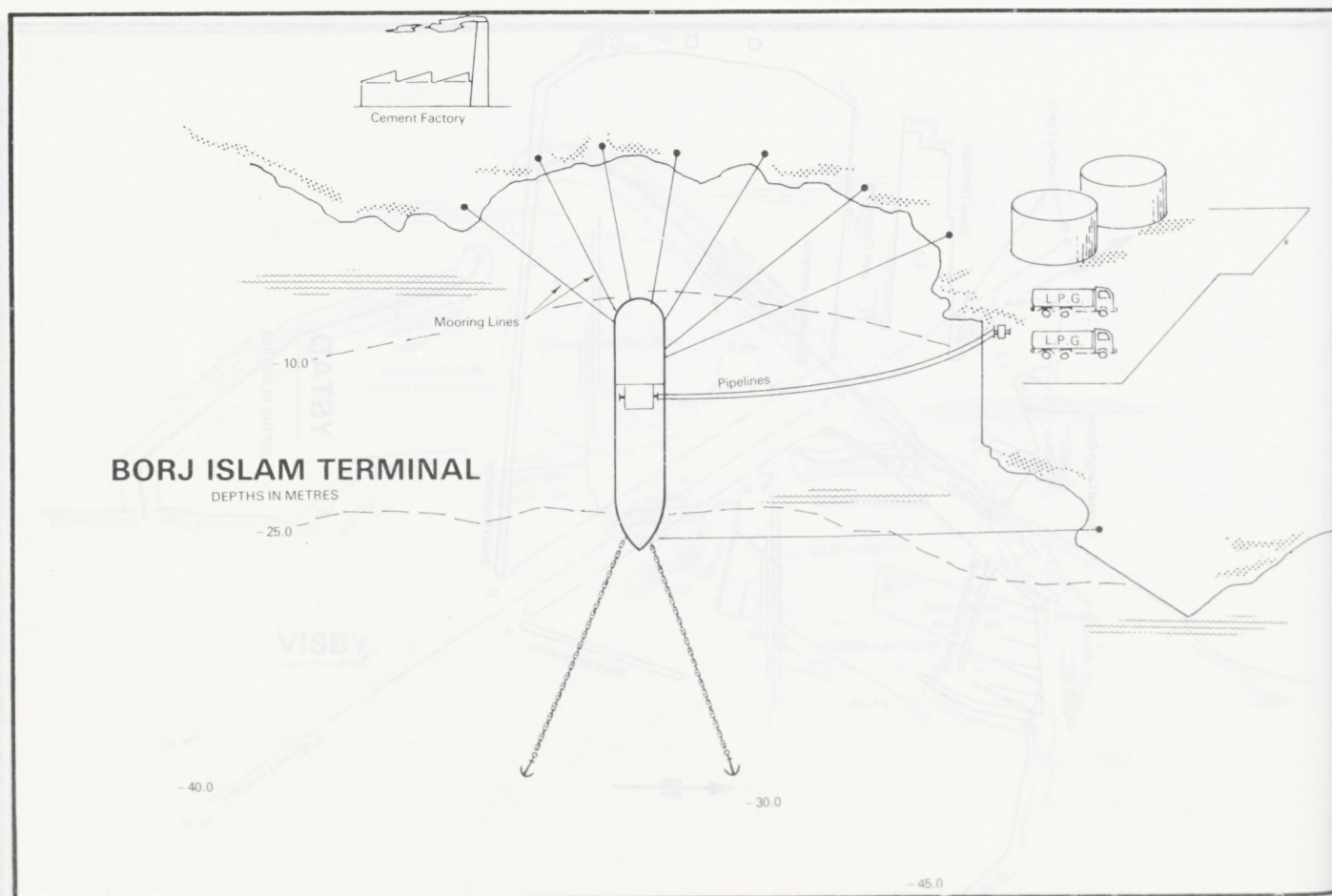
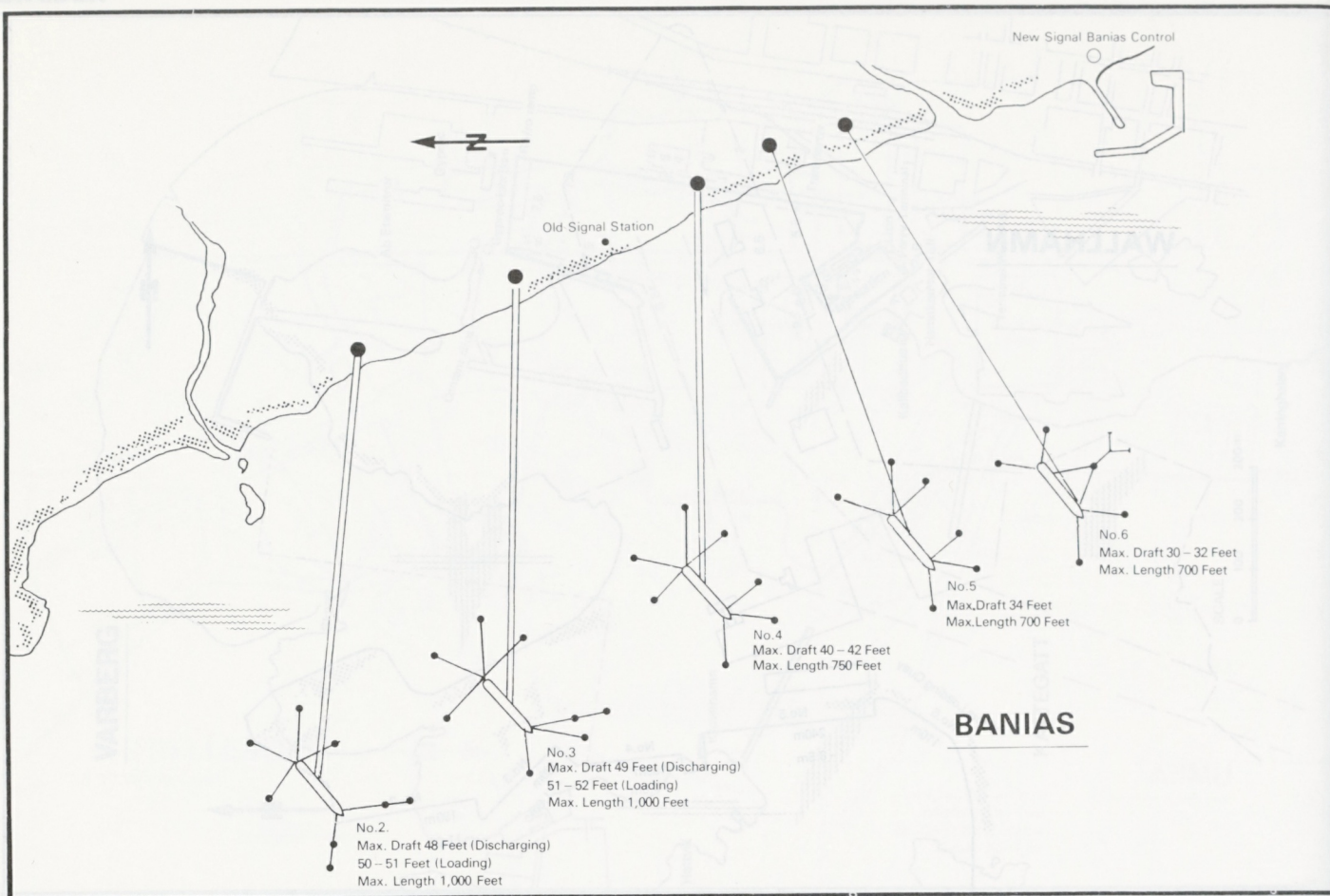


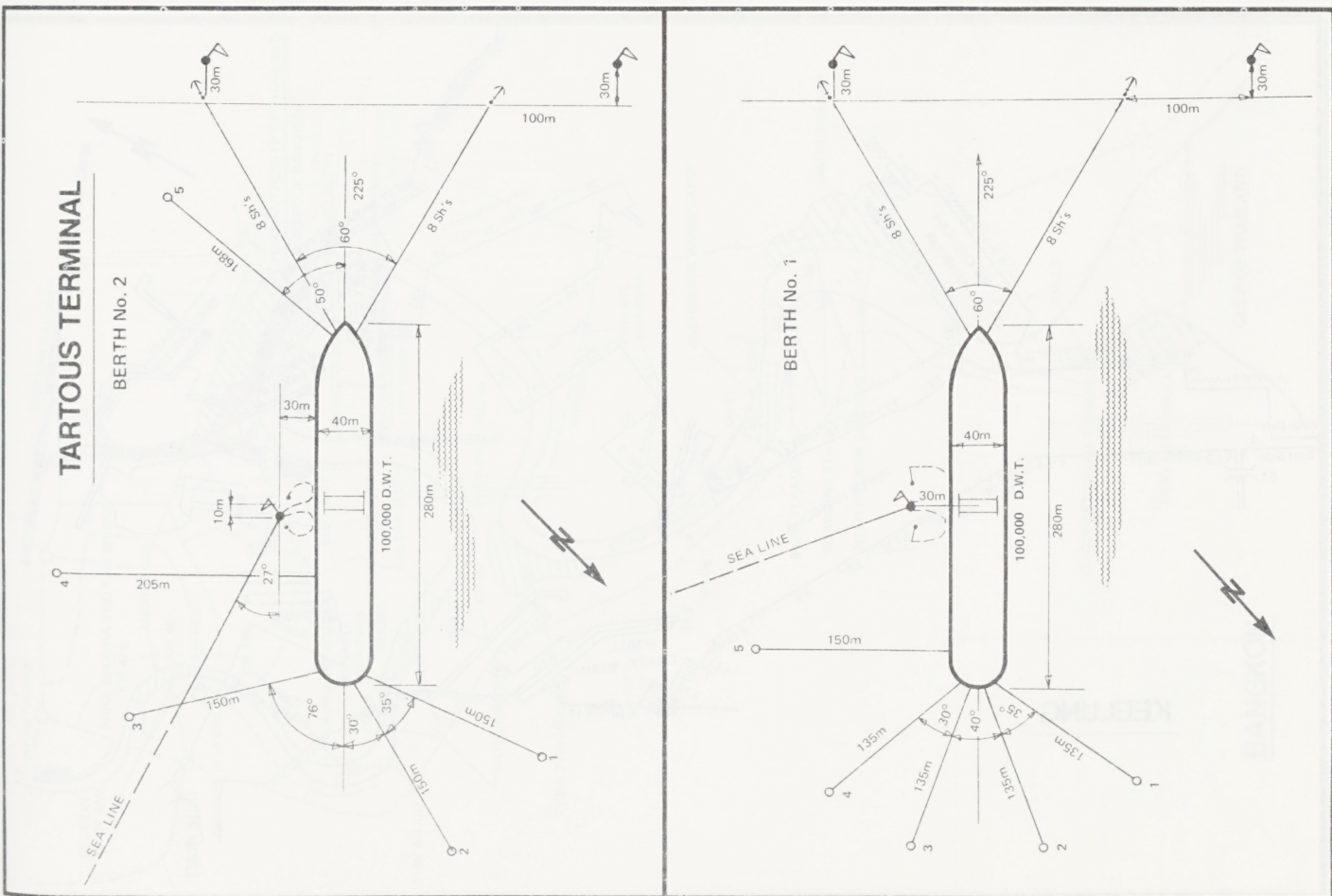


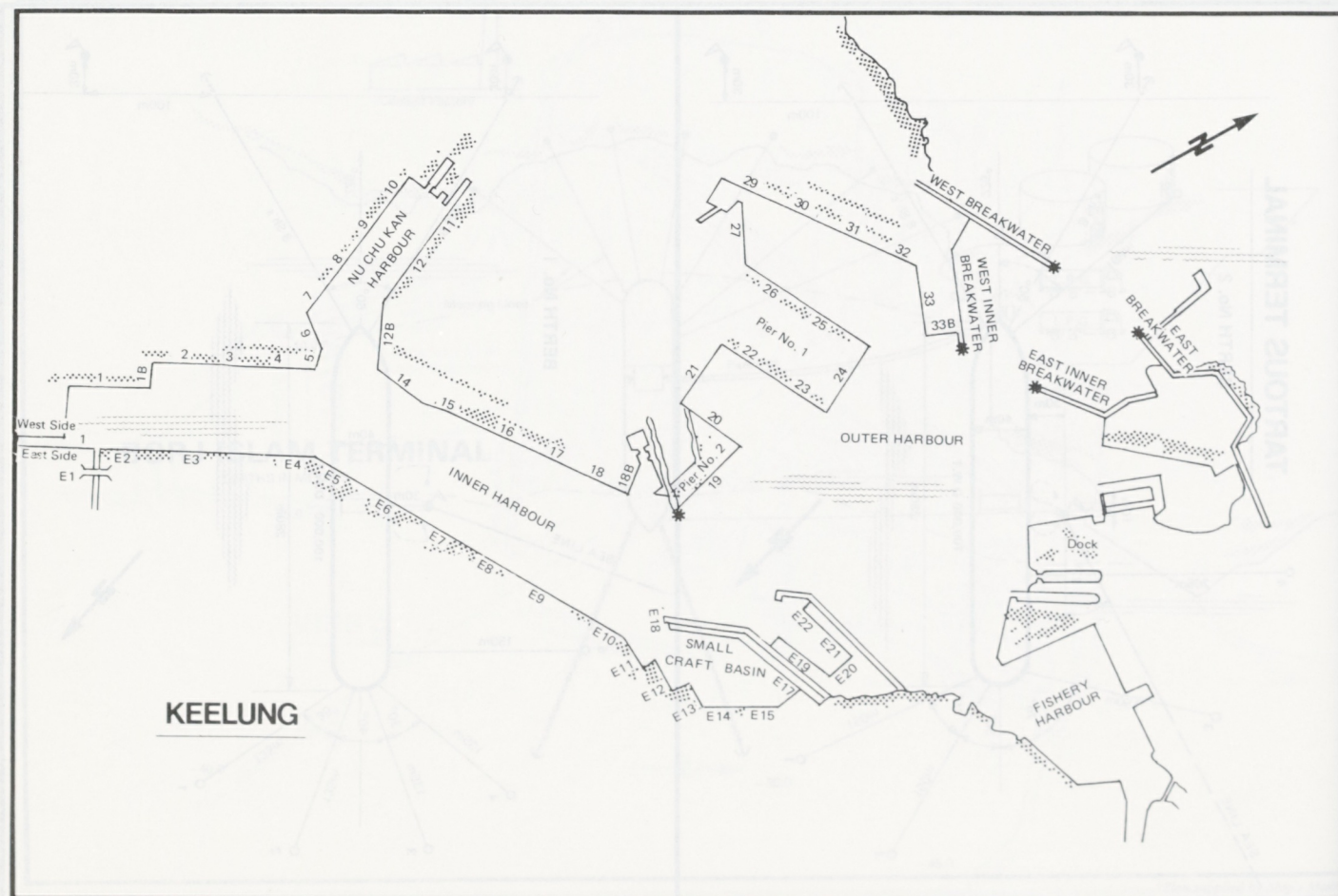
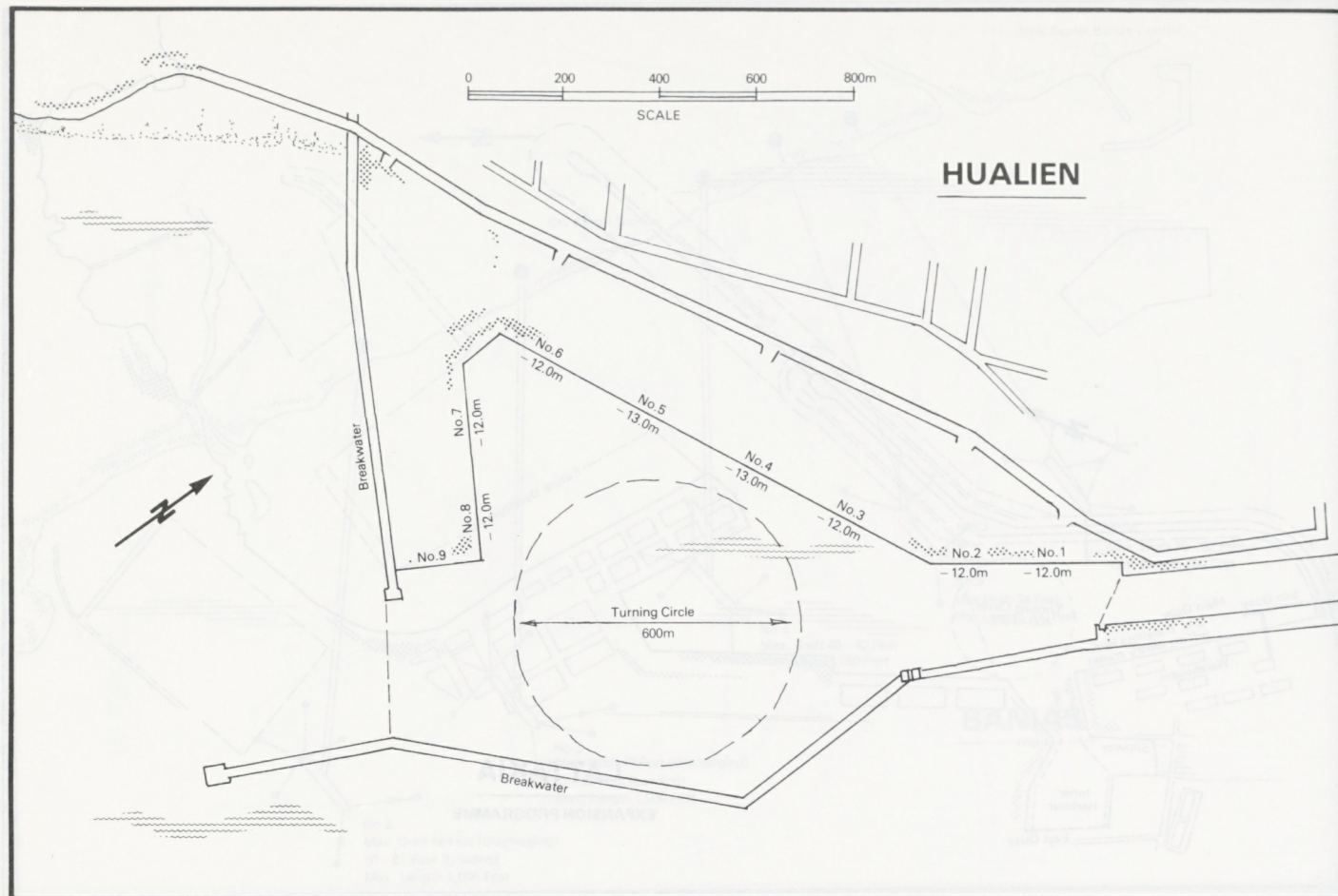


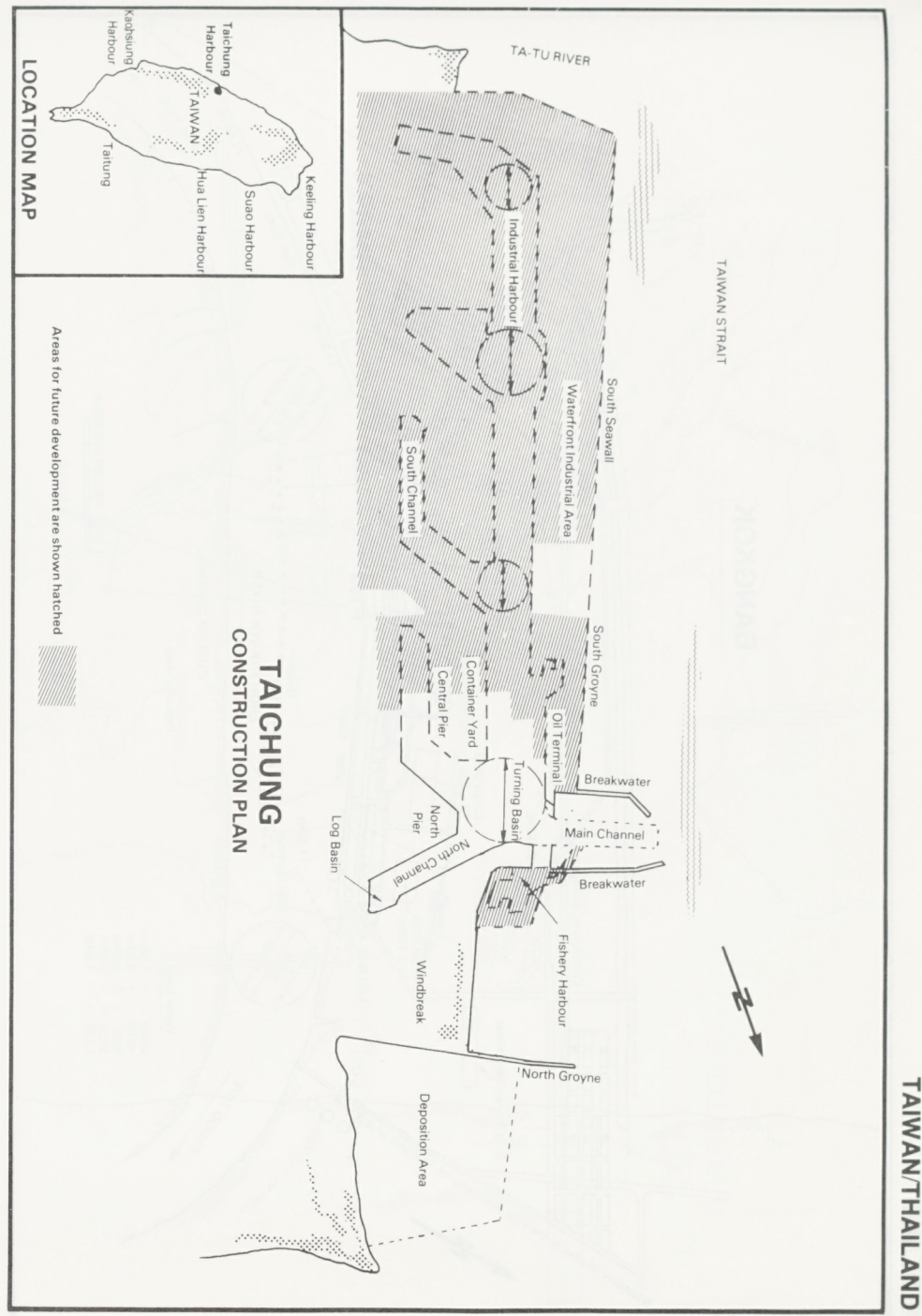
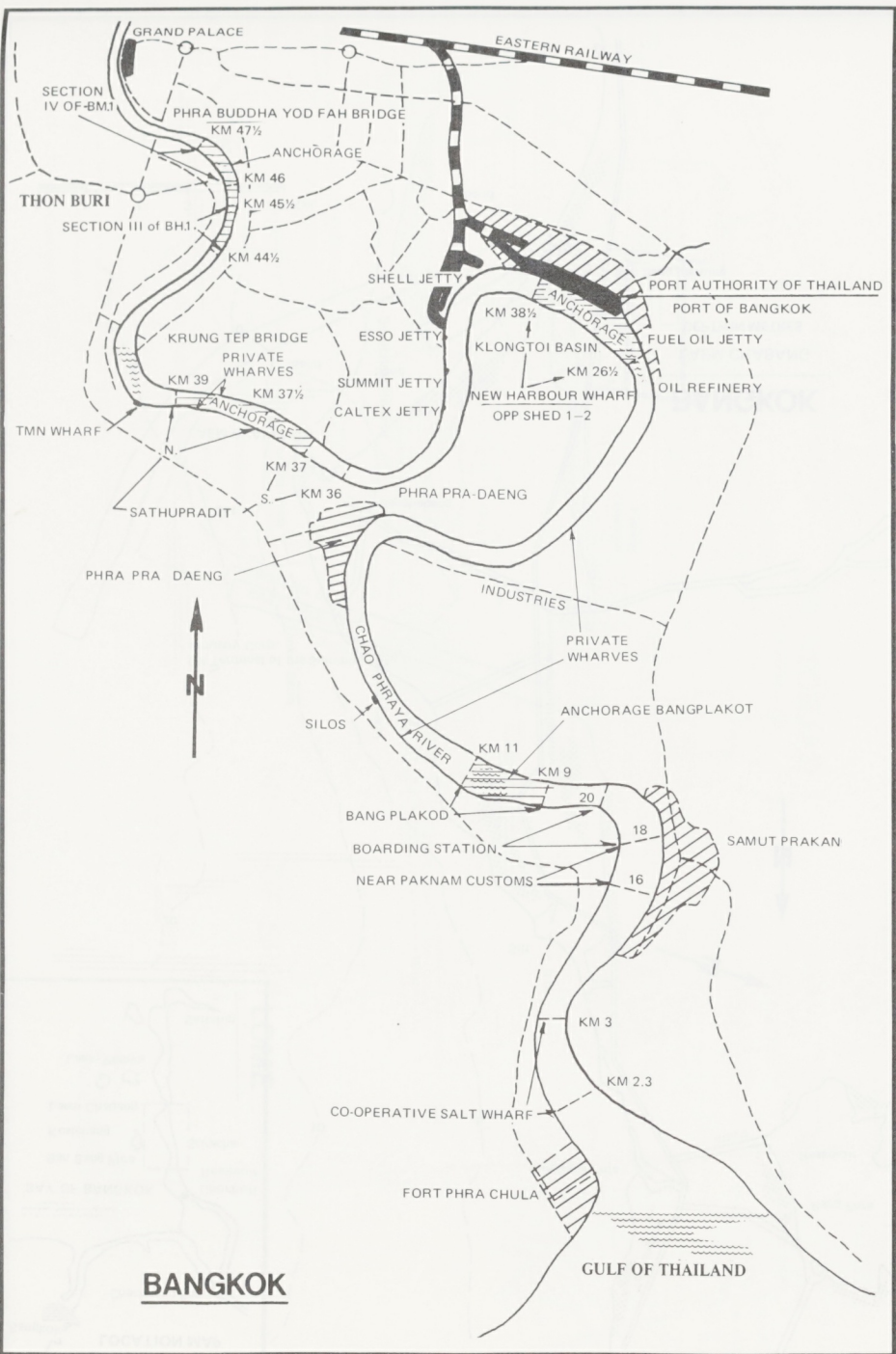




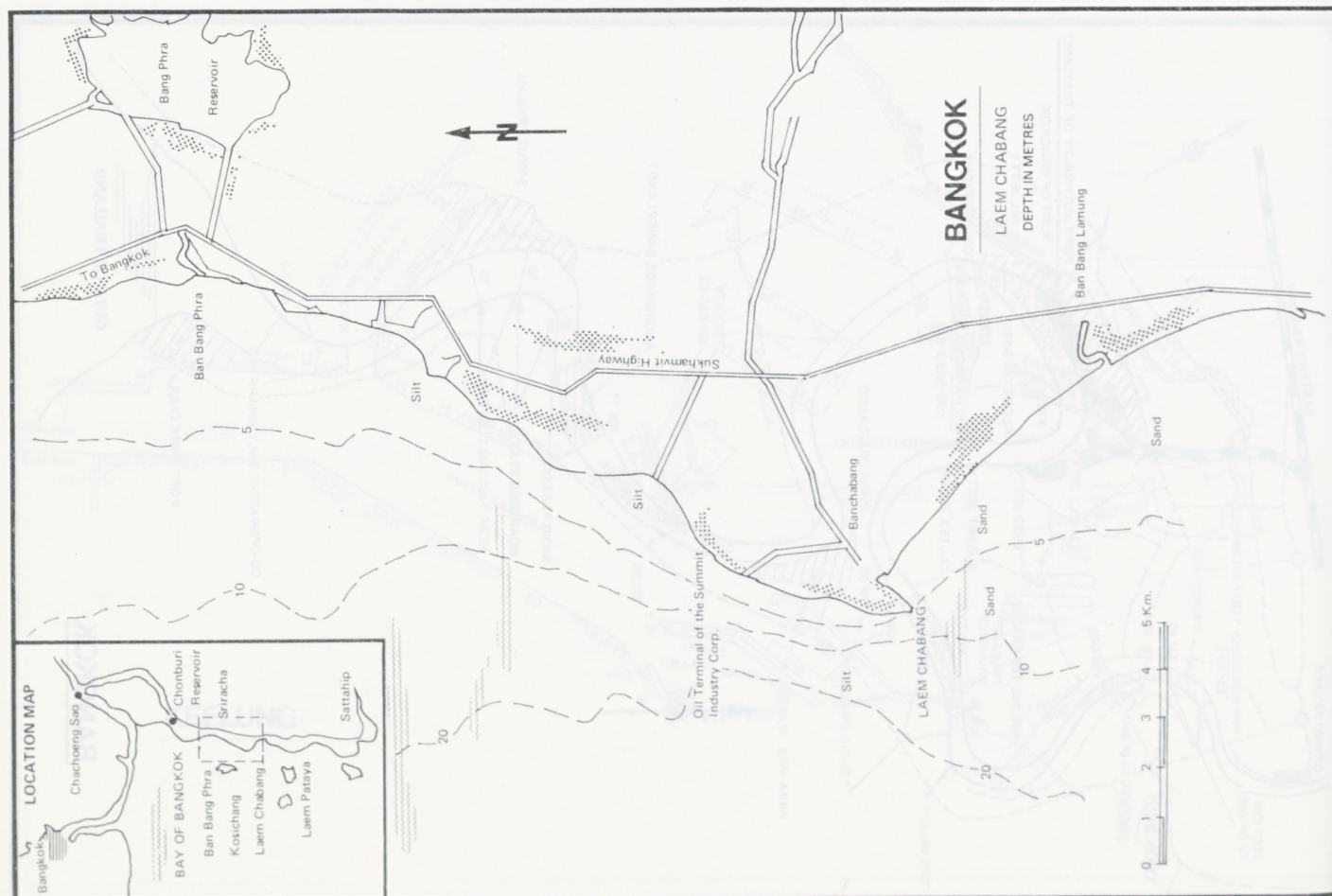
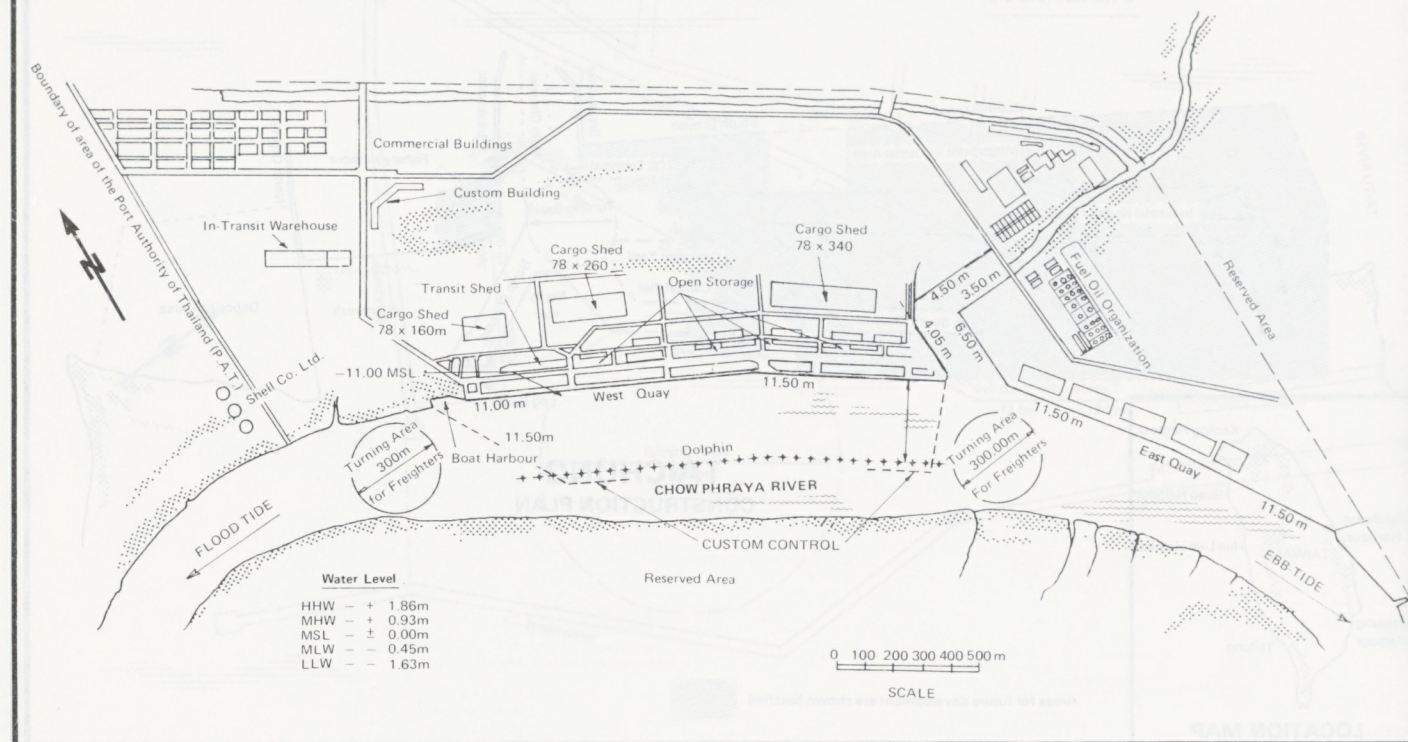


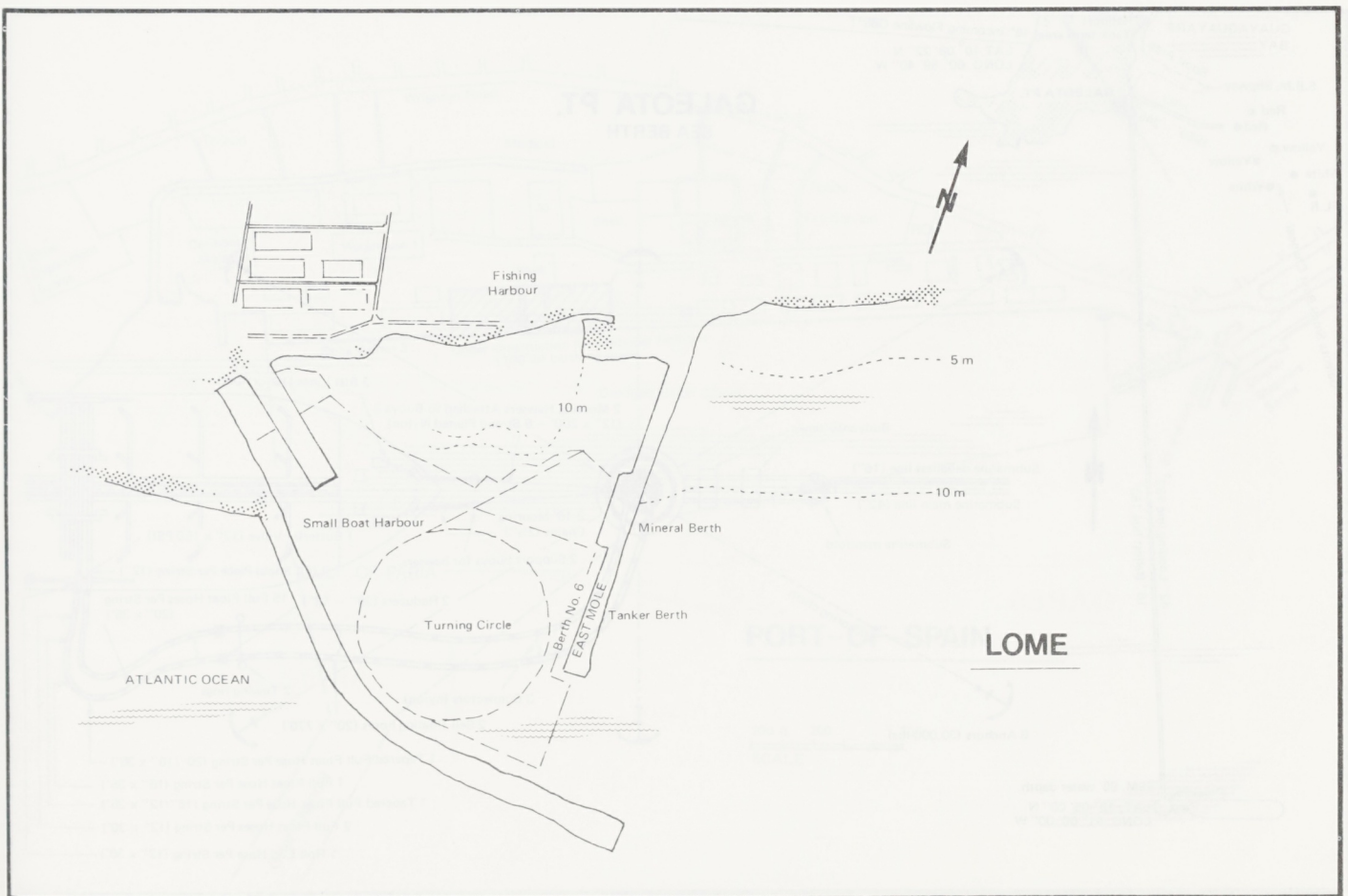
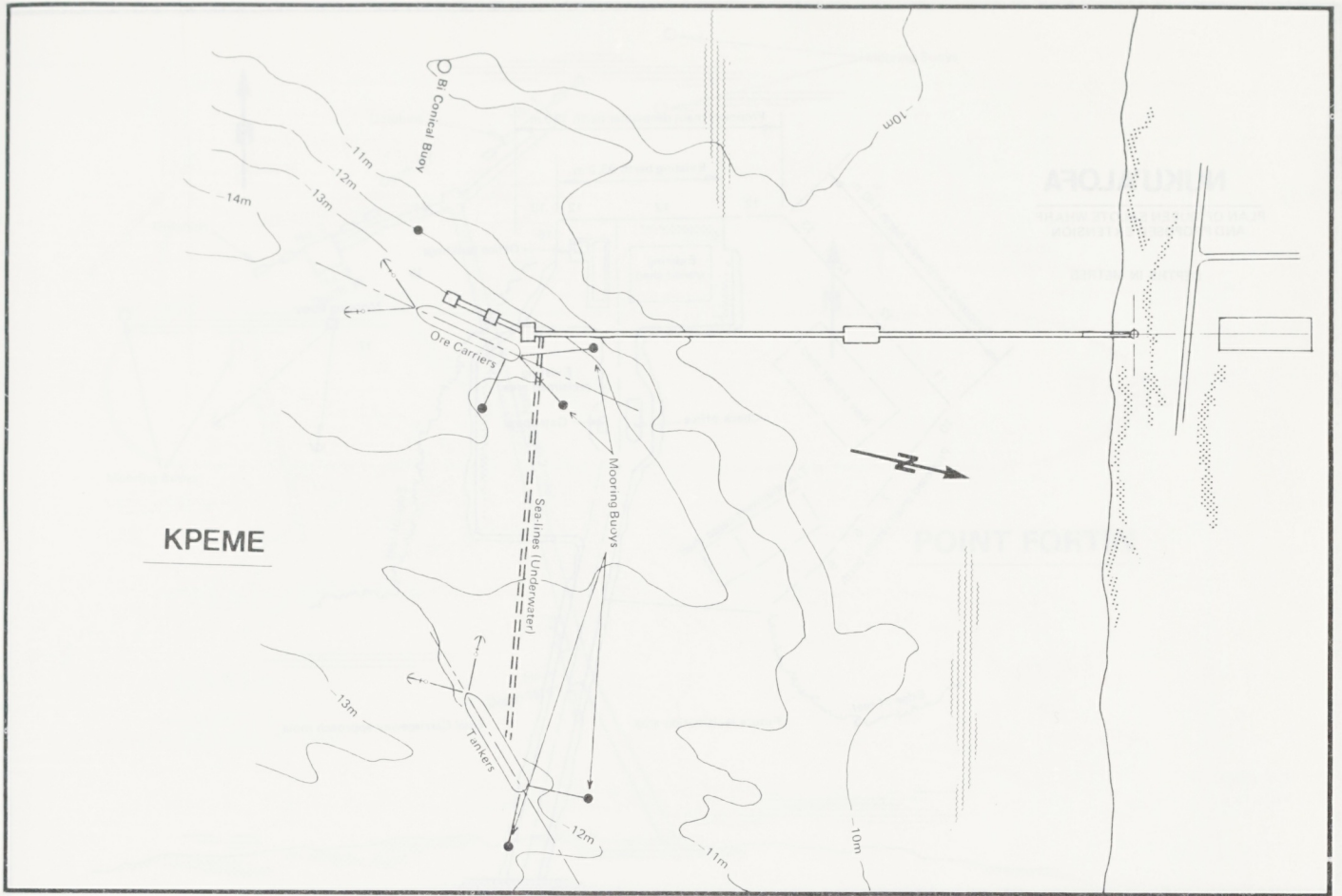






BANGKOK

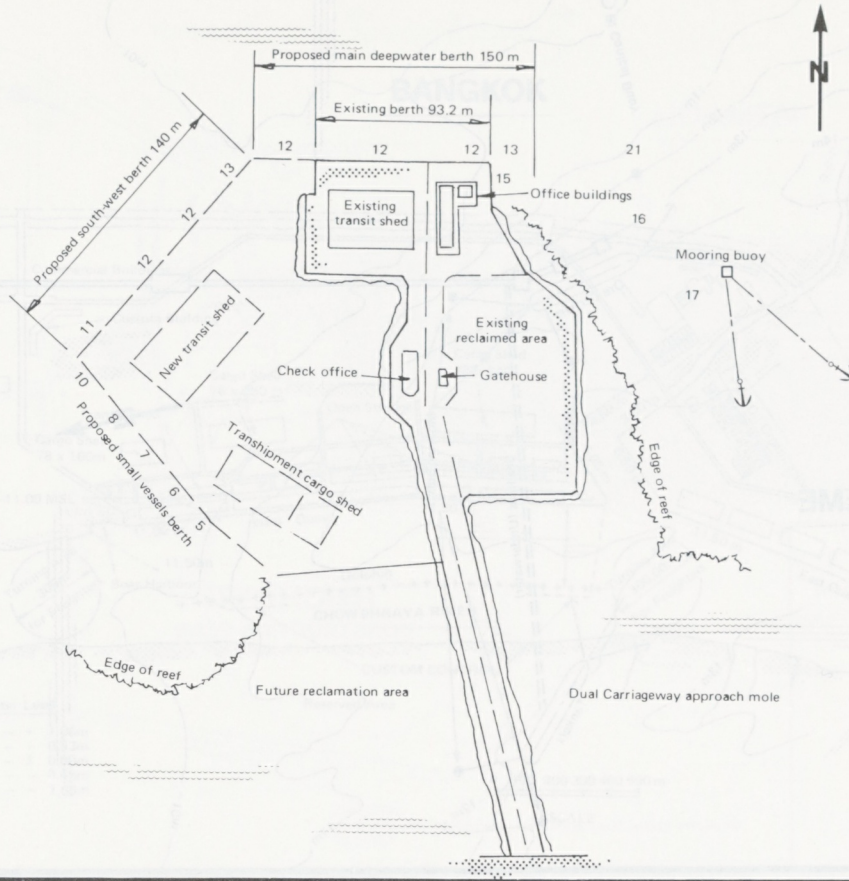




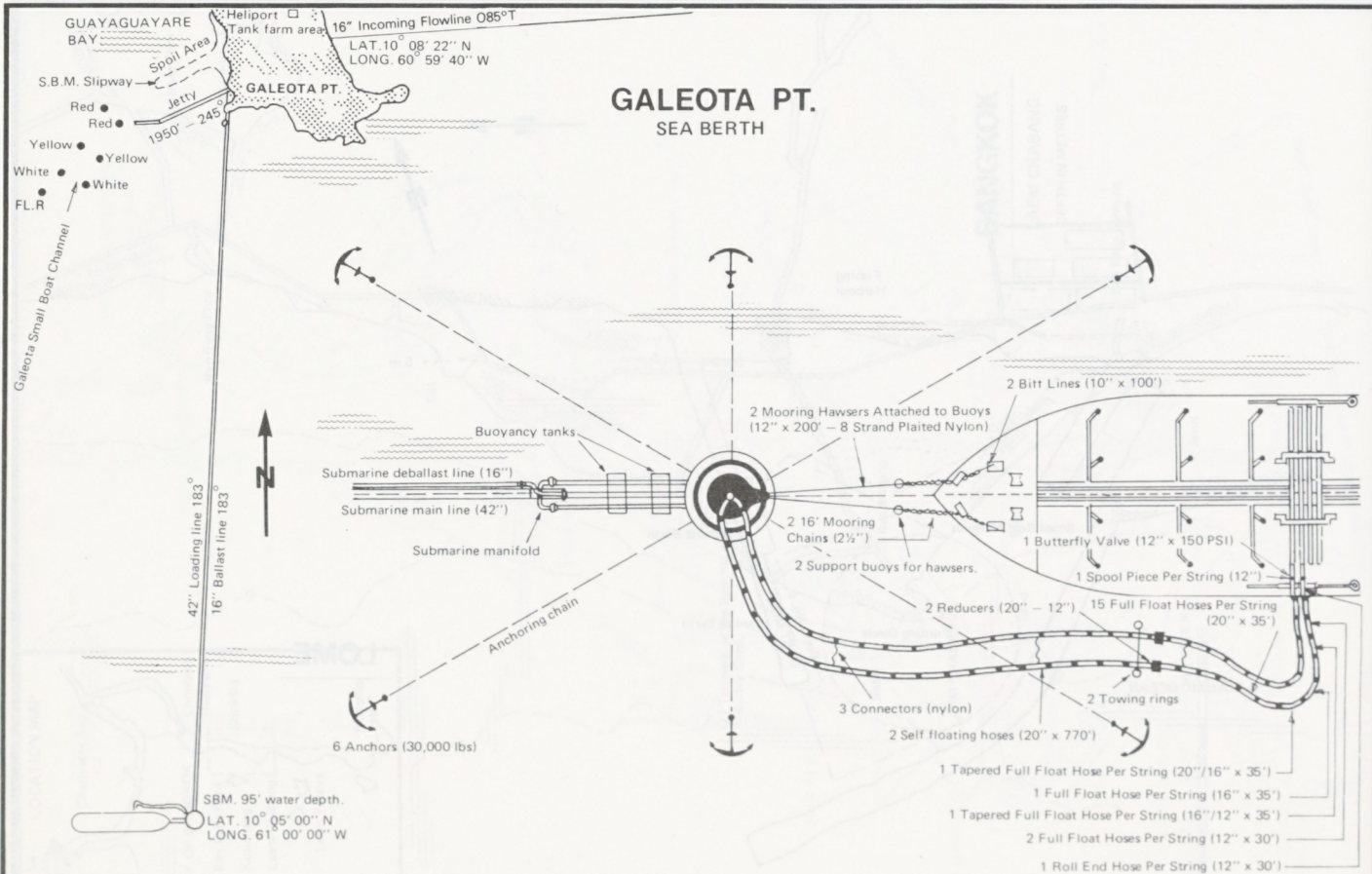
NUKU'ALOFA

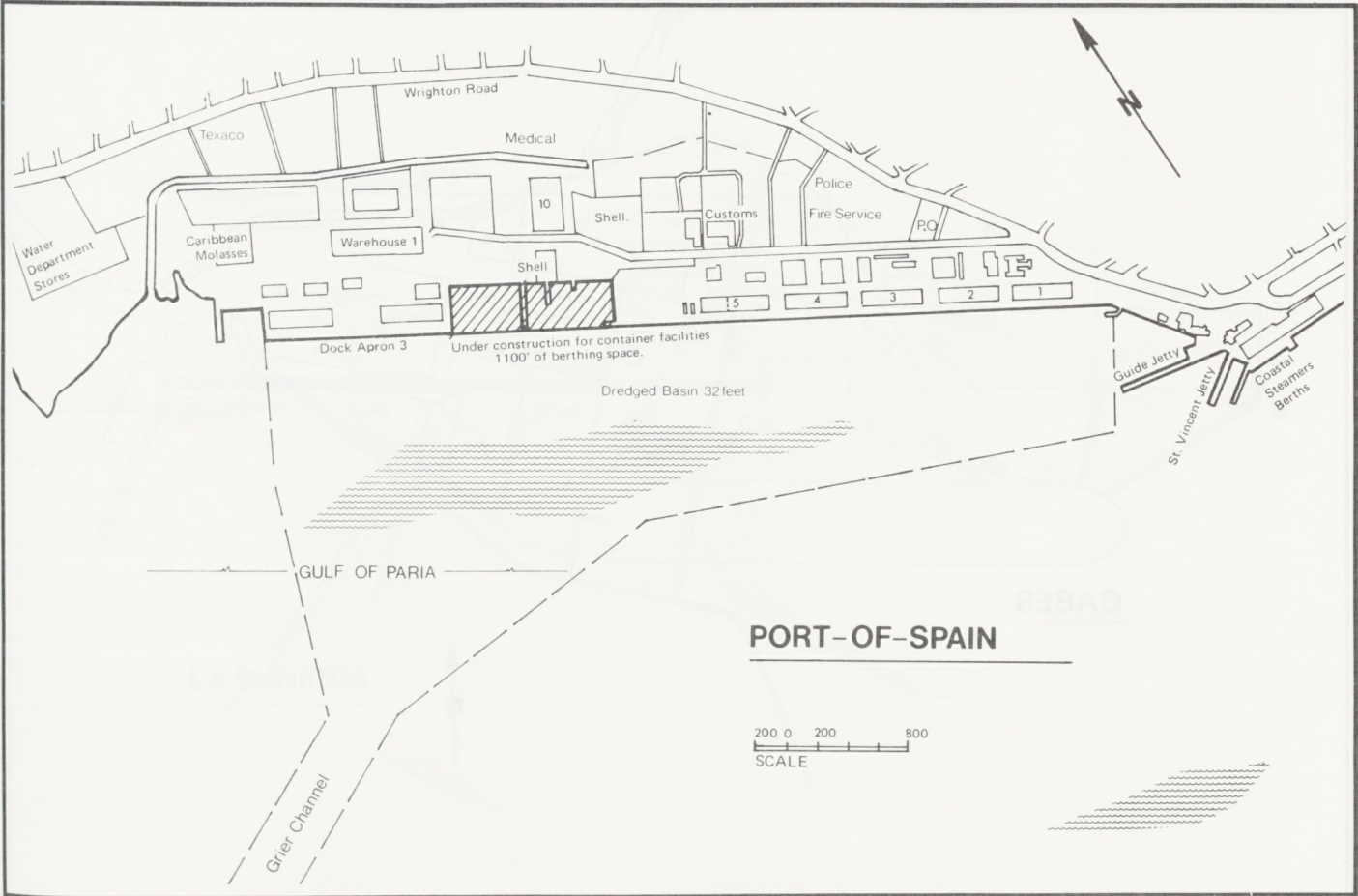
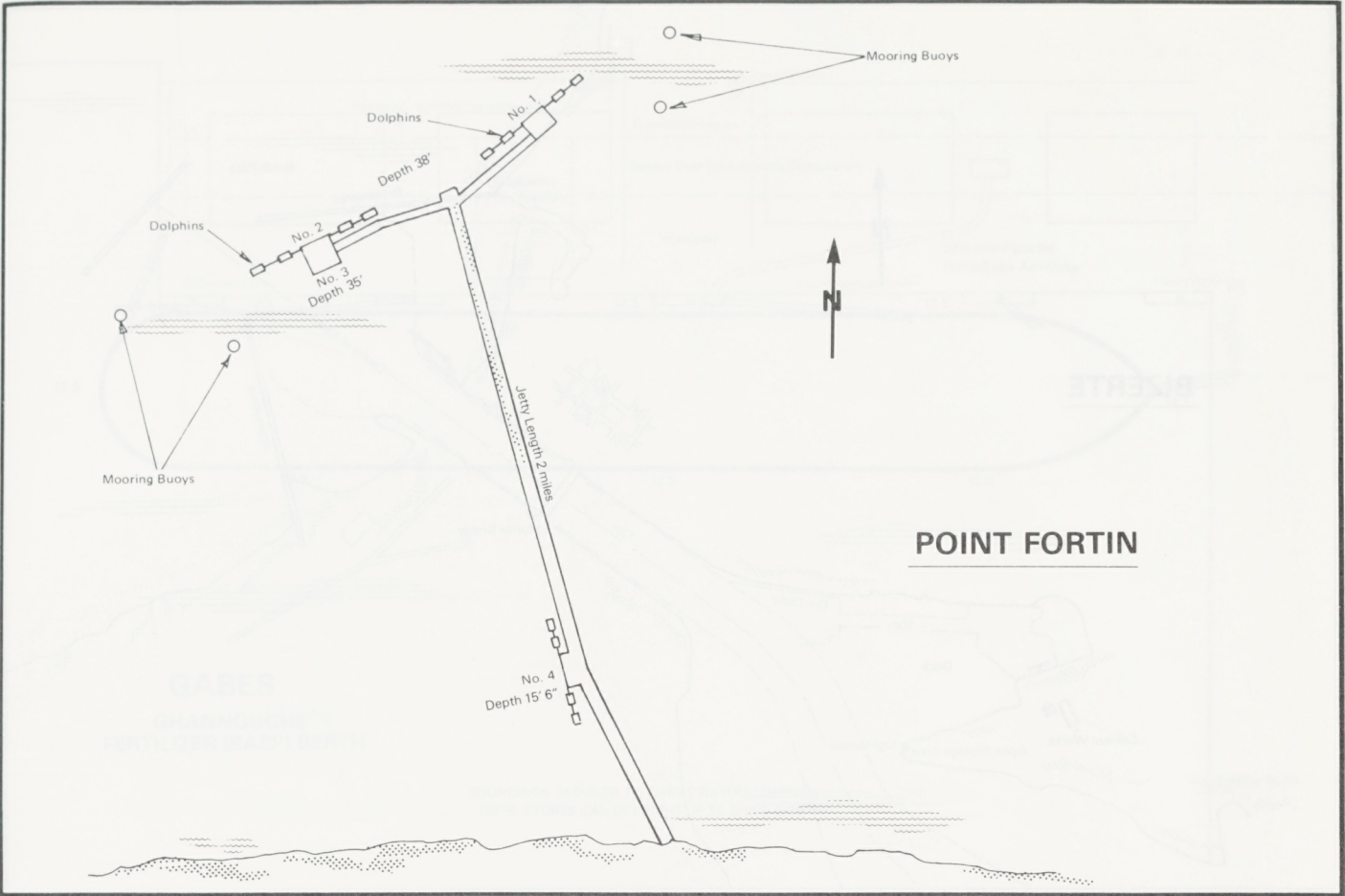
PLAN OF QUEEN SALOTE WHARF
AND PROPOSED EXTENSION

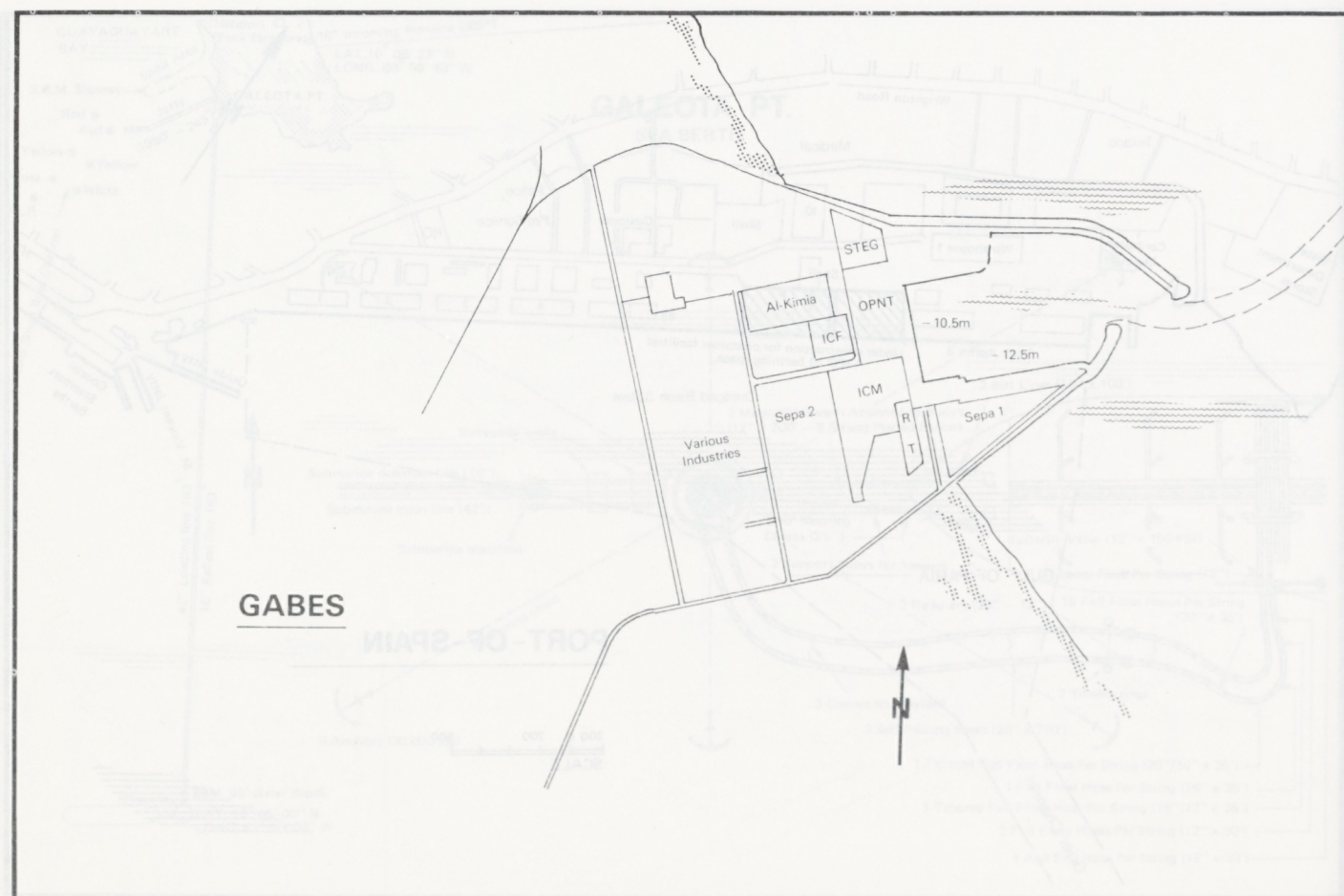
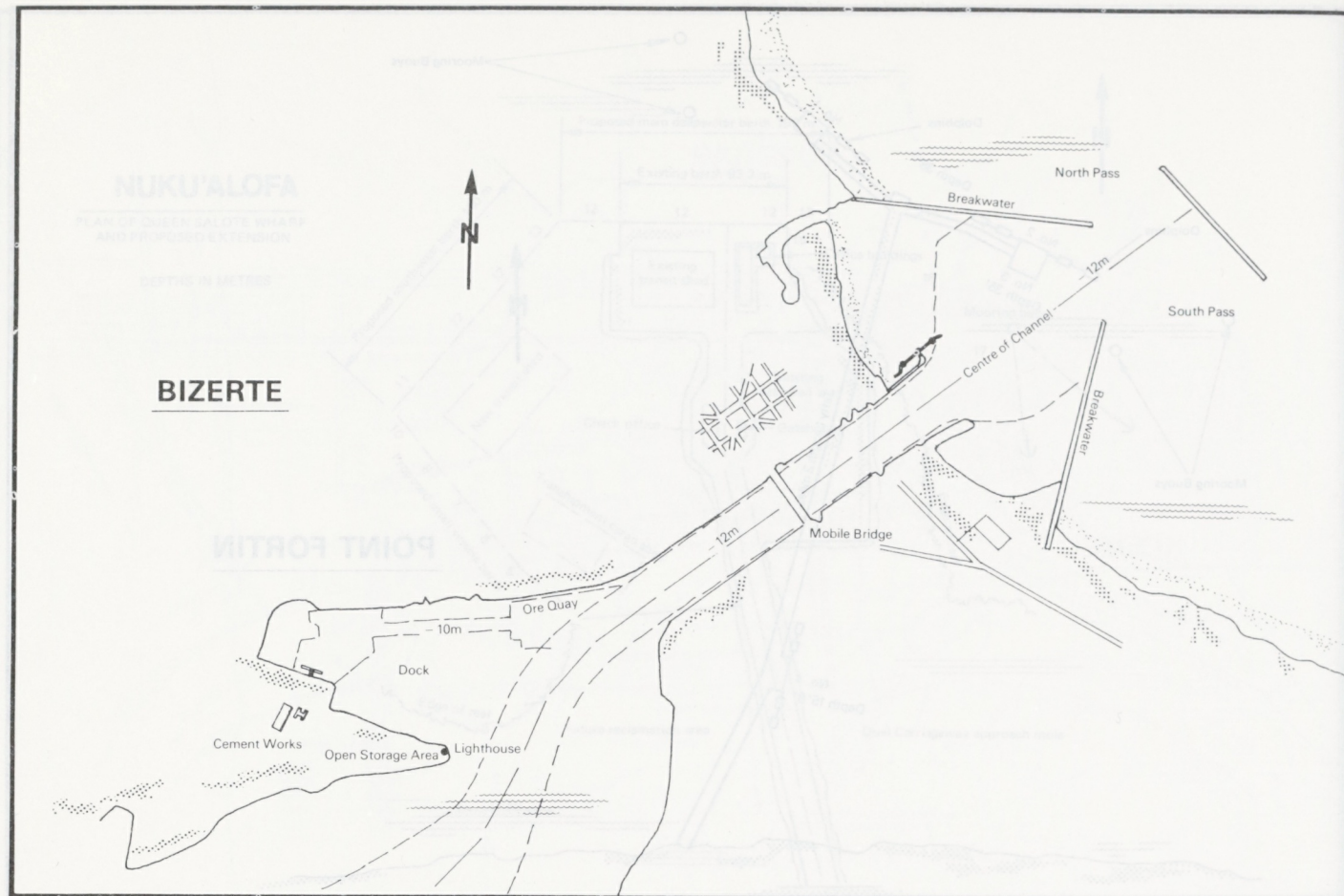
DEPTHS IN METRES

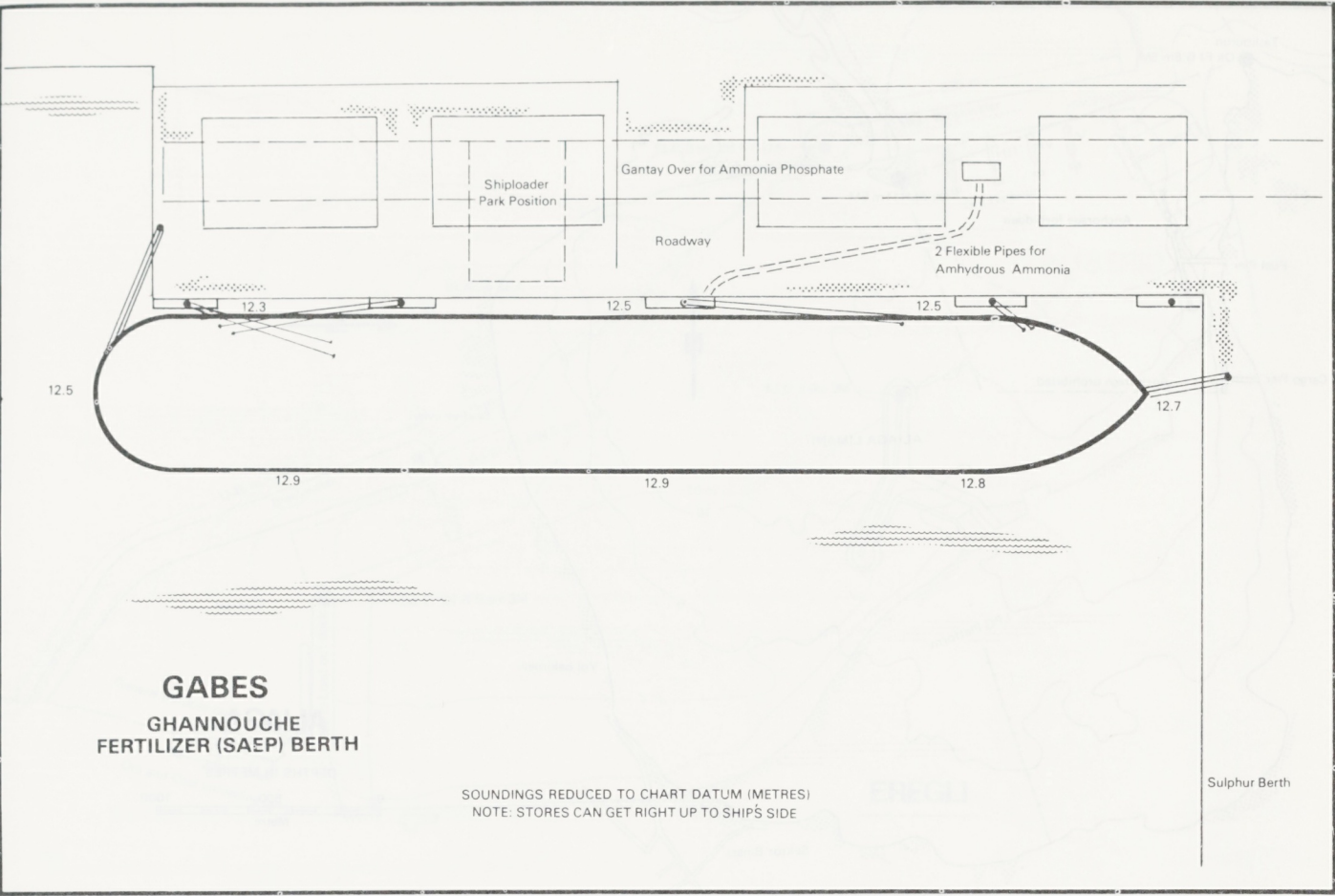


GALEOTA PT. SEA BERTH

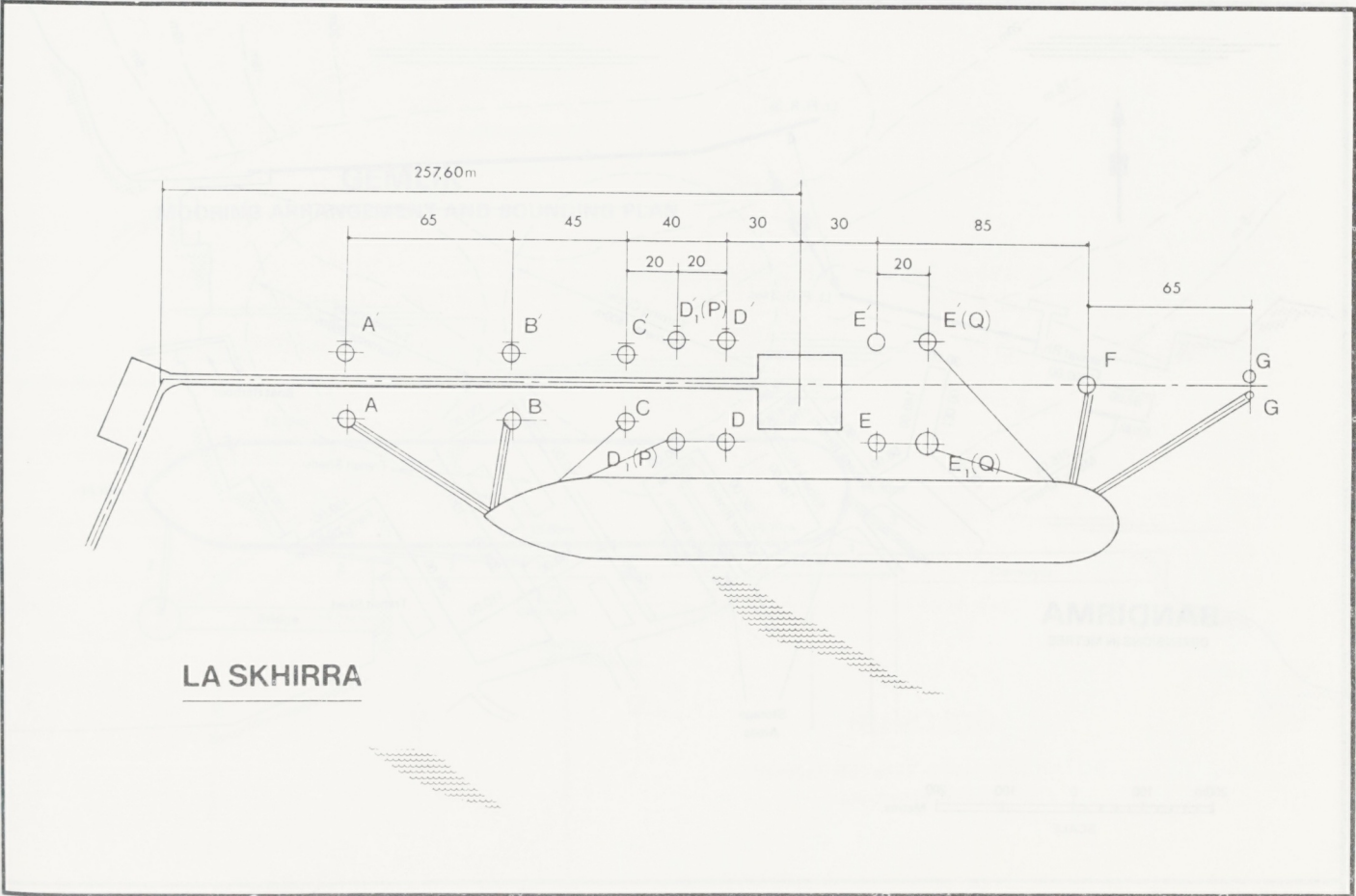




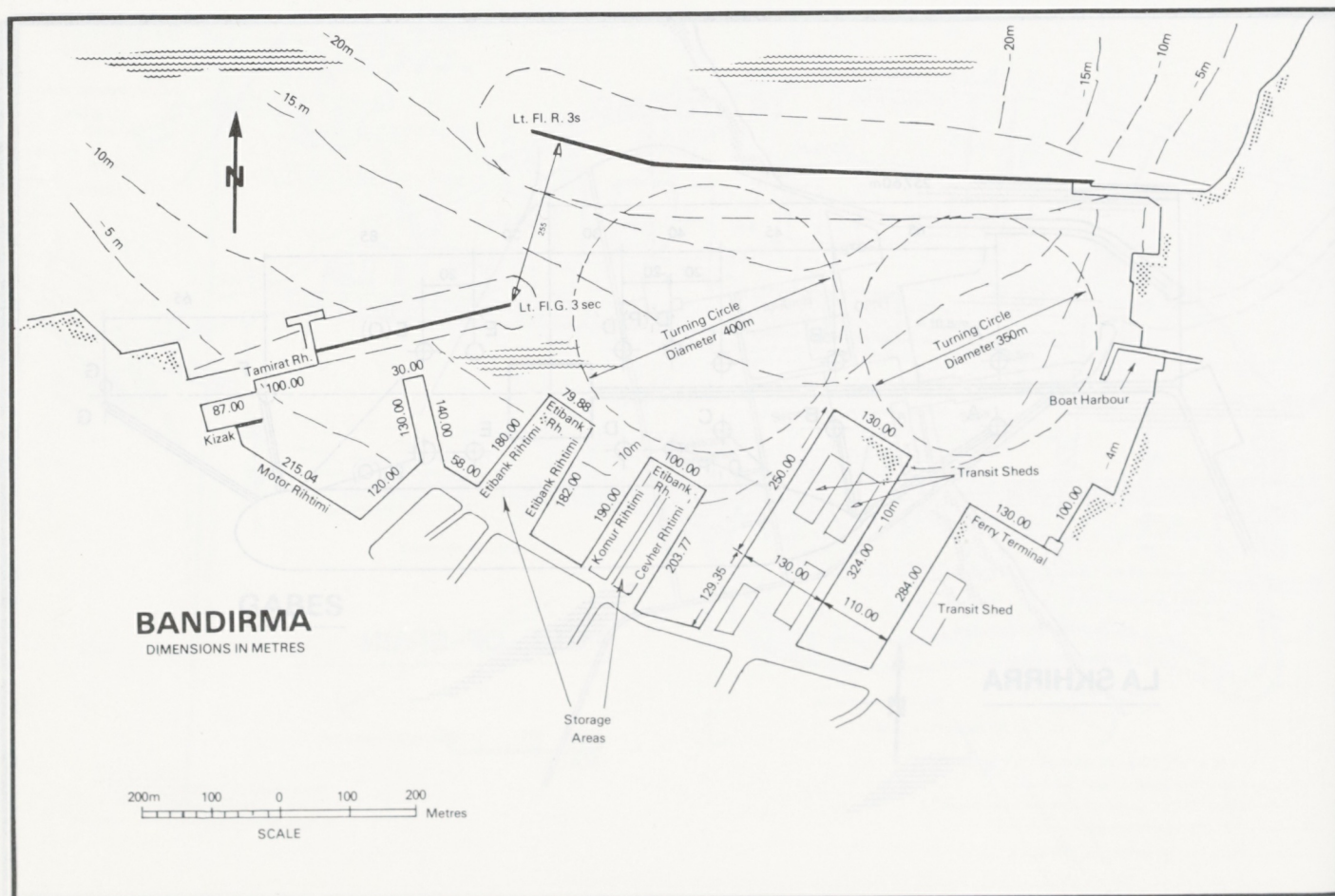
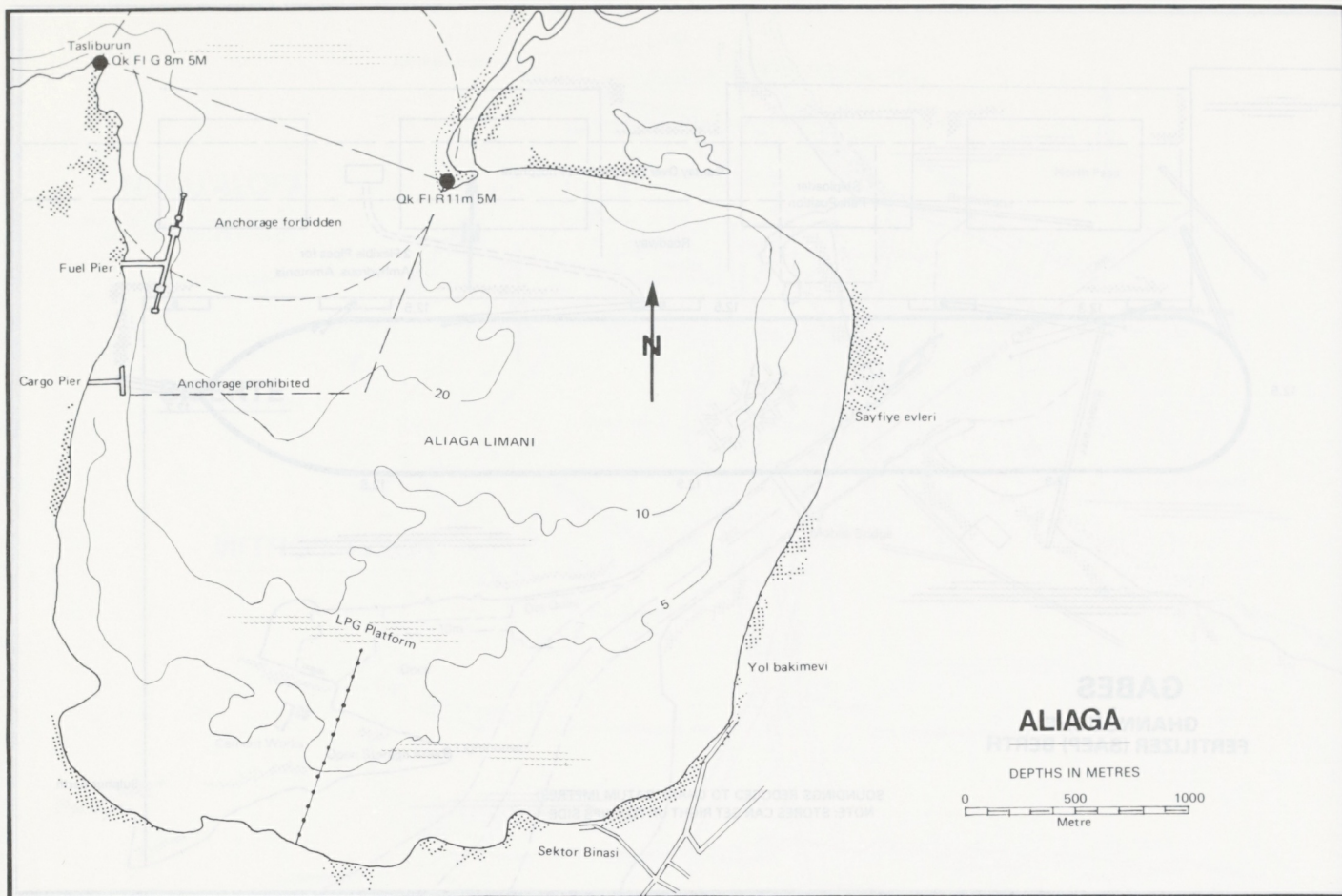


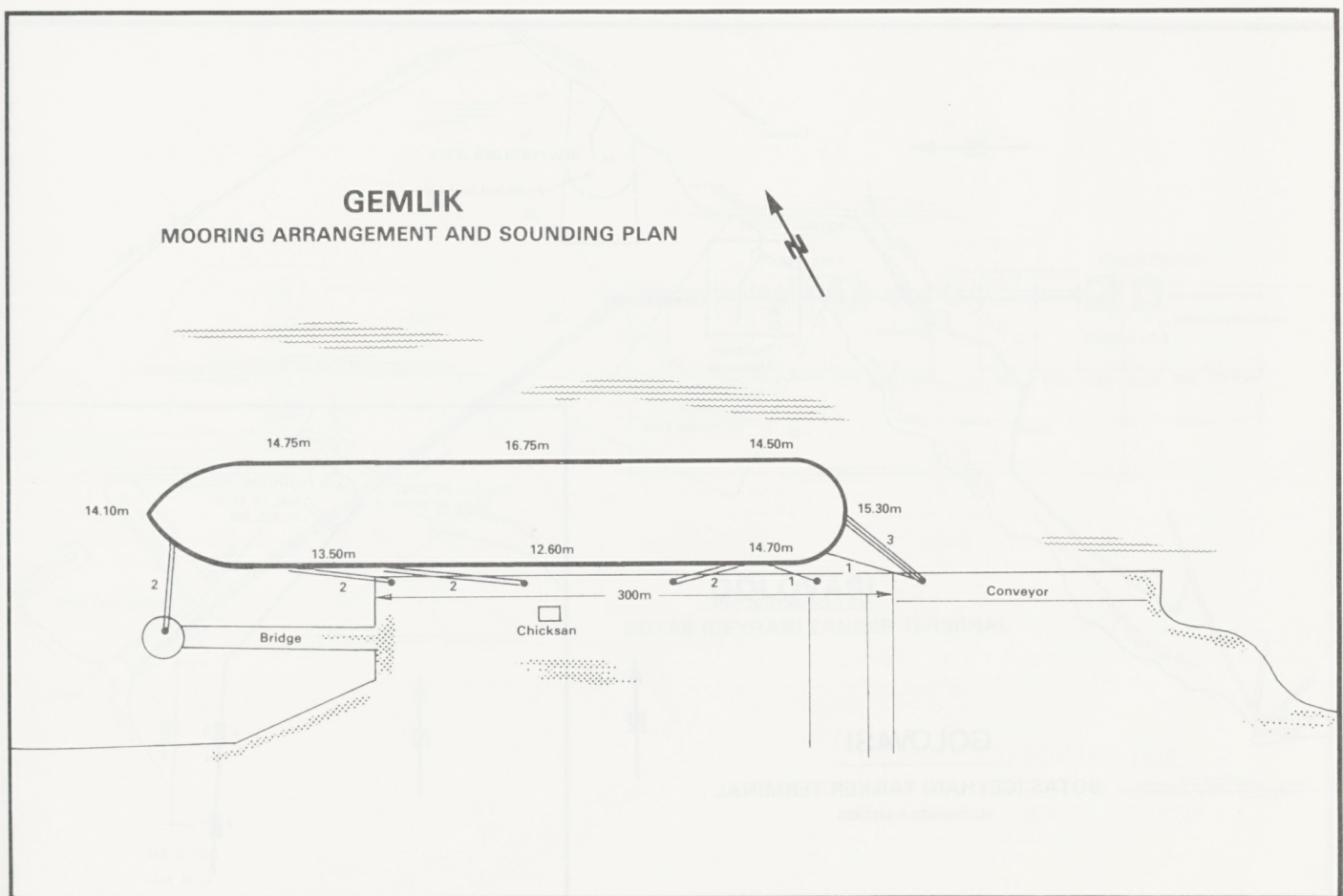


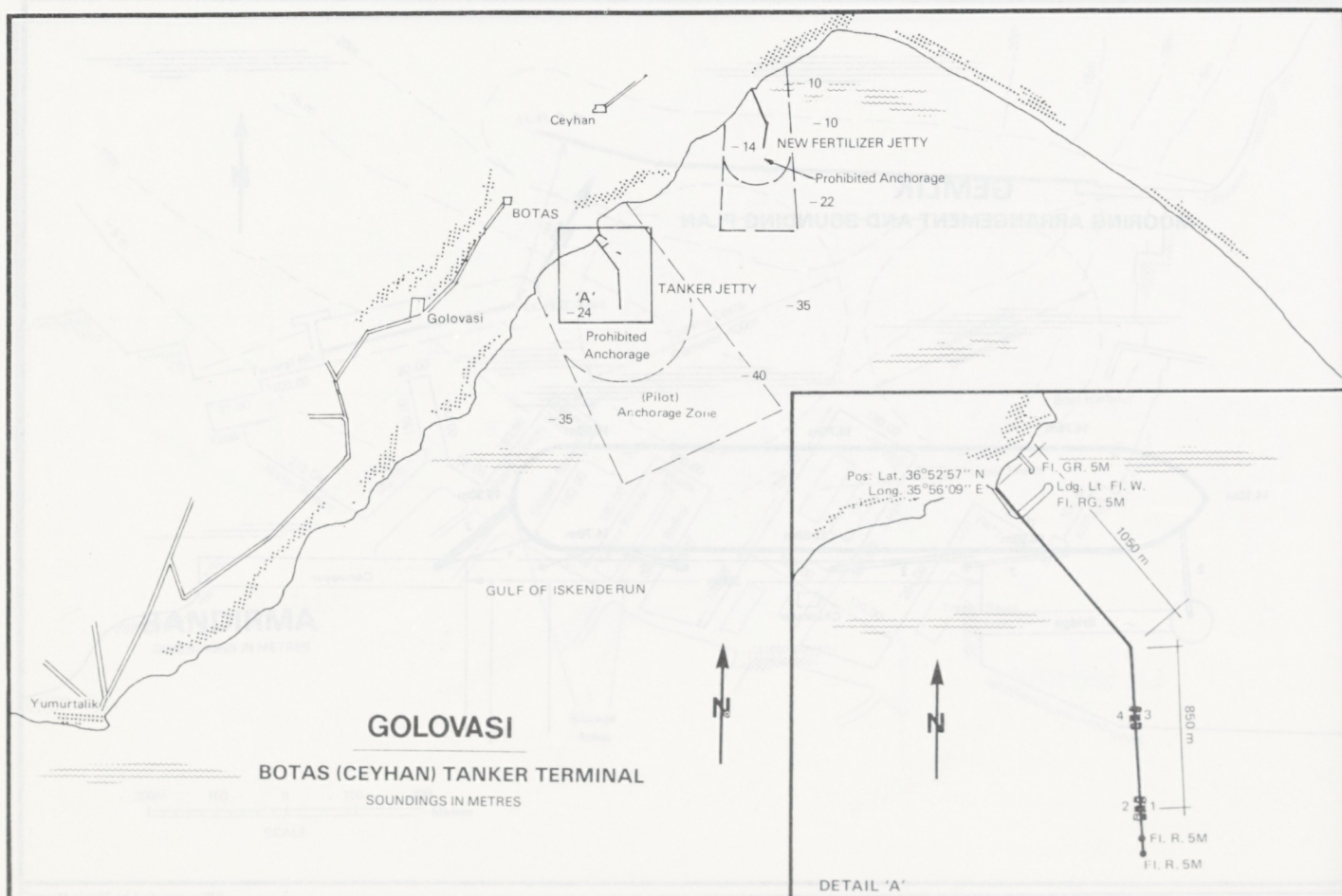
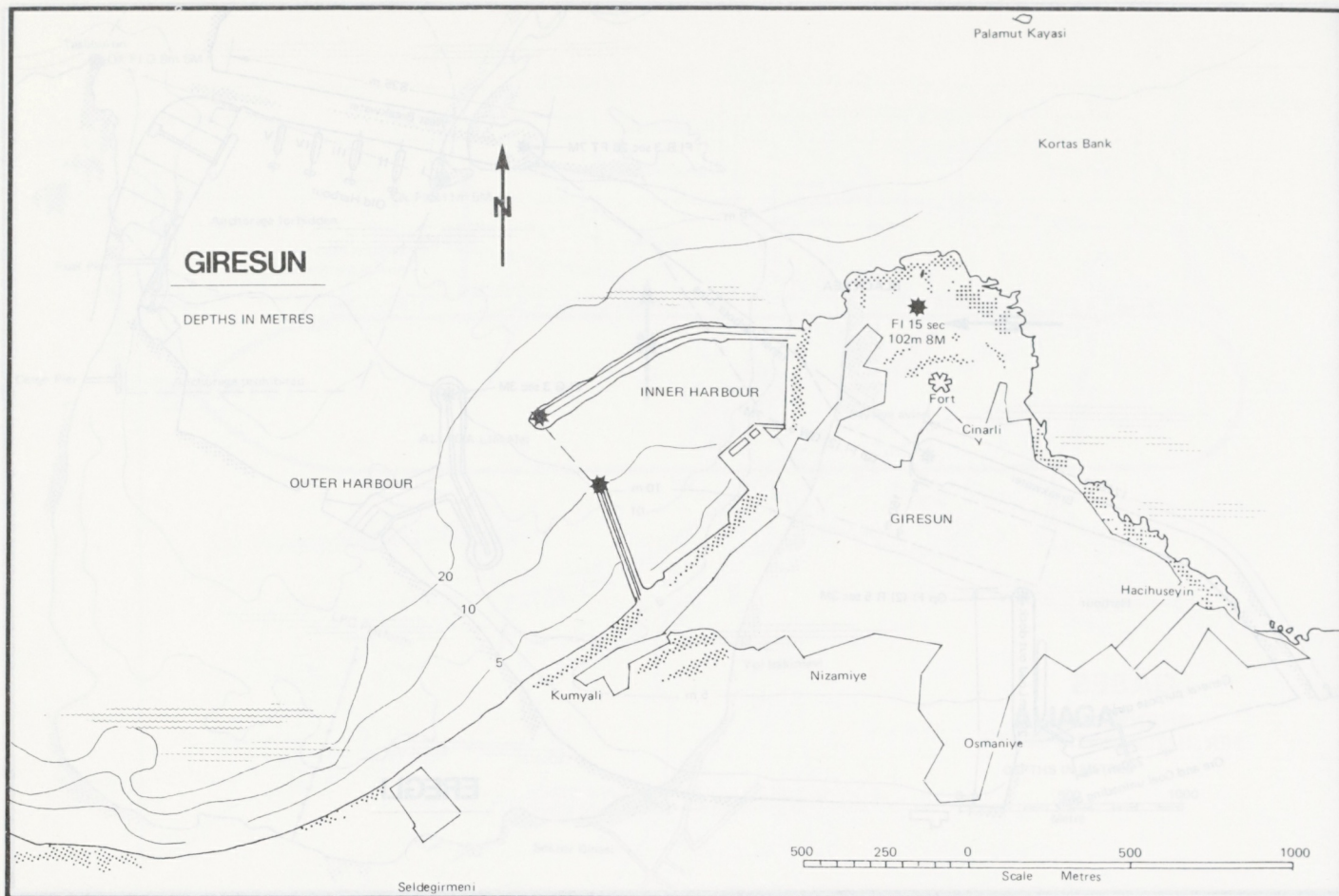
"Plan supplied by Ship's Master"

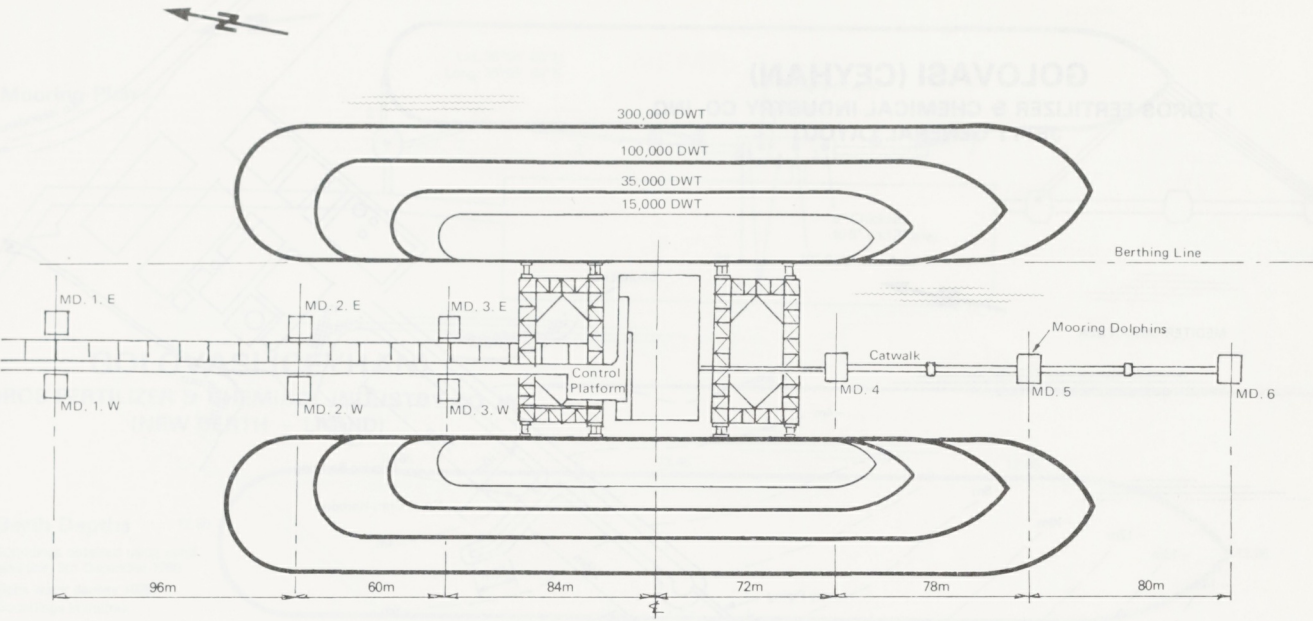


TURKEY



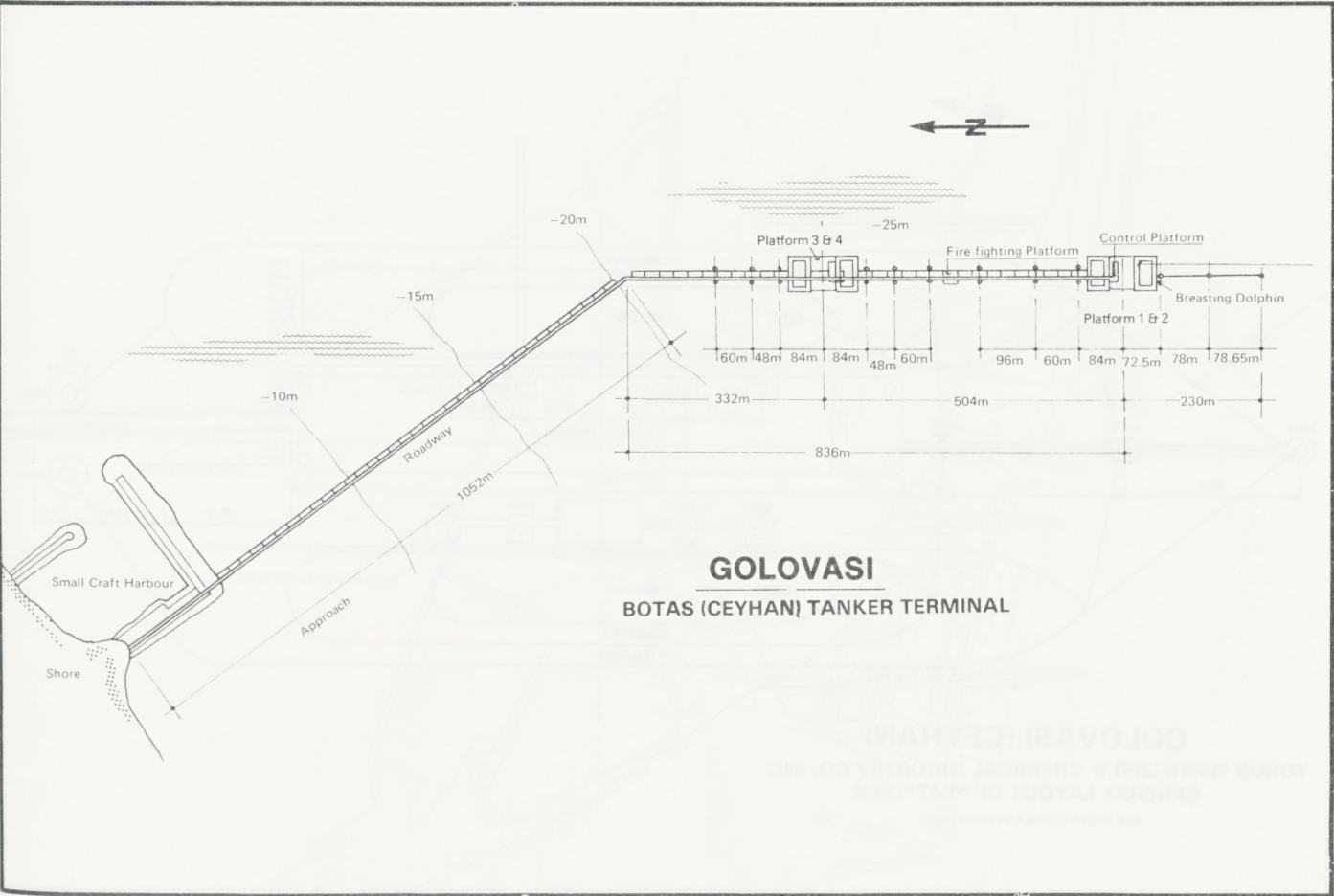






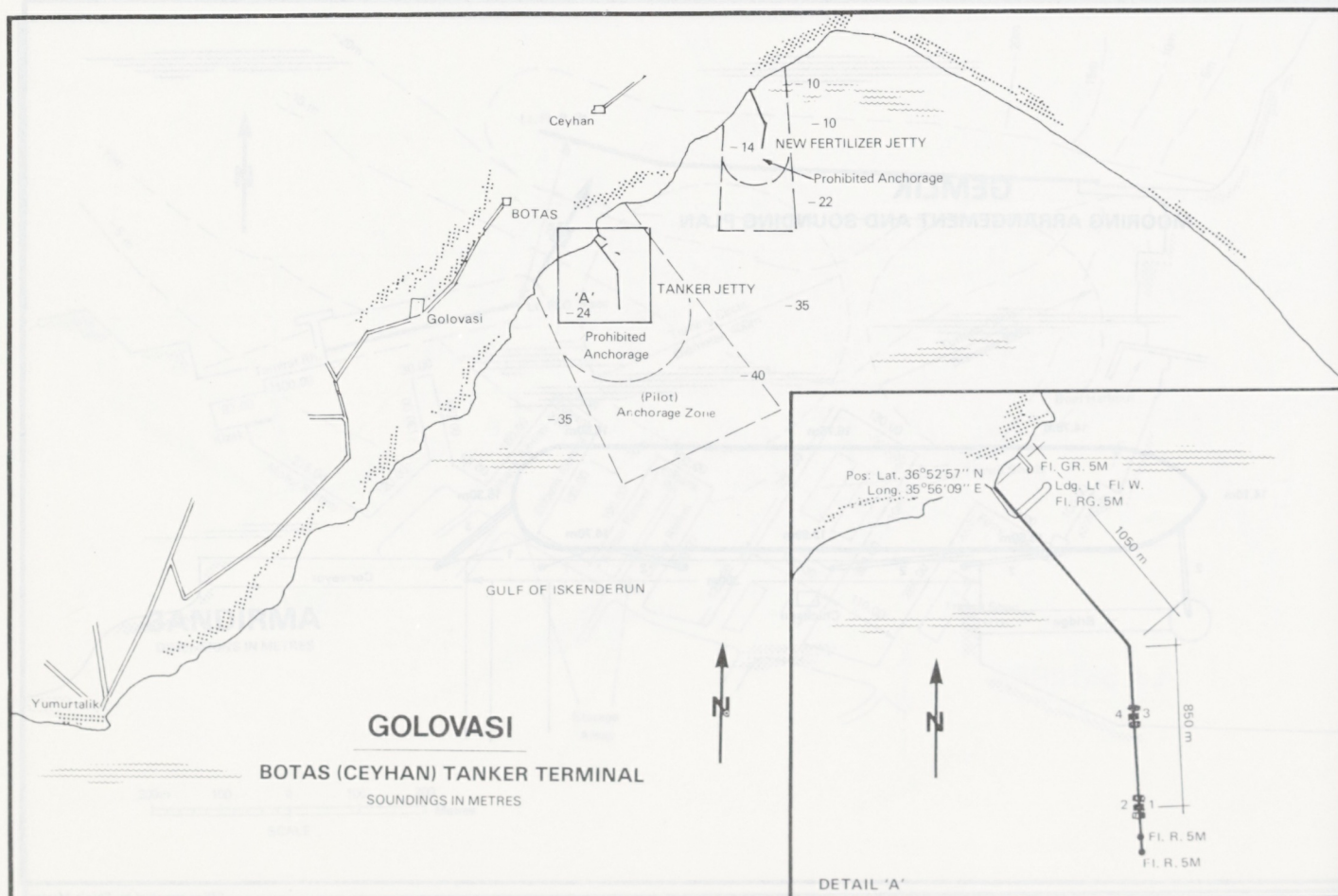
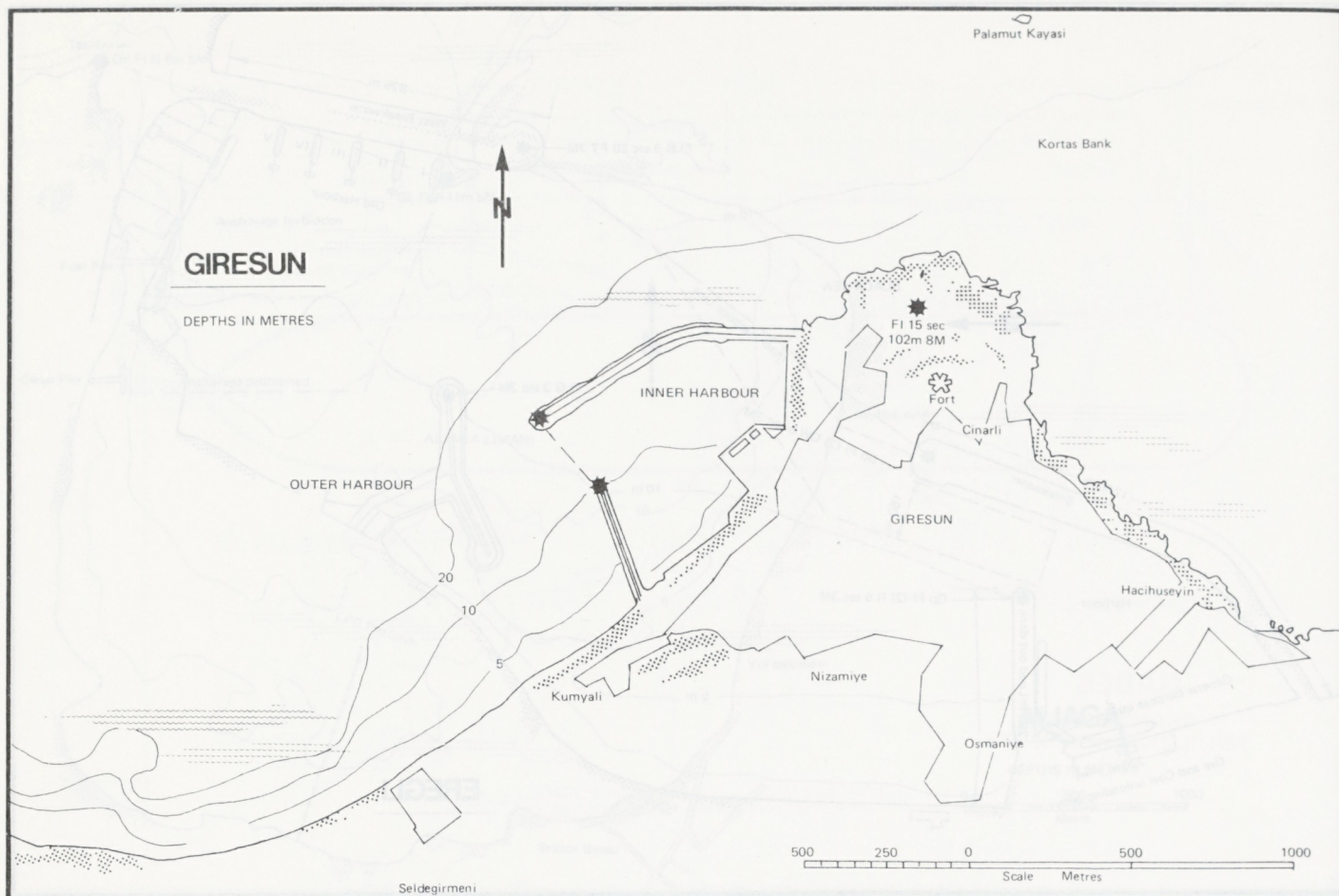
GOLOVASI

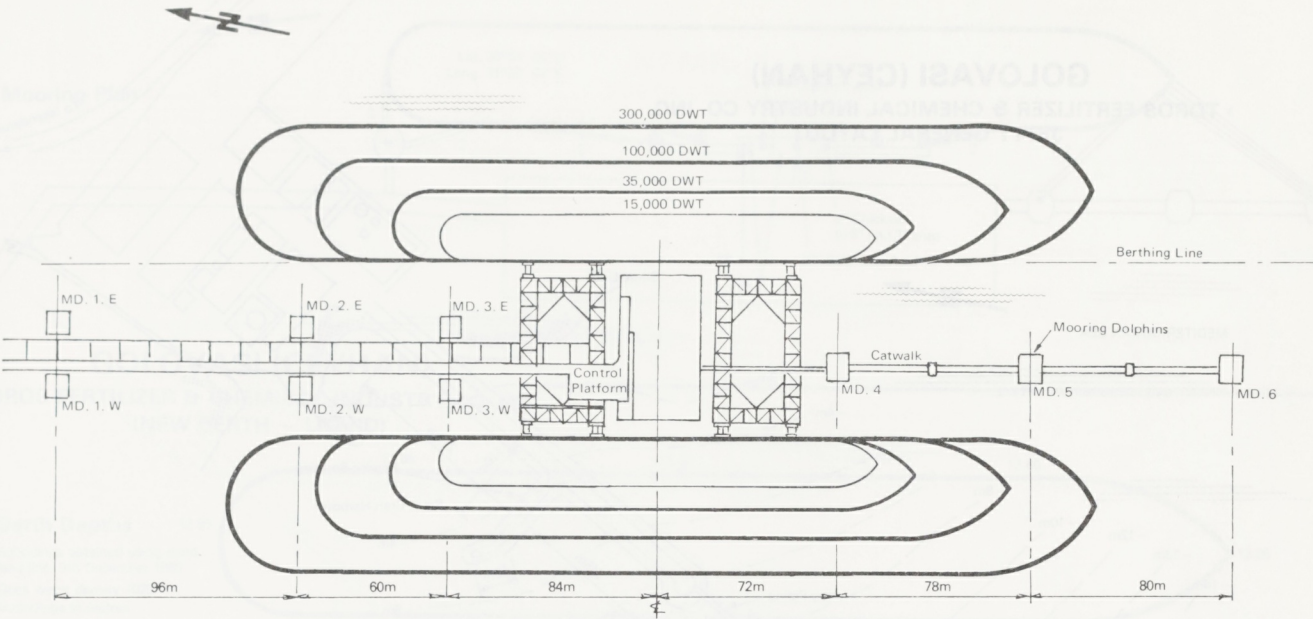
BOTAS (CEYHAN) TANKER TERMINAL (1&2)



GOLOVASI

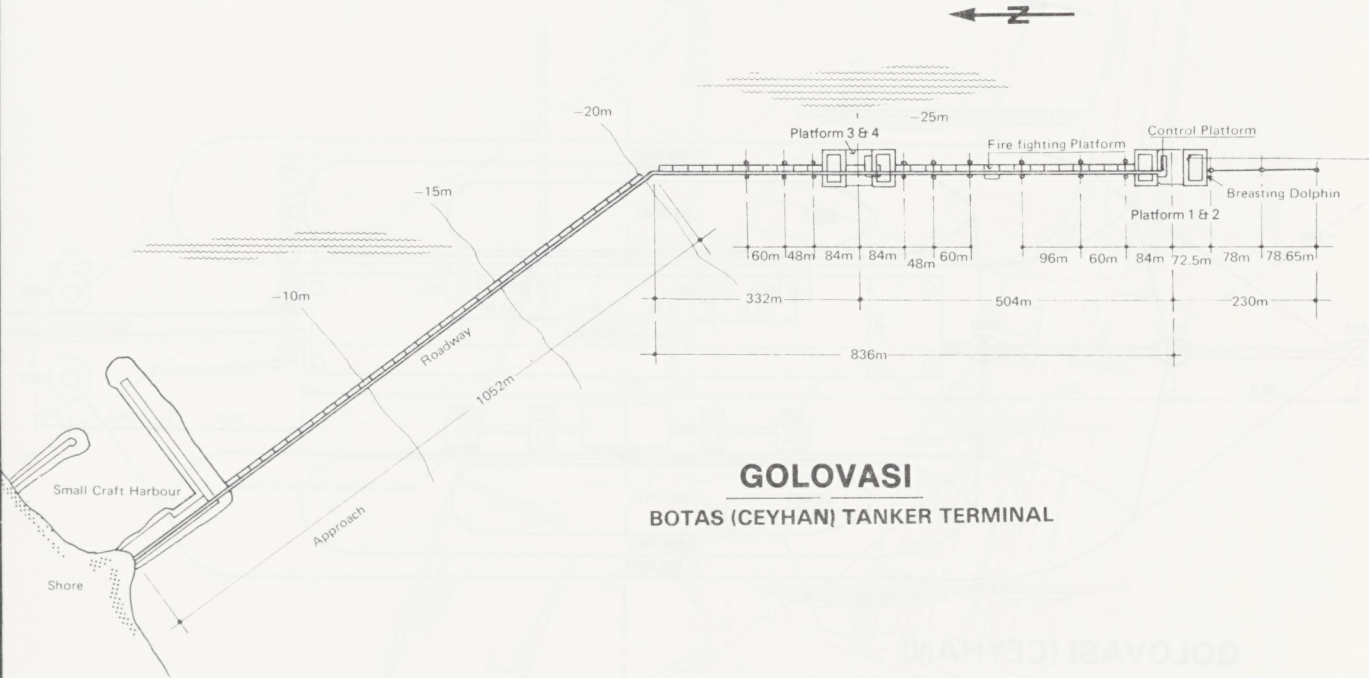
BOTAS (CEYHAN) TANKER TERMINAL





GOLOVASI

BOTAS (CEYHAN) TANKER TERMINAL (1&2)

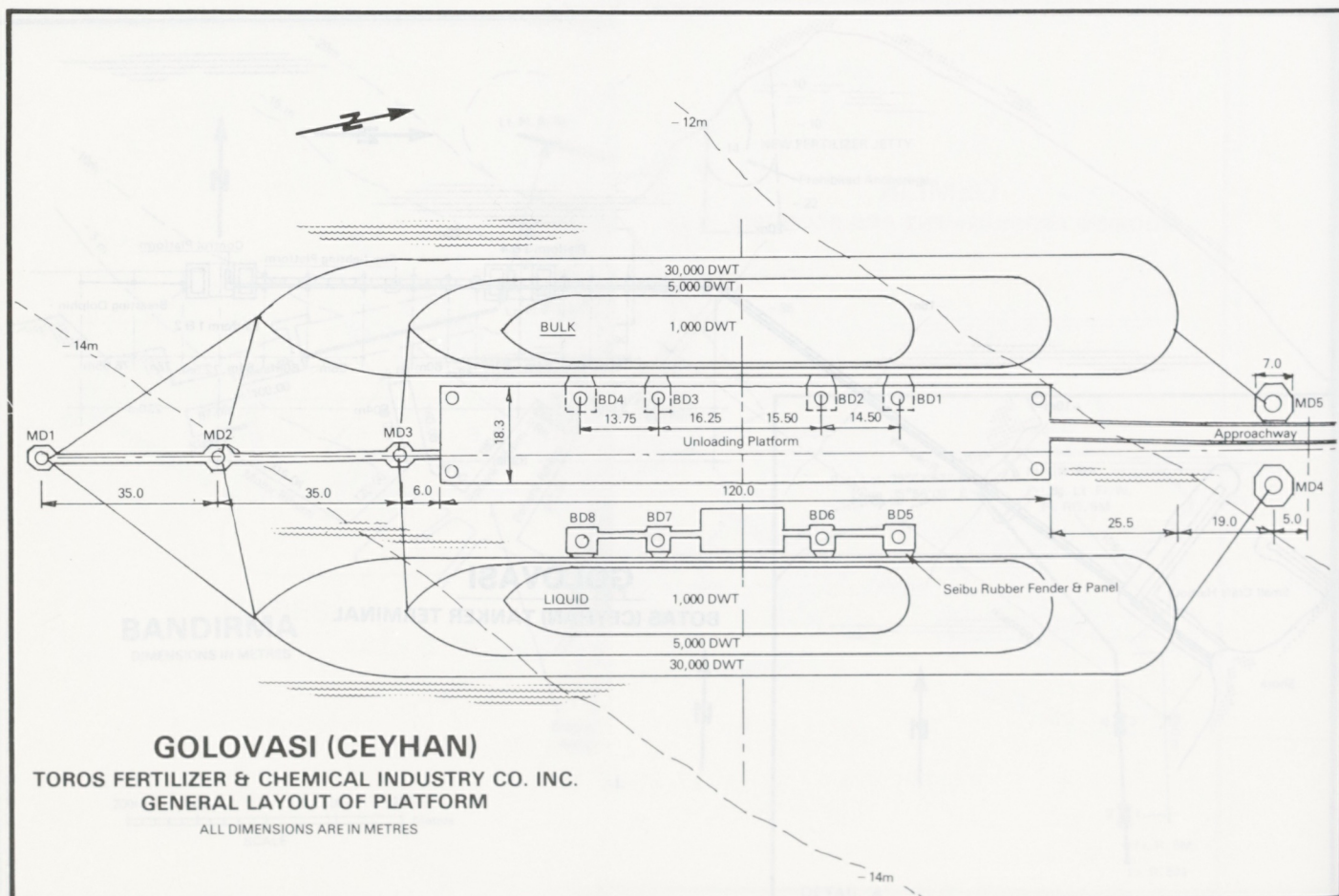
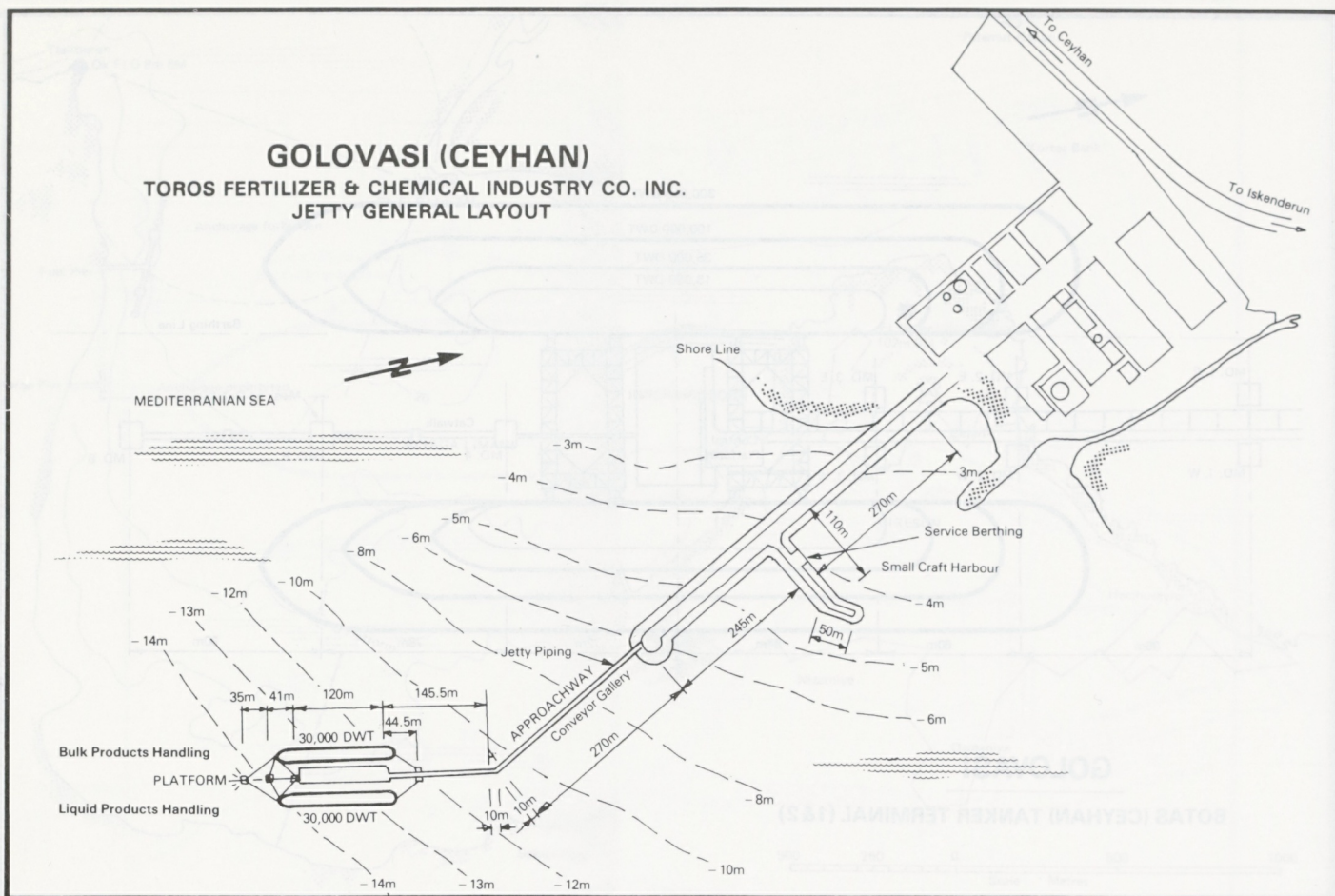


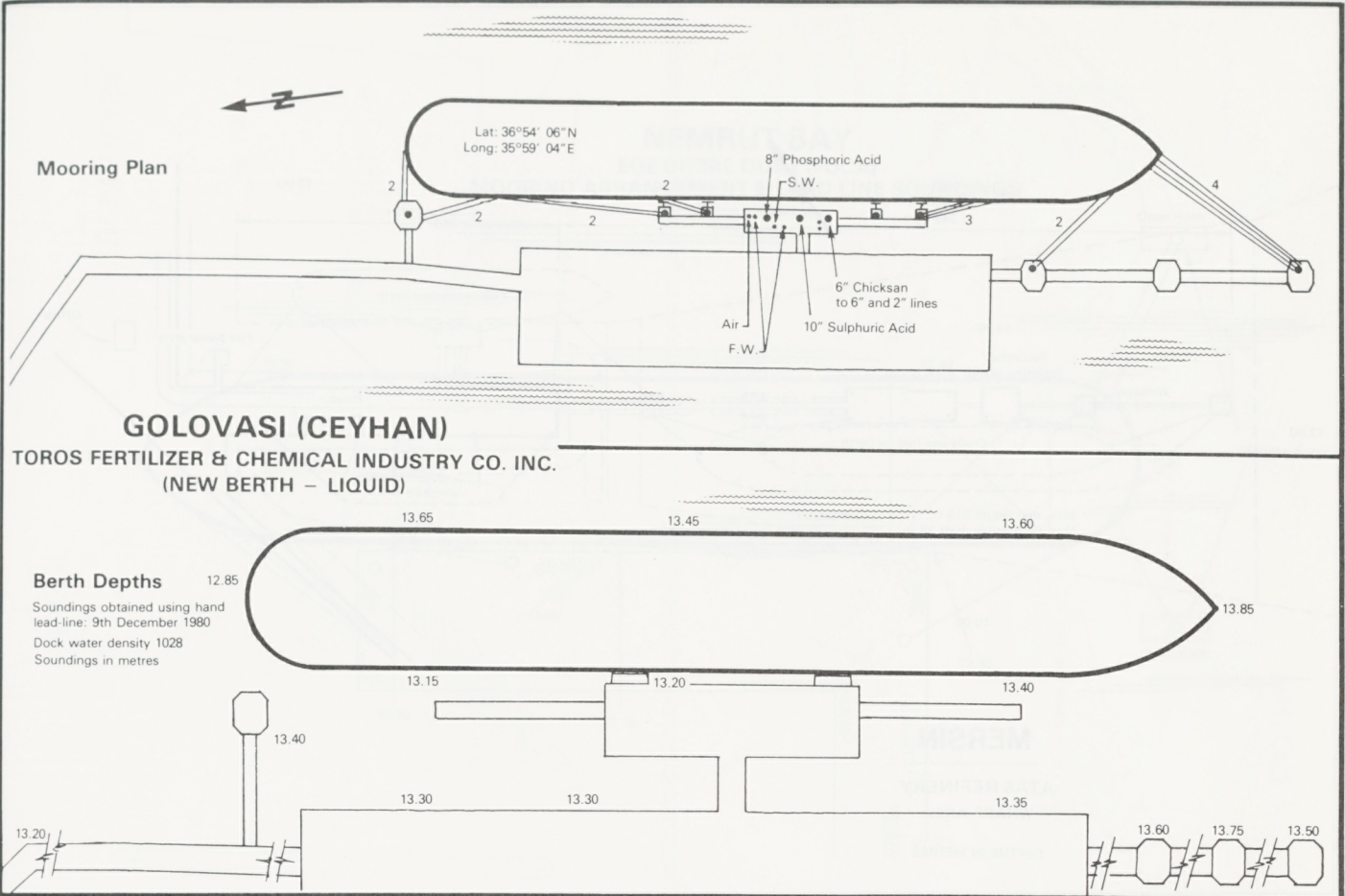
GOLOVASI

BOTAS (CEYHAN) TANKER TERMINAL

GOLOVASI (CEYHAN)

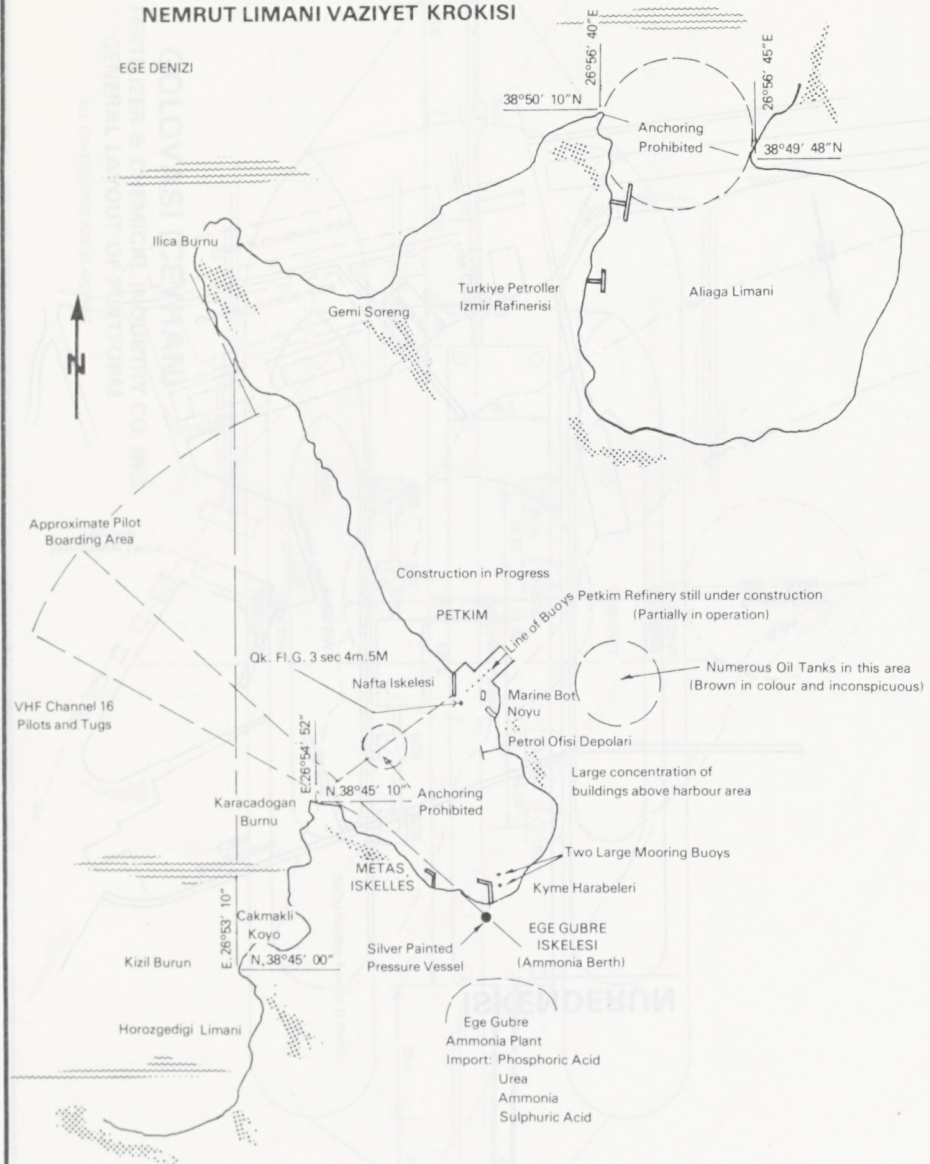
TOROS FERTILIZER & CHEMICAL INDUSTRY CO. INC.
JETTY GENERAL LAYOUT





NEMRUT BAY

NEMRUT LIMANI VAZİYET KROKISI

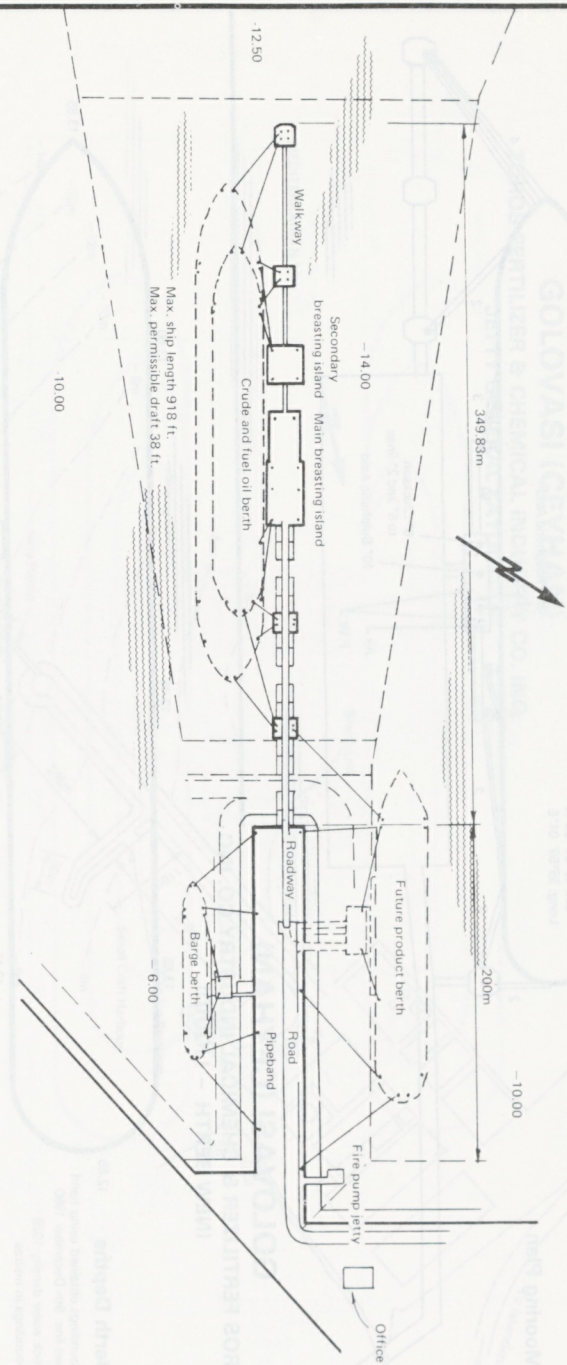


TRACING FROM CHART SUPPLIED BY EGE GÜBRE
RECEIVERS AND OPERATORS OF THE AMMONIA PLANT

"Plan supplied by Ship's Master"

MERSİN

ATAS REFINERY
WHARF AREA
DEPTHS IN METRES

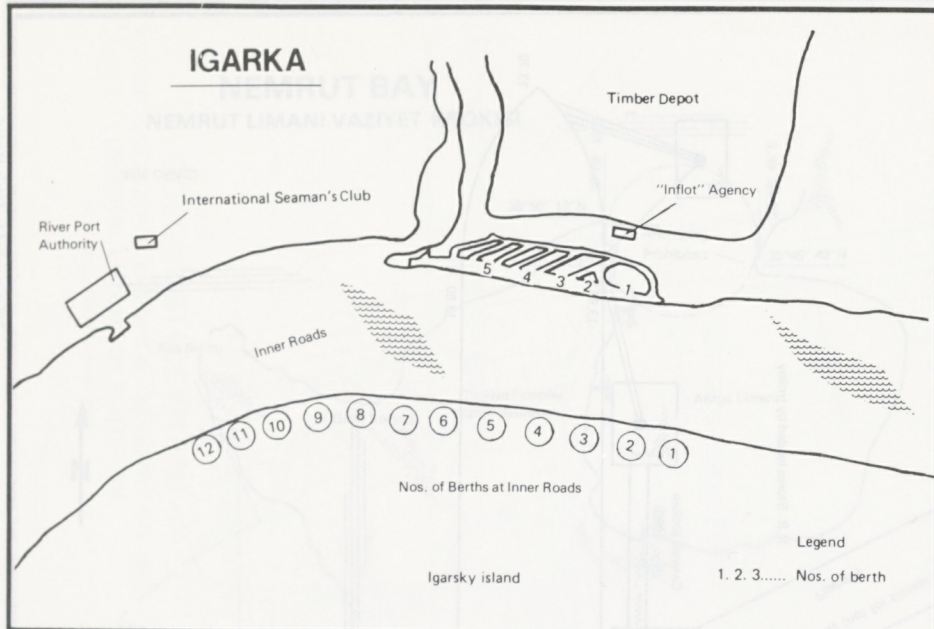




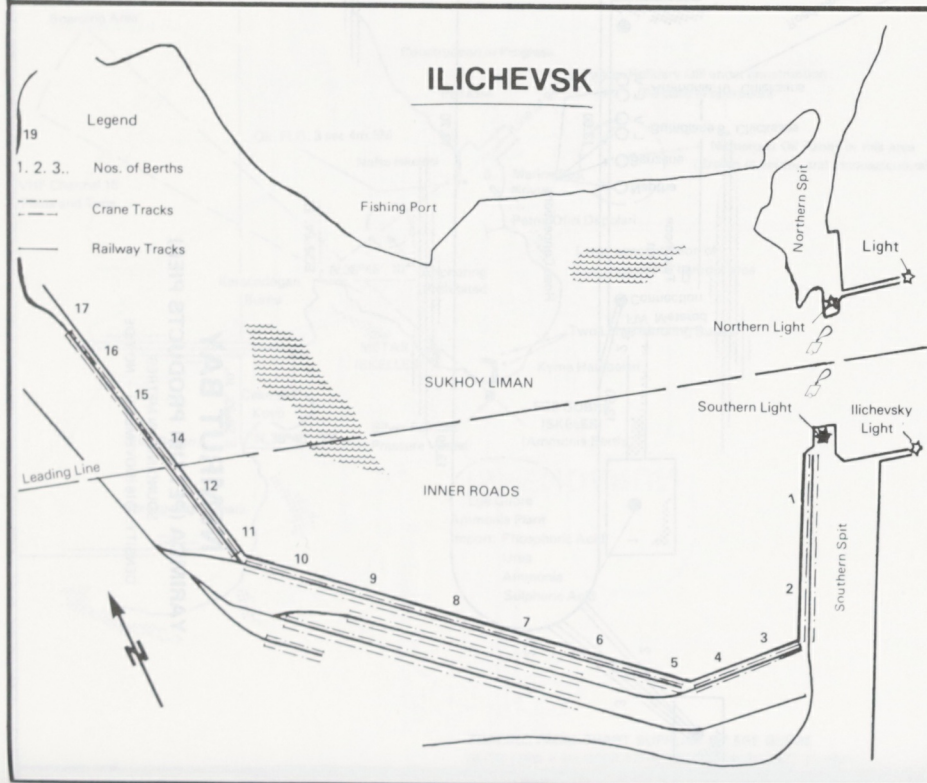
"Plan supplied by Ship's Master"

SOUNDINGS IN METRES
DENSITY: 1018 (NOVEMBER) – NO TIDE

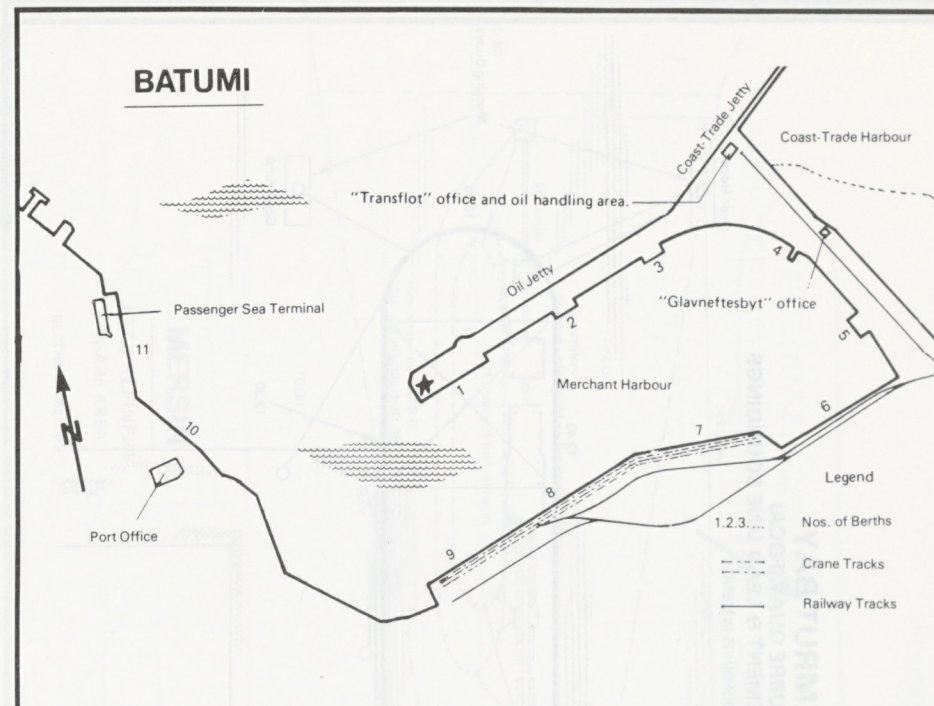
IGARKA



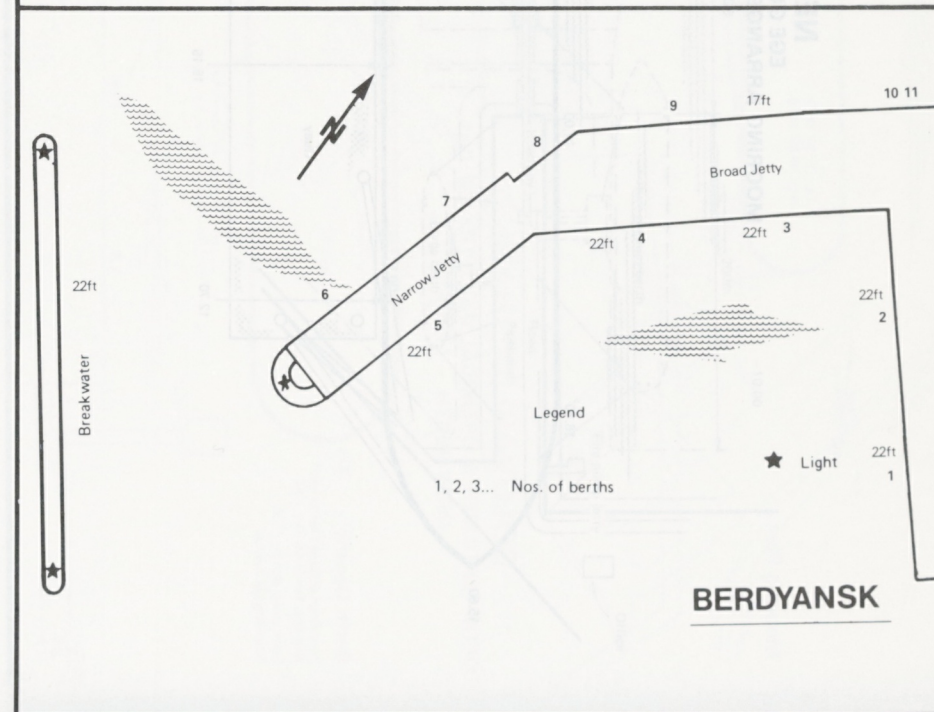
ILICHEVSK



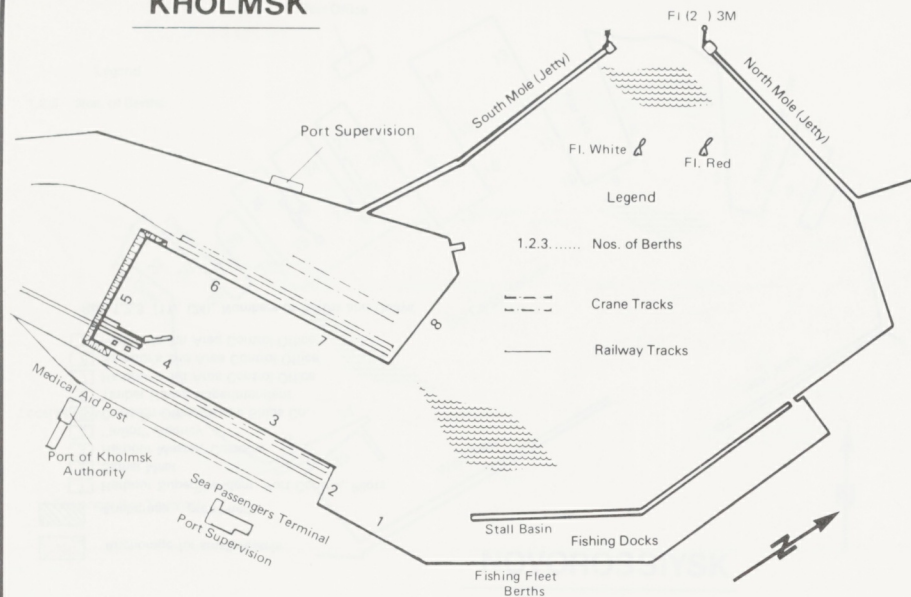
BATUMI



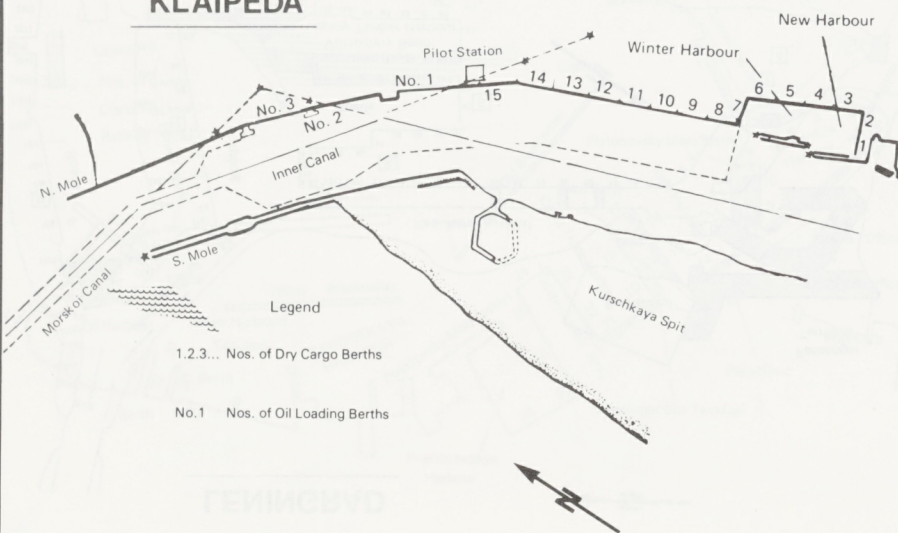
BERDYANSK



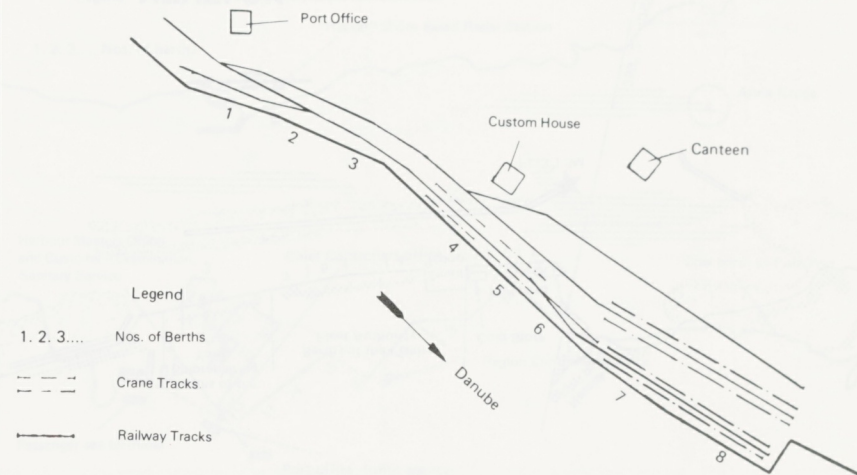
KHOLMSK



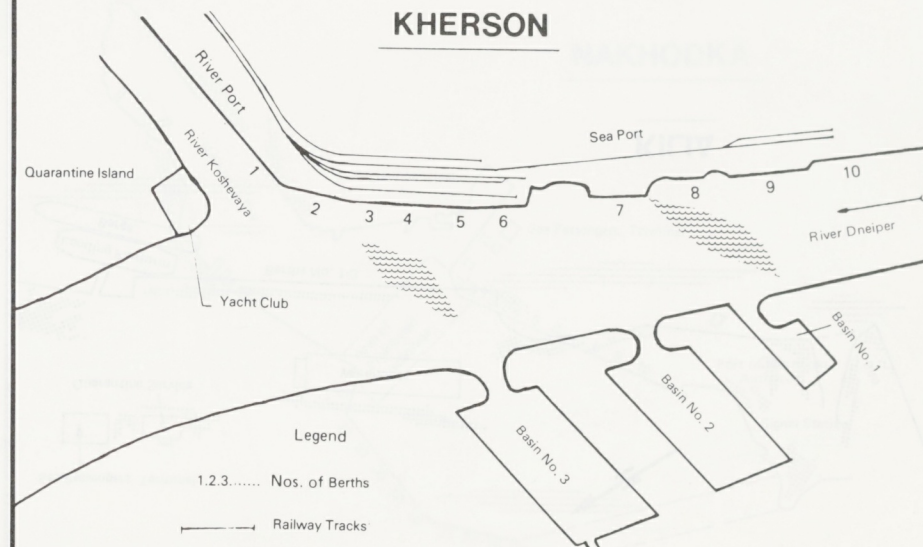
KLAIPEDA



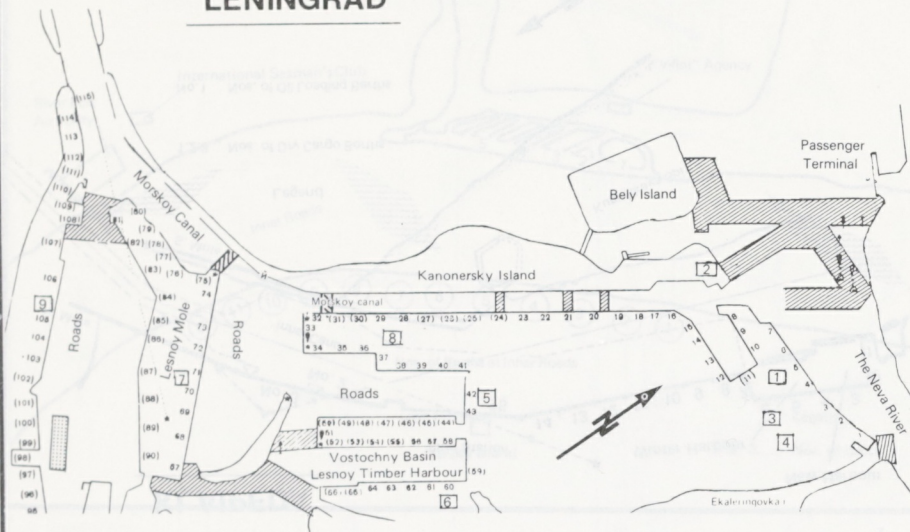
IZMAIL



KHERSON



LENINGRAD



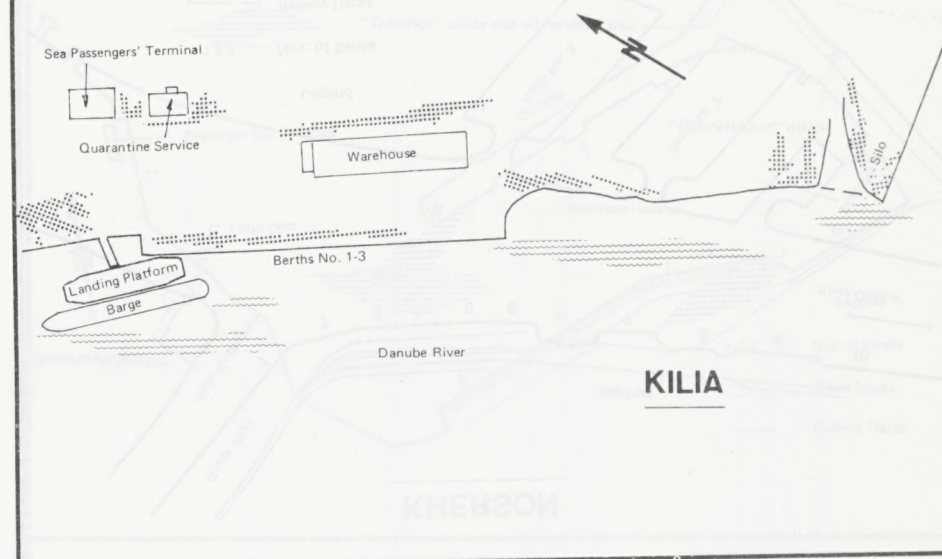
Anchorage for small vessels

Anchorage prohibited

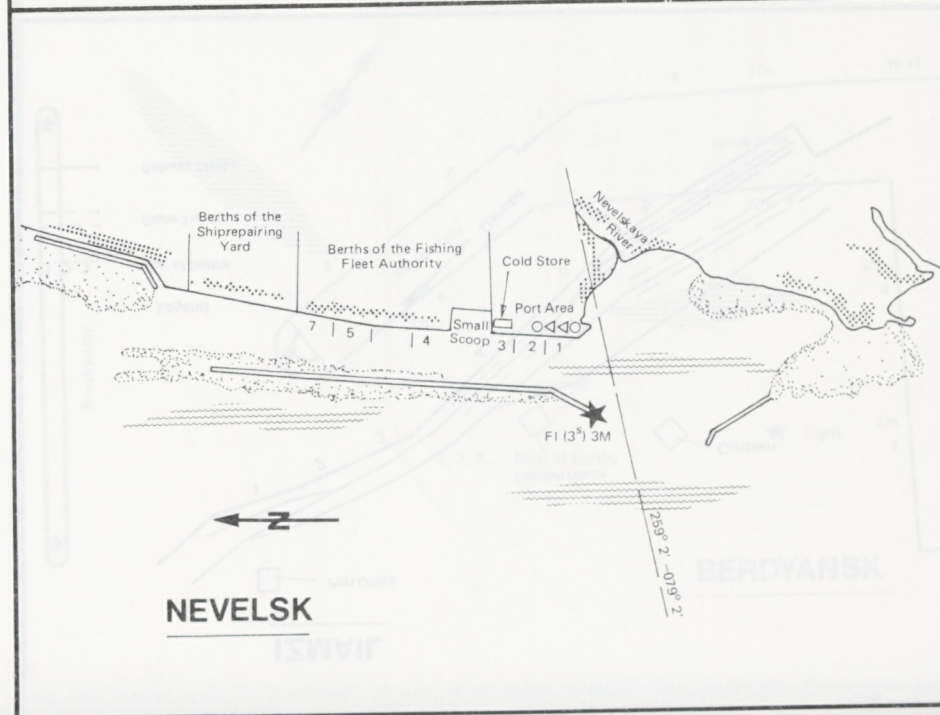
- Harbour Superintendent, Port Control, Pilots
- Signal Mast
- Harbour Master, Customs
- "Infliot" Agency
- Dispatch Office, Baltic Ships Co.
- Timber Haven Superintendent
- Harbour's 3rd Area Control Office
- Harbour's 2nd Area Control Office
- Harbour's 4th Area Control Office

Ref. 1,2,3, (11), (24), Numbers of Berths and Quays

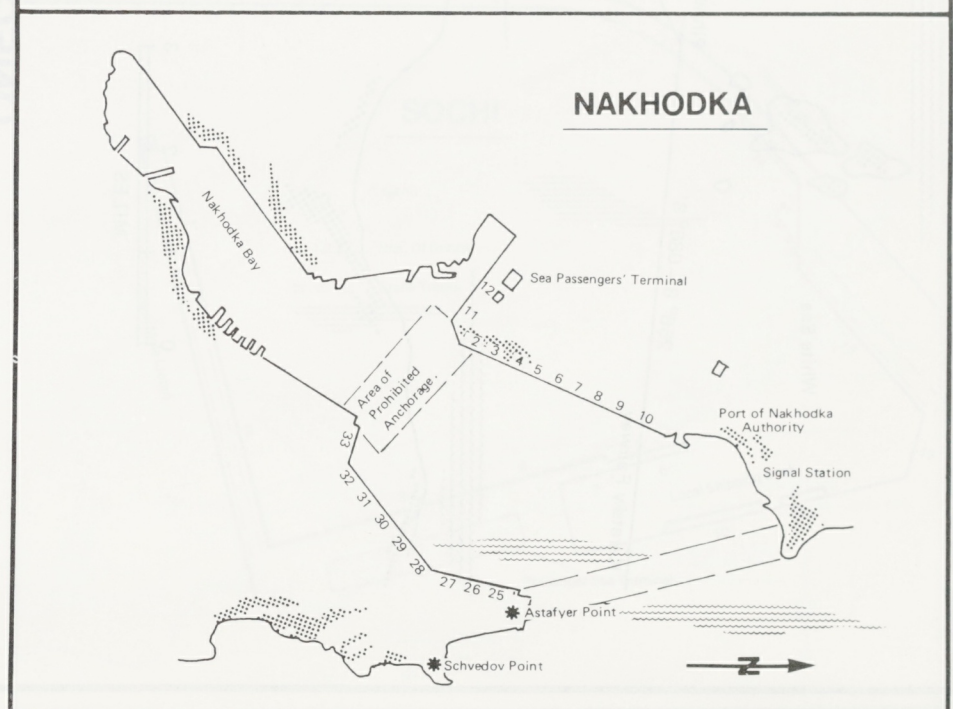
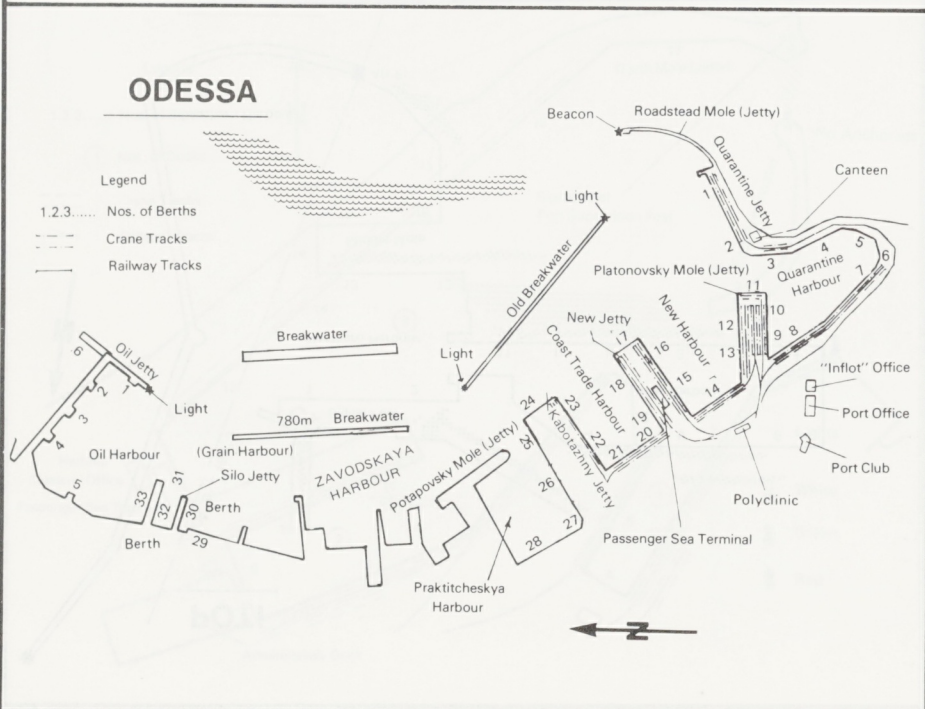
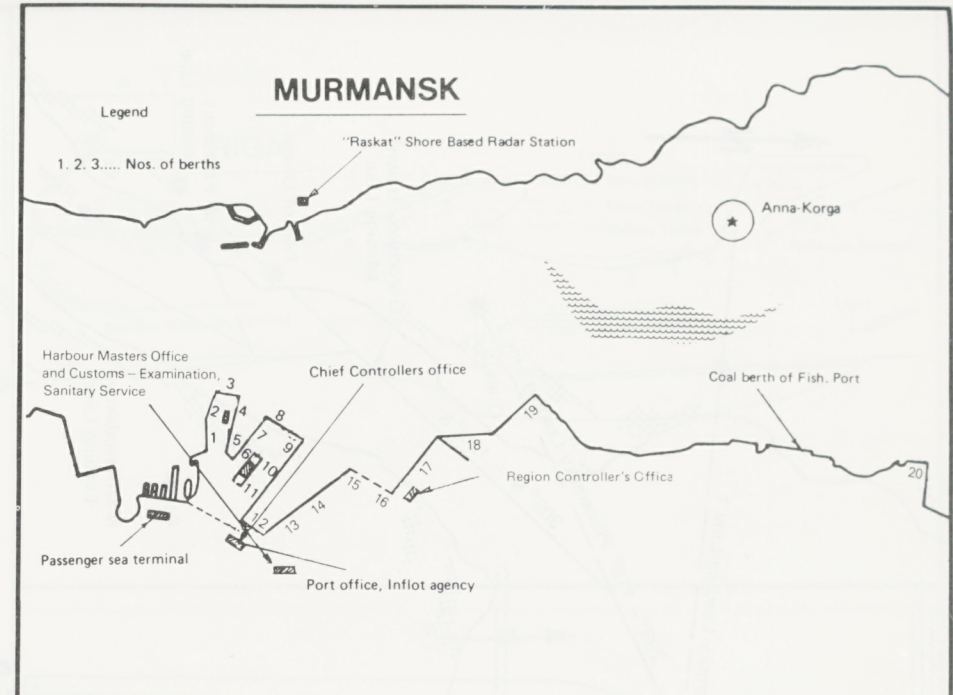
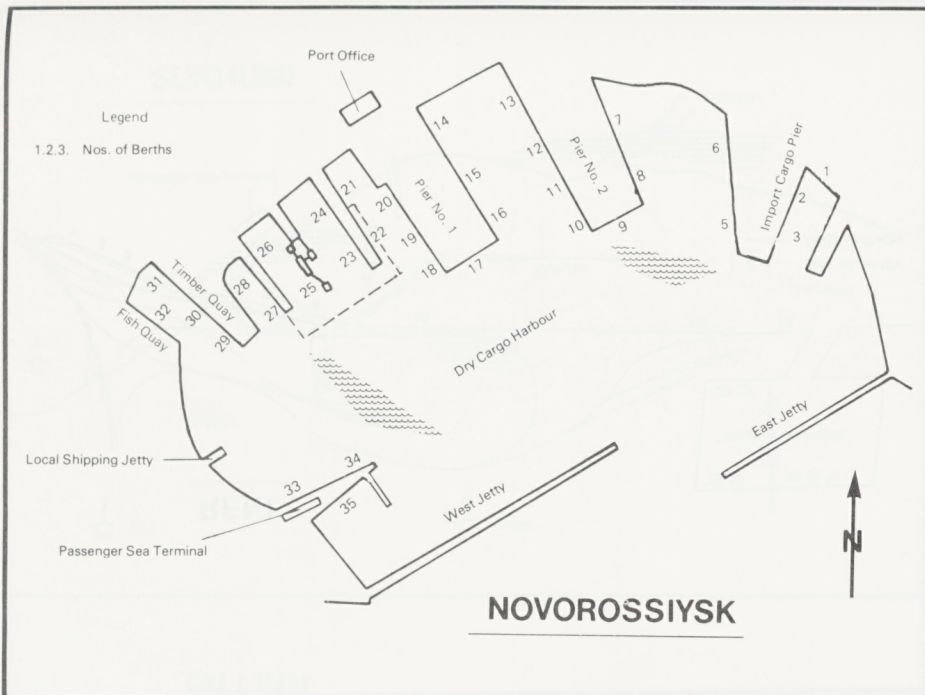
BATUMI



KILIA



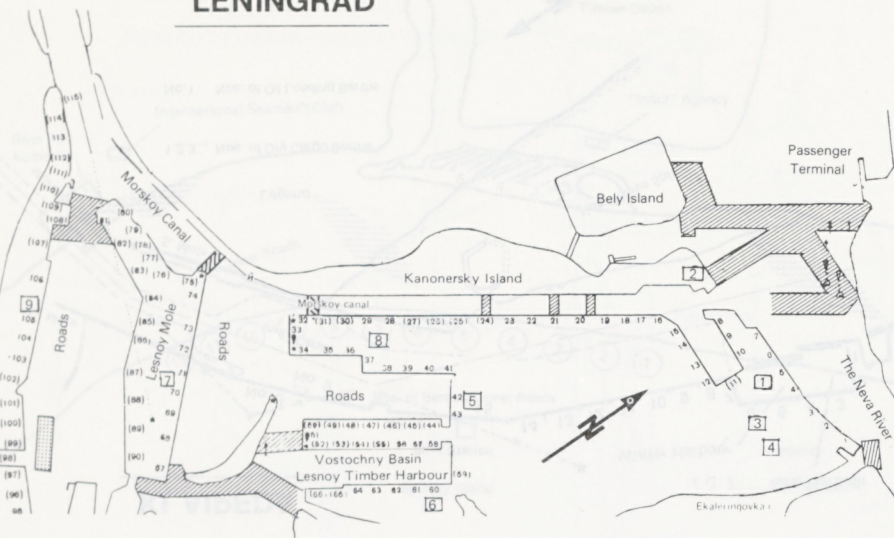
NEVELSK



"Reproduced by kind permission of Sovinflat".

"Reproduced by kind permission of Sovinflat".

LENINGRAD



Anchorage for small vessels

Anchorage prohibited

- Harbour Superintendent, Port Control, Pilots
- Signal Mast
- Harbour Master, Customs
- "Inflot" Agency
- Dispatch Office, Baltic Ships Co.
- Timber Haven Superintendent
- Harbour's 3rd Area Control Office
- Harbour's 2nd Area Control Office
- Harbour's 4th Area Control Office

Ref. 1,2,3, (11), (24), Numbers of Berths and Quays

Sea Passengers' Terminal

Quarantine Service

Warehouse

Landing Platform
Barge

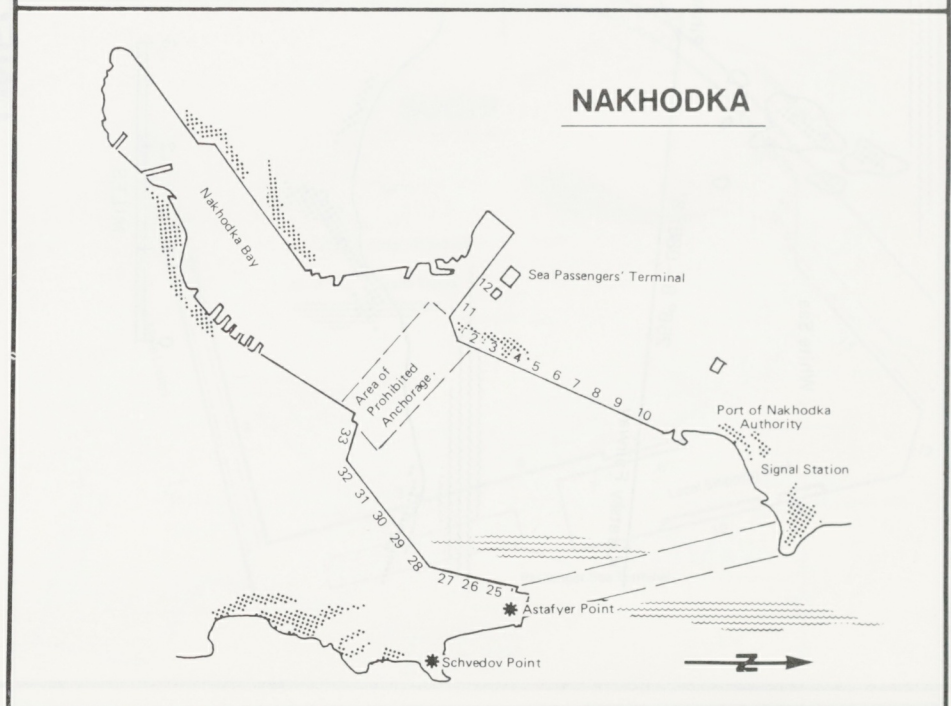
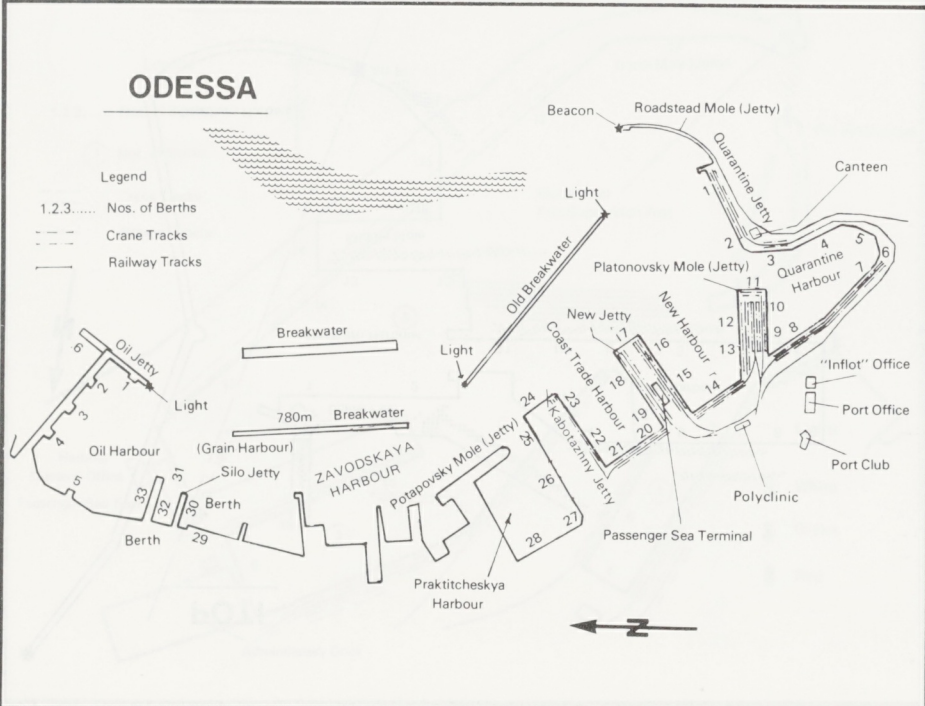
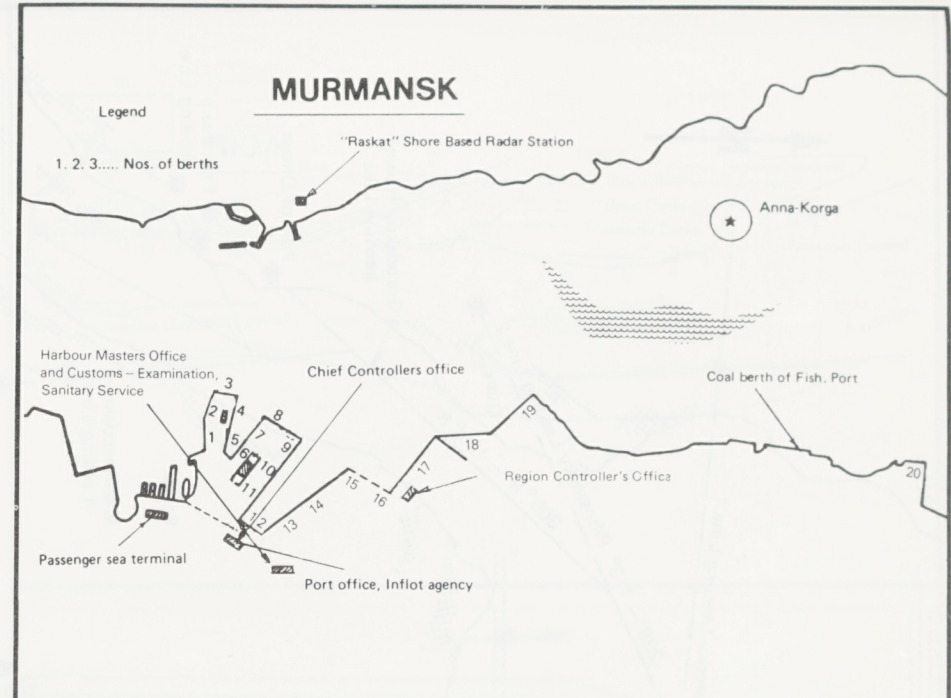
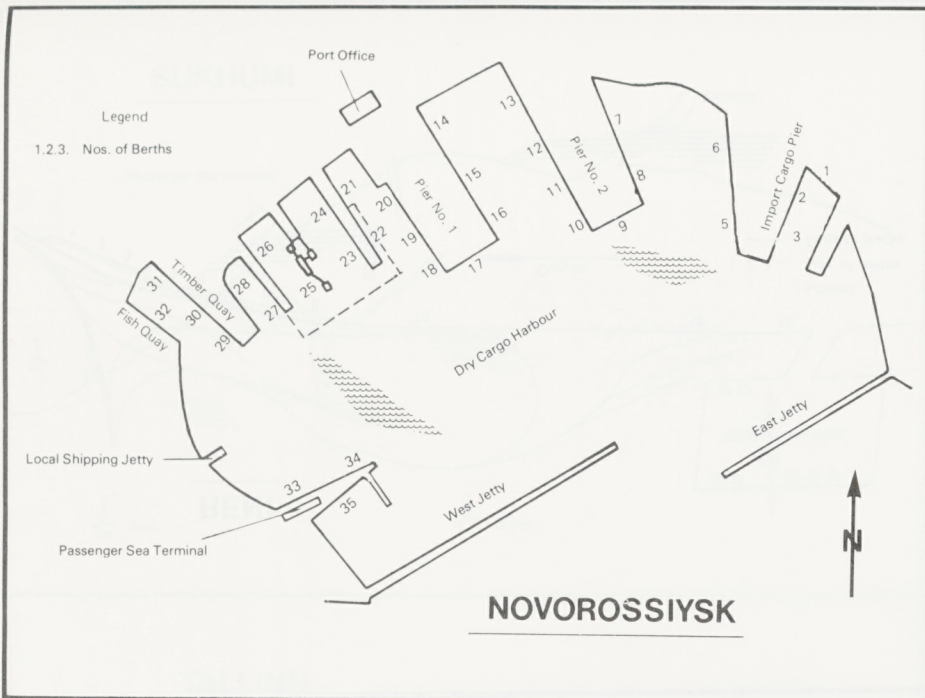
Berths No. 1-3

Danube River

KILIA

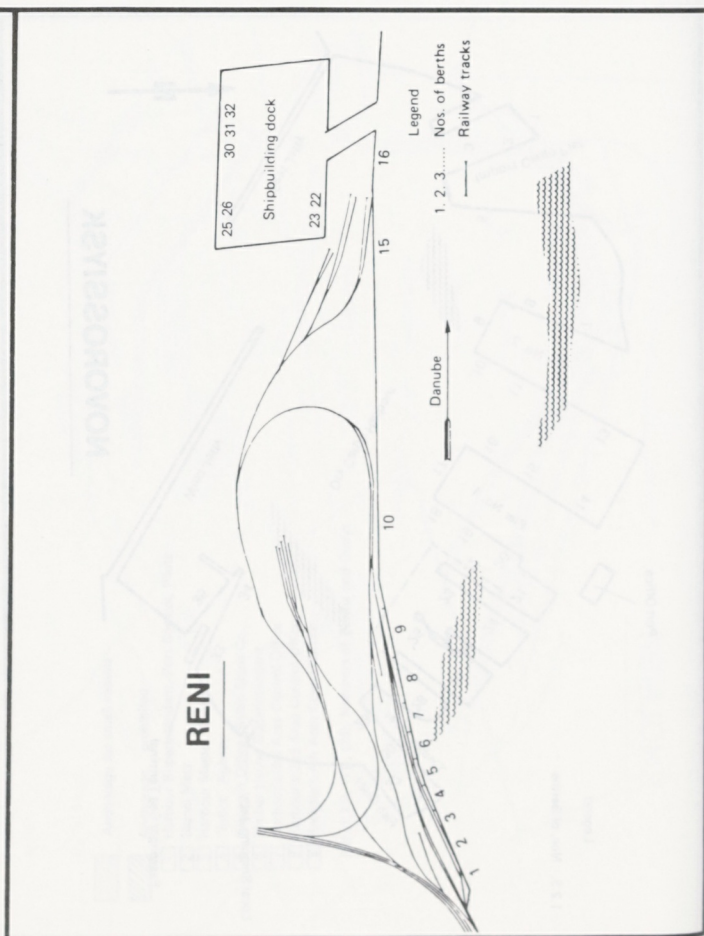
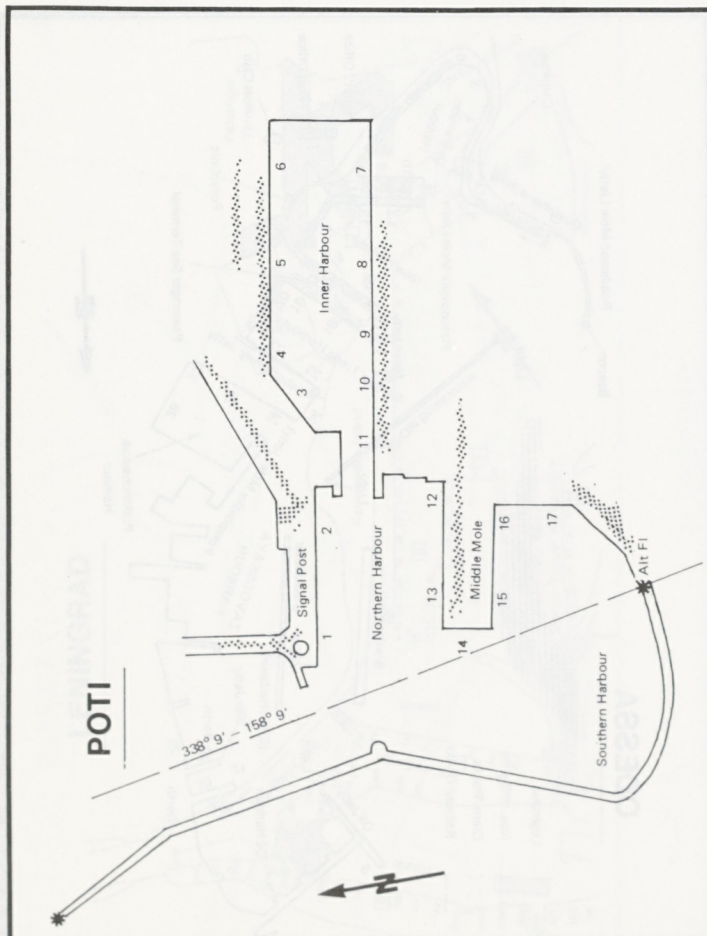
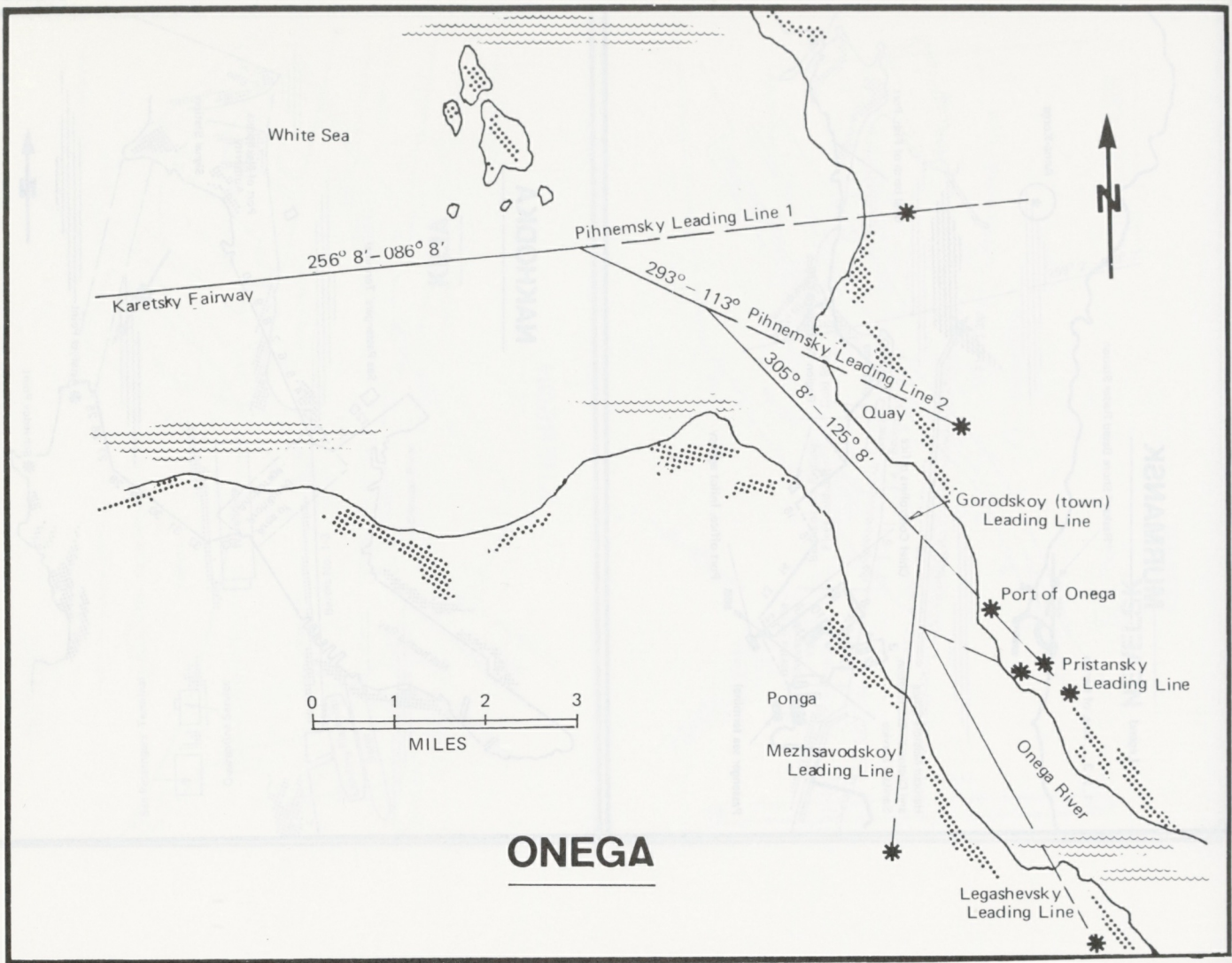


NEVELSK

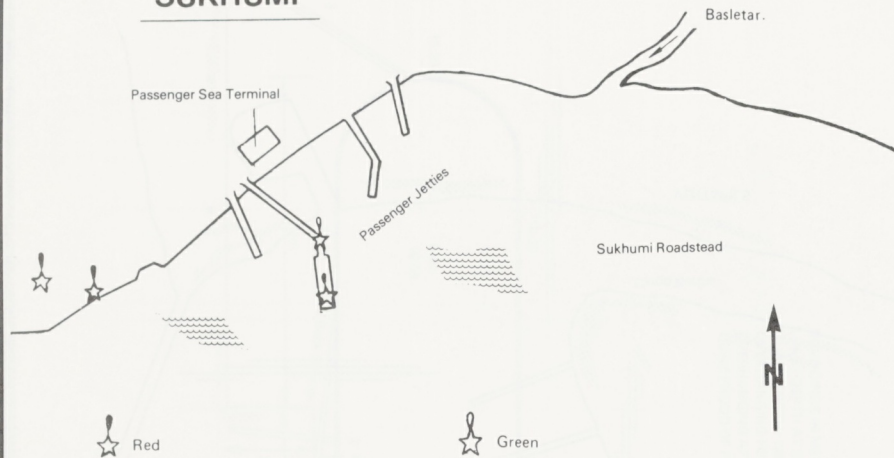


"Reproduced by kind permission of Sovinflat".

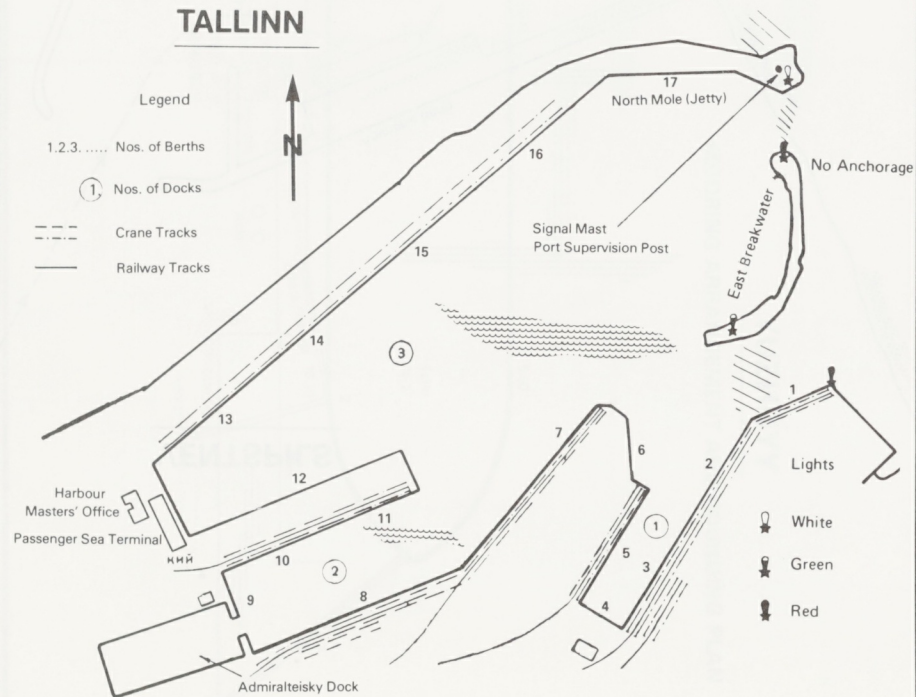
"Reproduced by kind permission of Sovinflat".



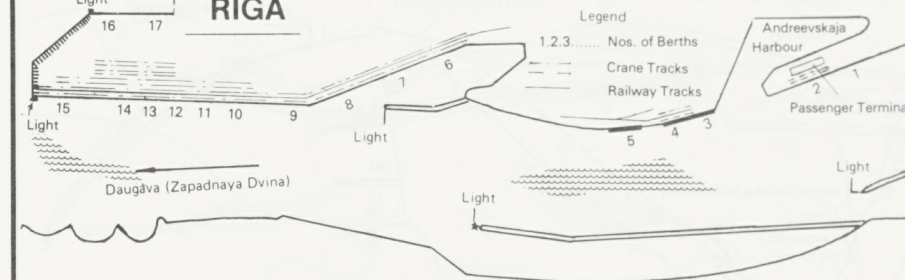
SUKHUMI



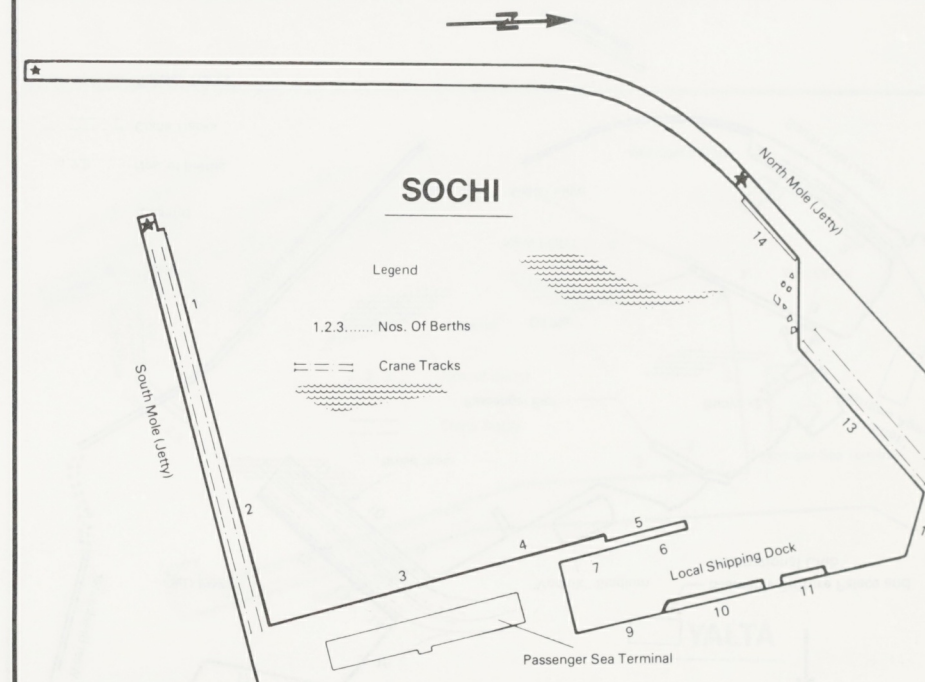
TALLINN



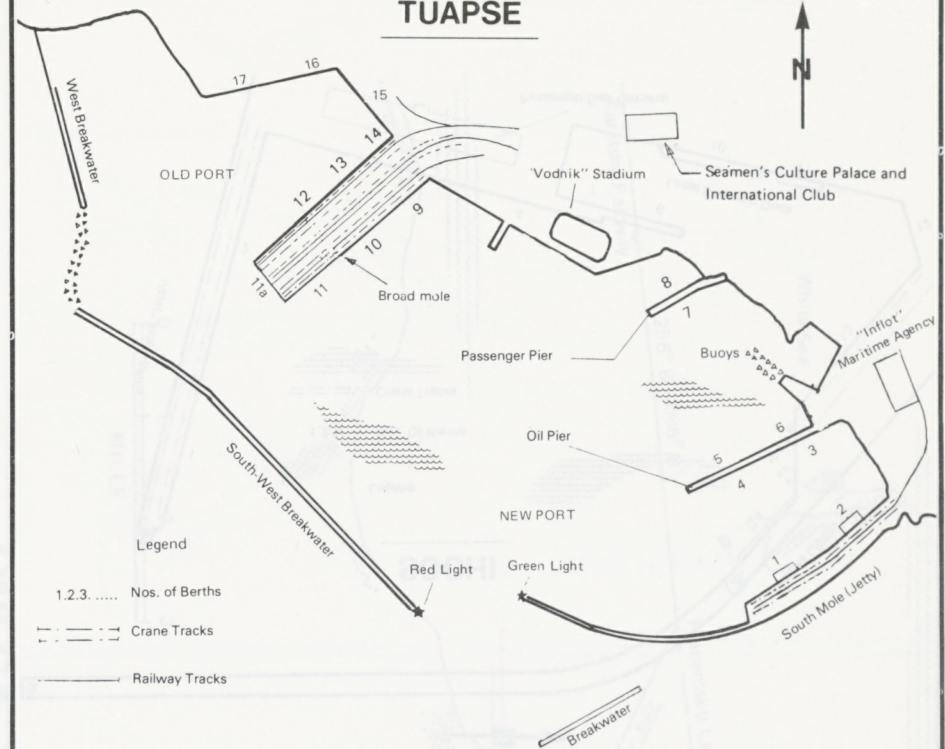
RIGA



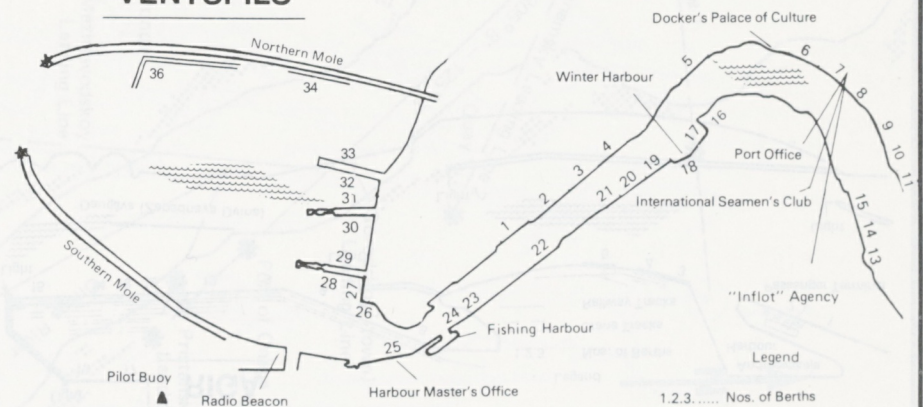
SOCHI



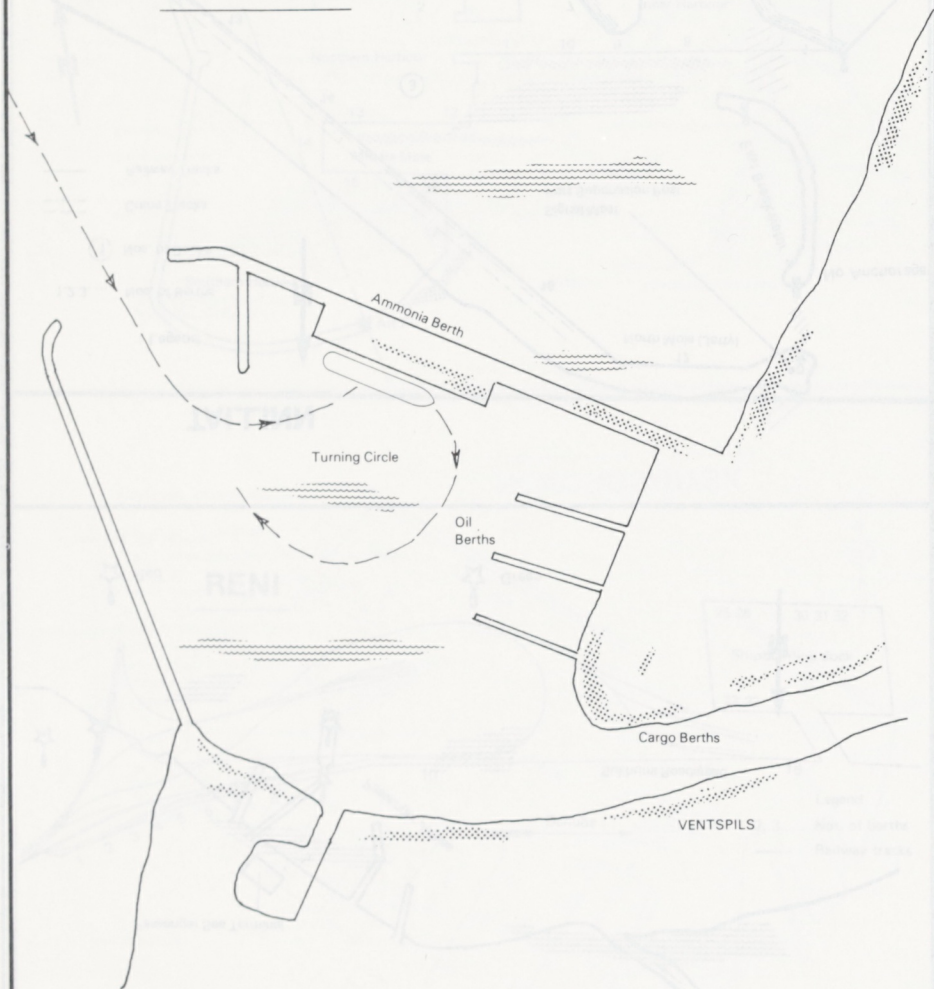
TUAPSE

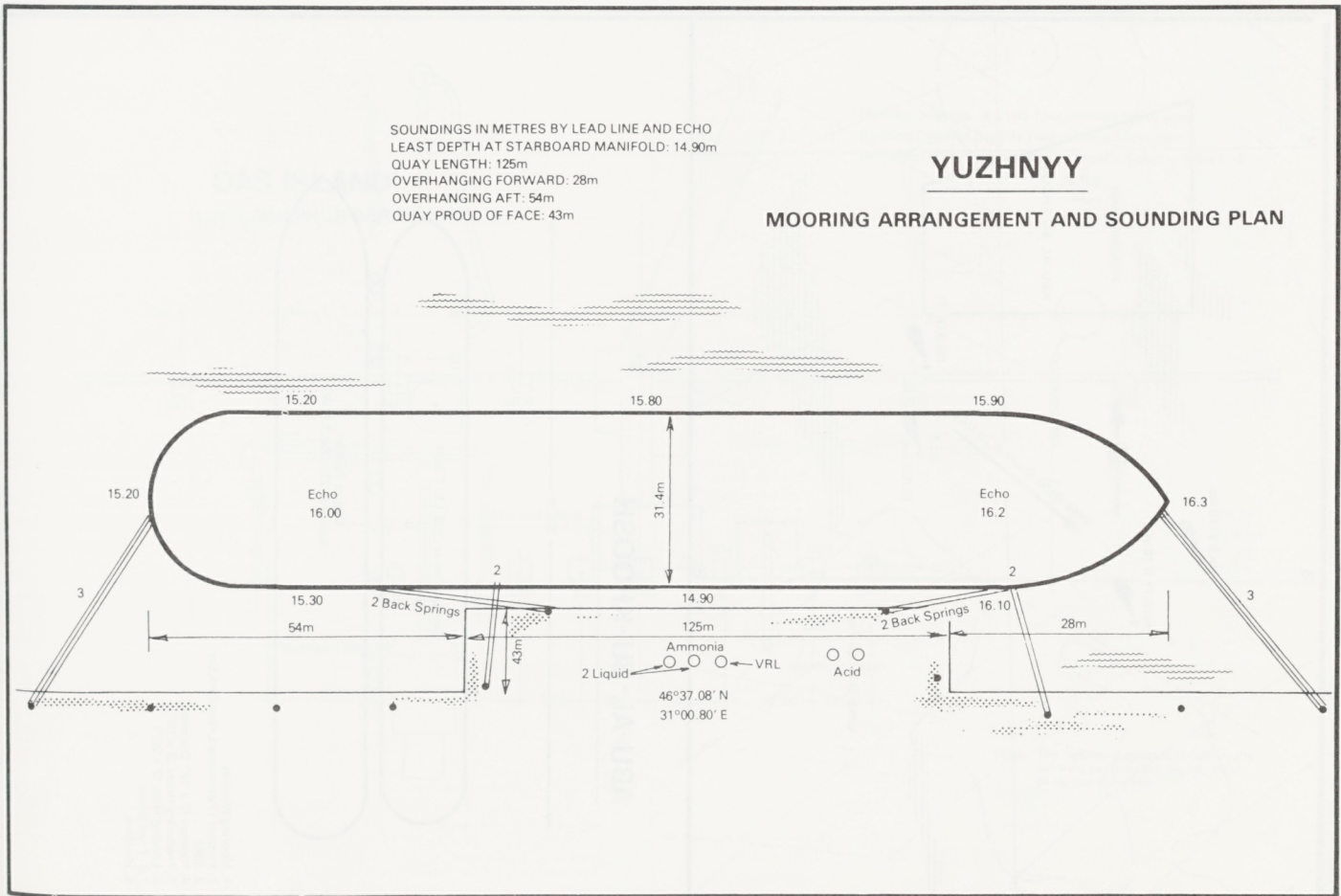
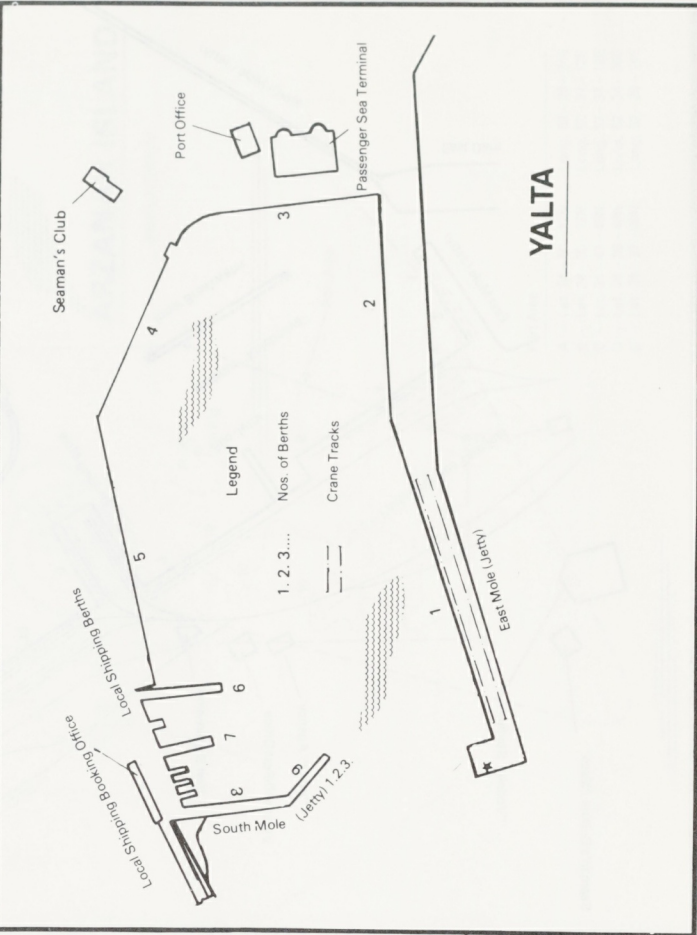
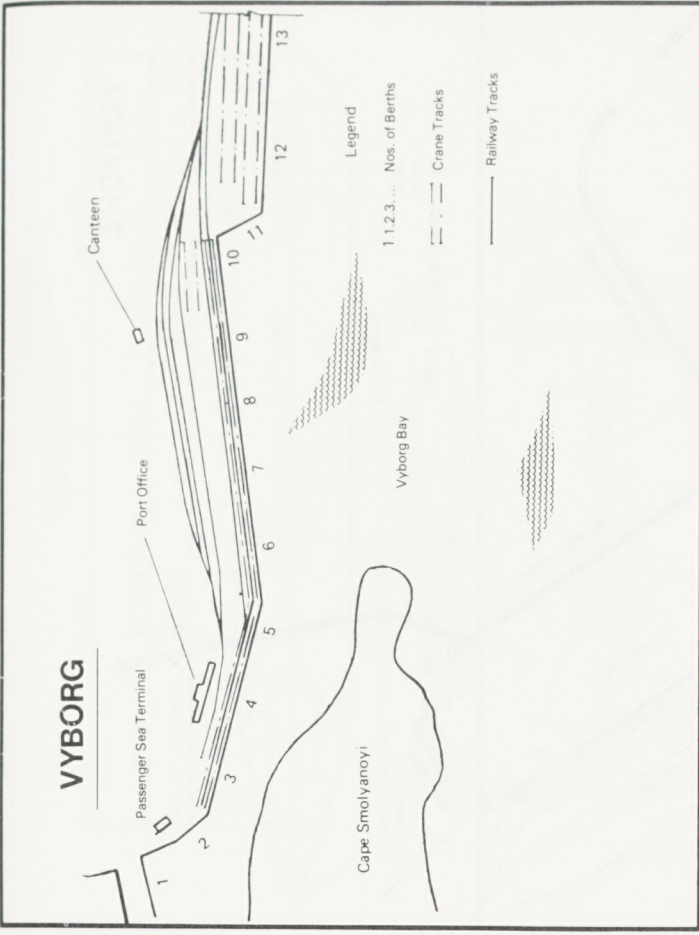


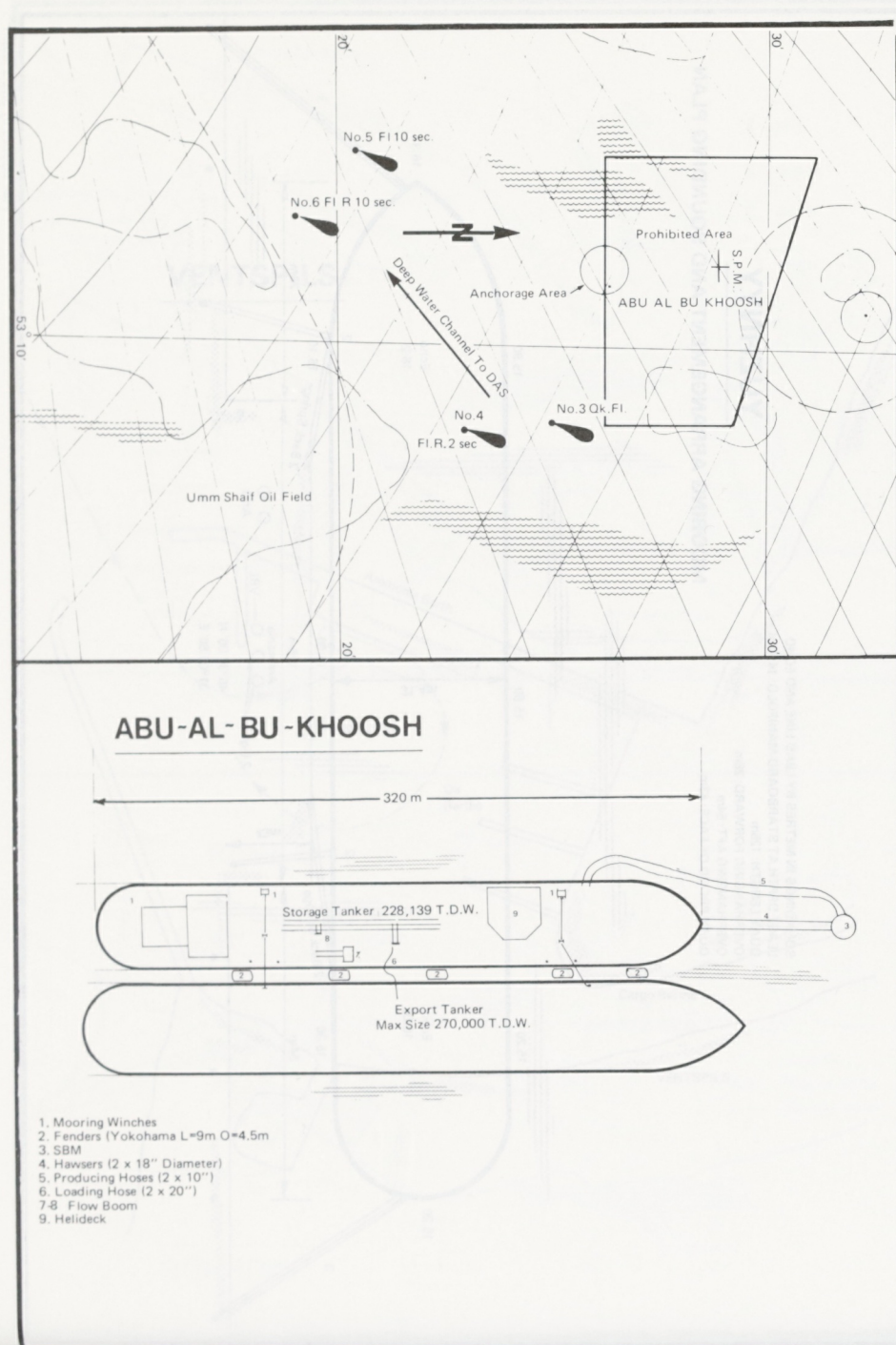
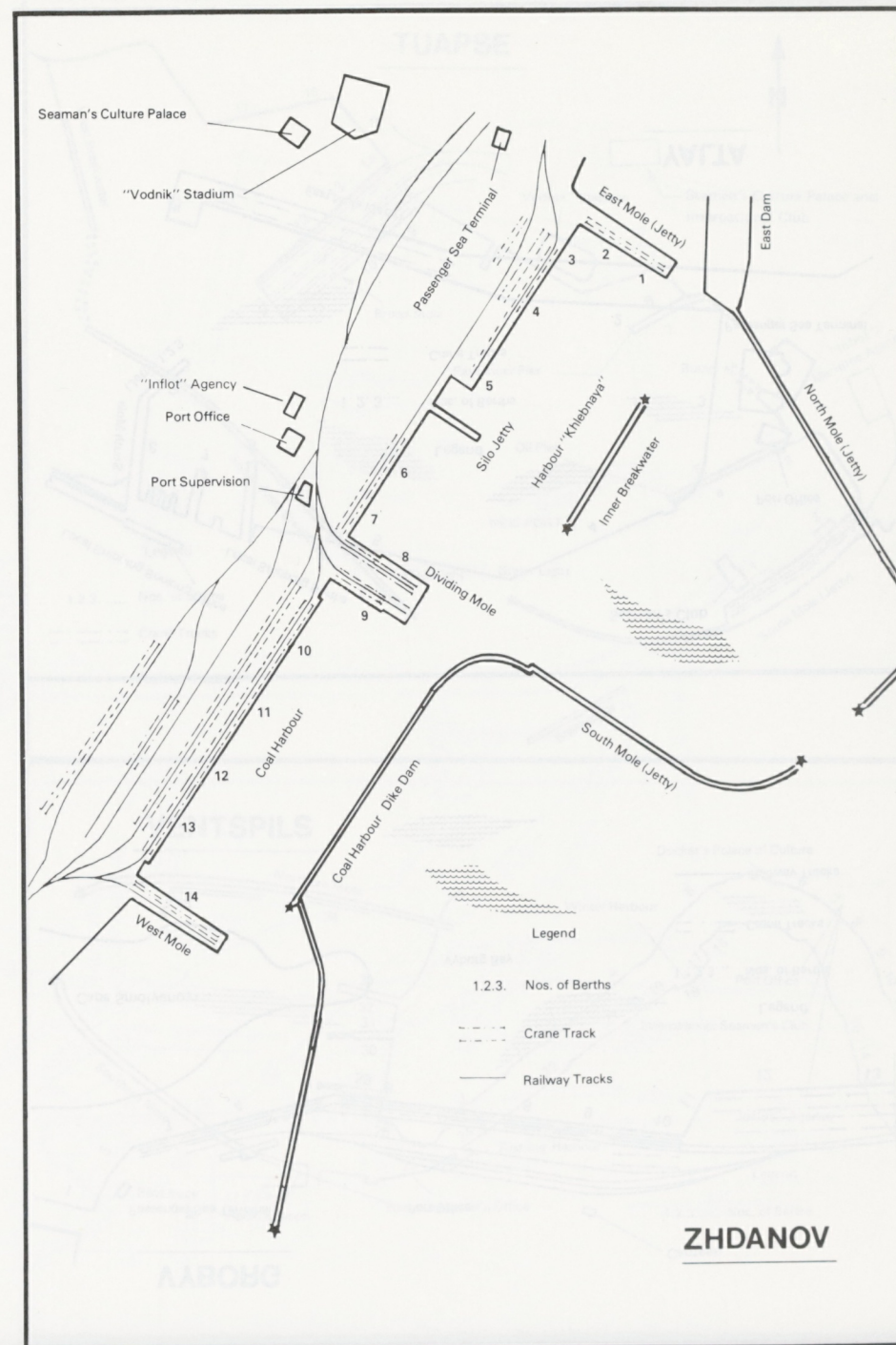
VENTSPILS

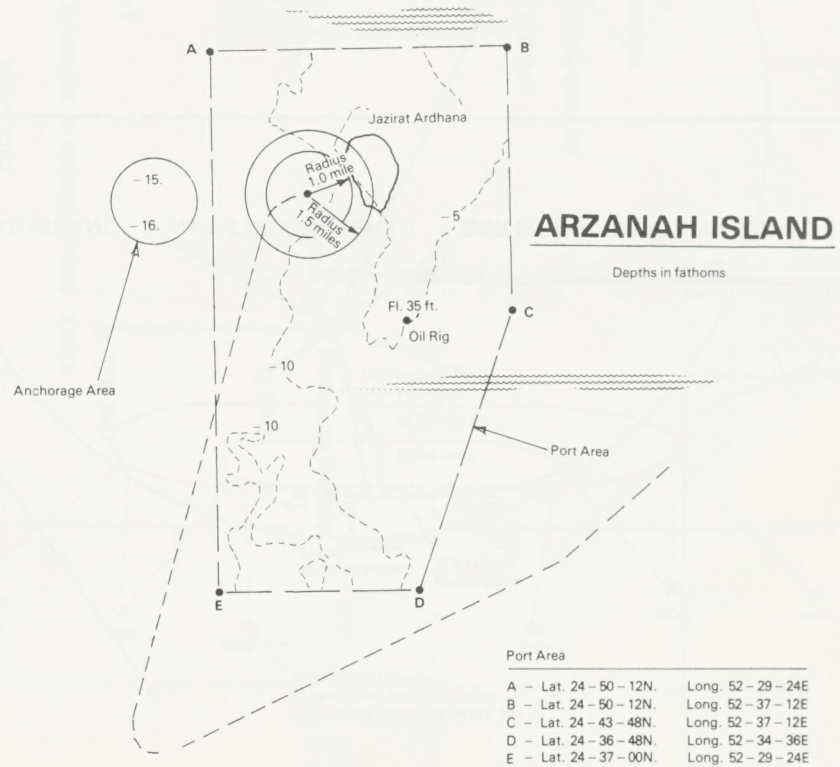
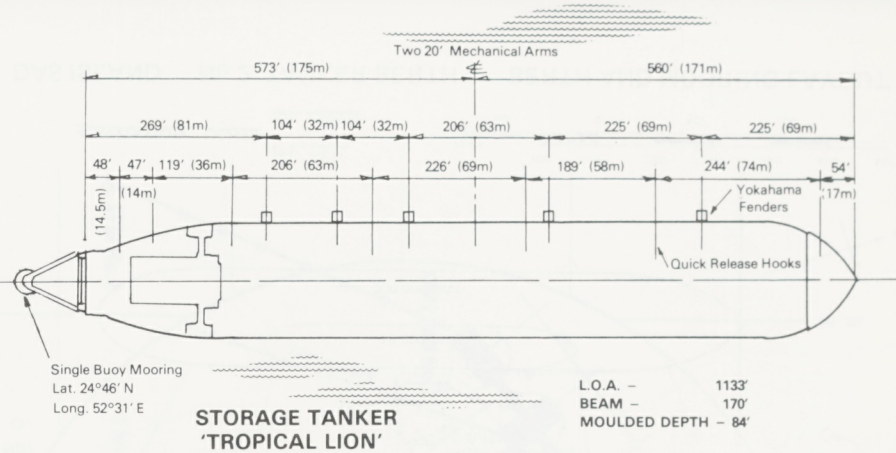


VENTSPILS

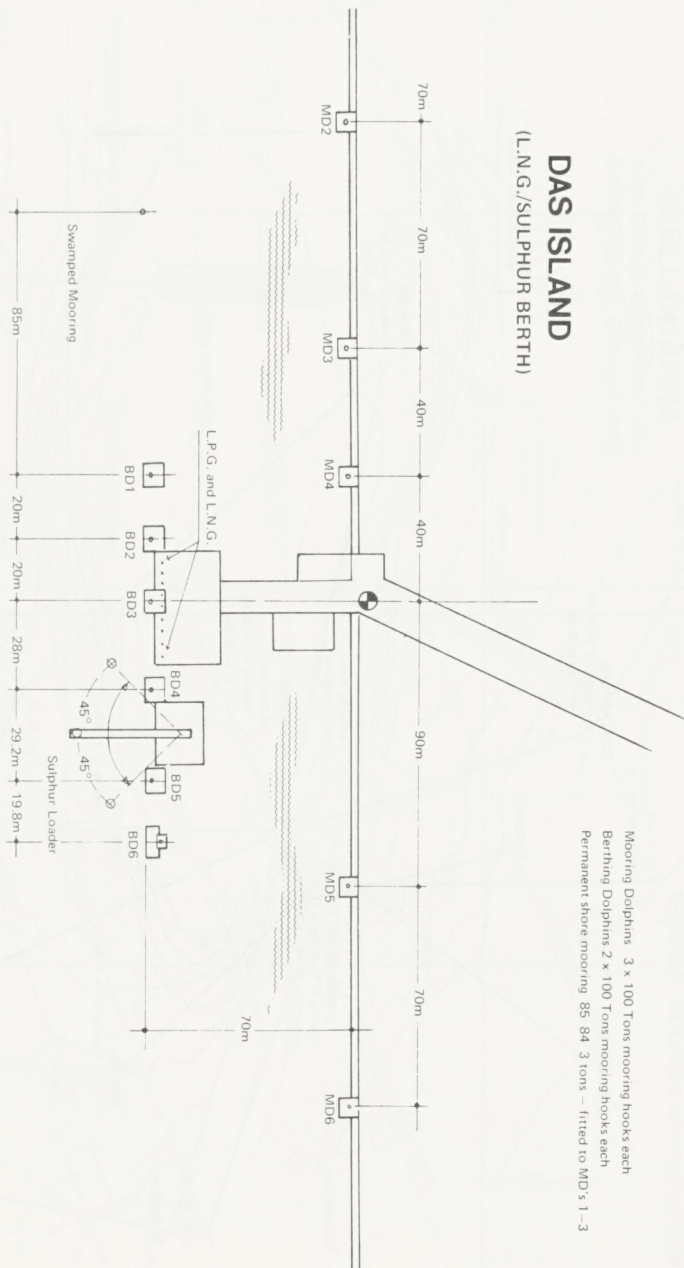




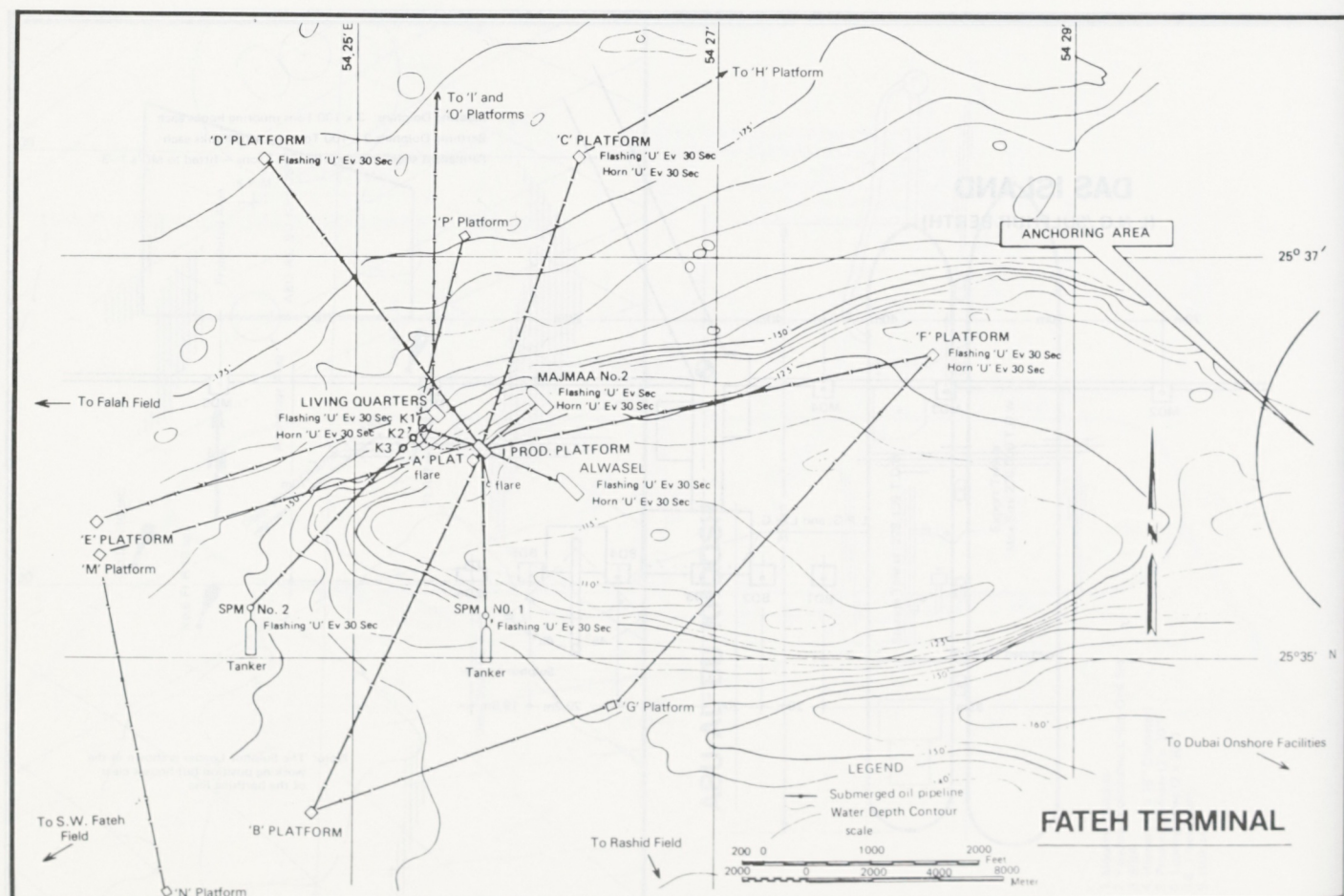
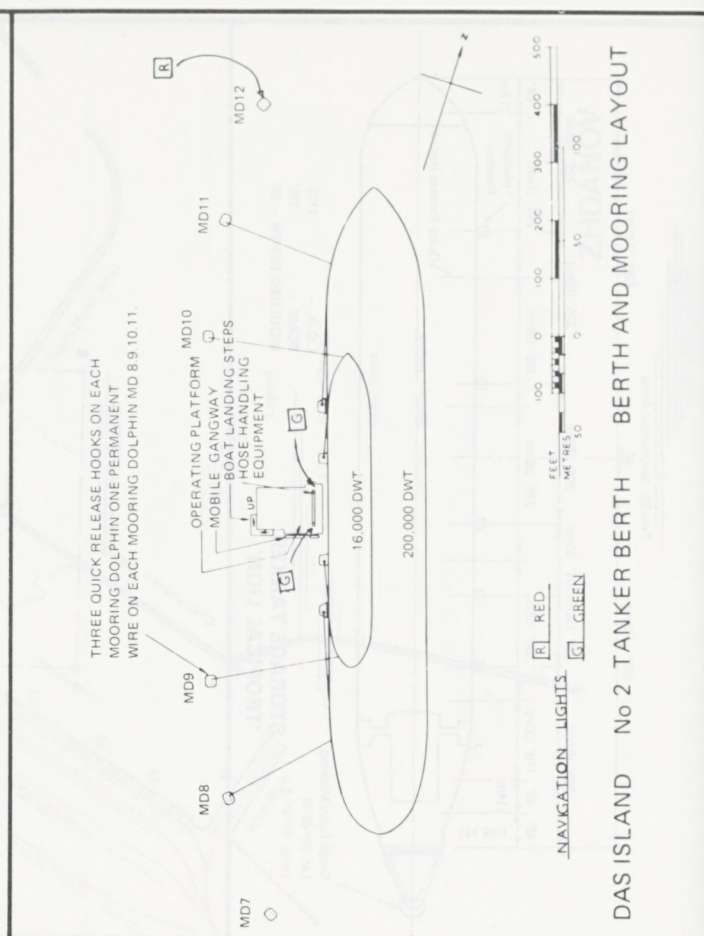
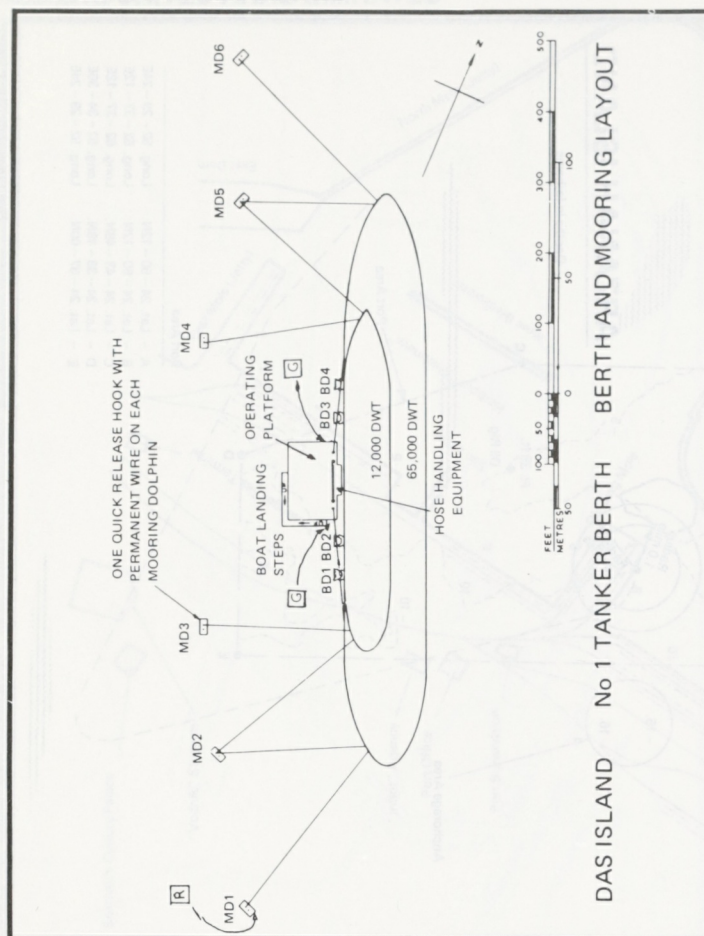




"Plan supplied by Ship's Master"



Note: The Sulphur Loader is shown in the working position but houses clear of the berthing line



The diagram illustrates a ship's mooring system. A central vertical oval represents the ship's hull. A horizontal line labeled "Sealine" passes through the middle of the hull. Above the hull, a dashed line labeled "Approach track" leads from the right towards the ship. A "Starboard anchor drop mark" is shown on this track. A "Ships anchor" is attached to the hull. A "Prevailing wind" arrow points from the top right towards the ship. To the left of the hull, a dashed line labeled "Transit beacons" leads away from the ship. A "Mooring buoy" is connected to the hull by a "Ships rope or wire". Below the hull, a "Wire from Buoy if required" connects to a "Buoy mooring chain", which then leads to "Wedge anchors".

TERMINAL MOORING ARRANGEMENTS

The diagram illustrates the mooring systems for four different berths (No. 1, No. 2, No. 3, and No. 4) along a coastline. Each berth is represented by a rectangular structure with multiple mooring points (black dots) and lines indicating the mooring system. The berths are arranged in a line from top-left to bottom-right.

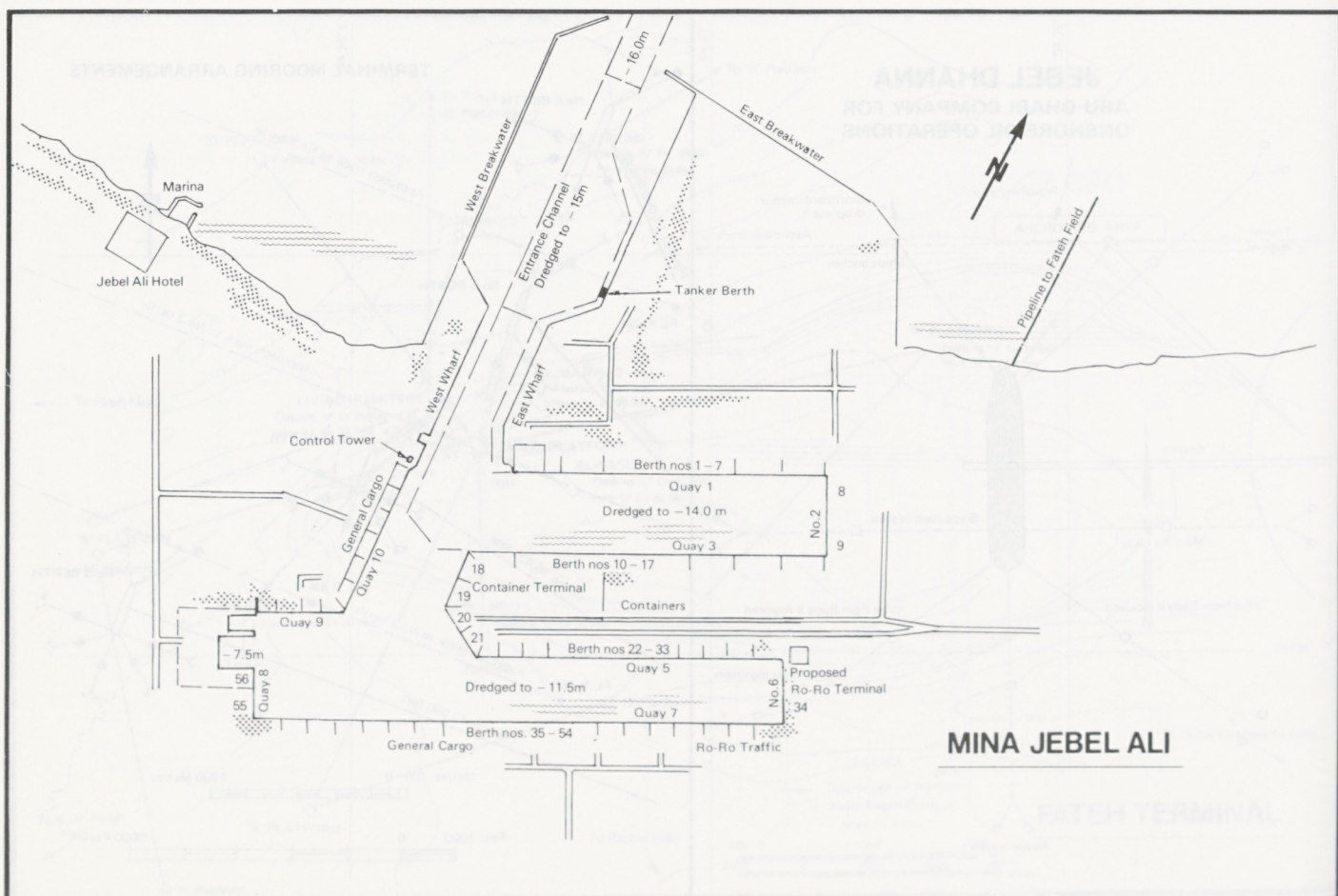
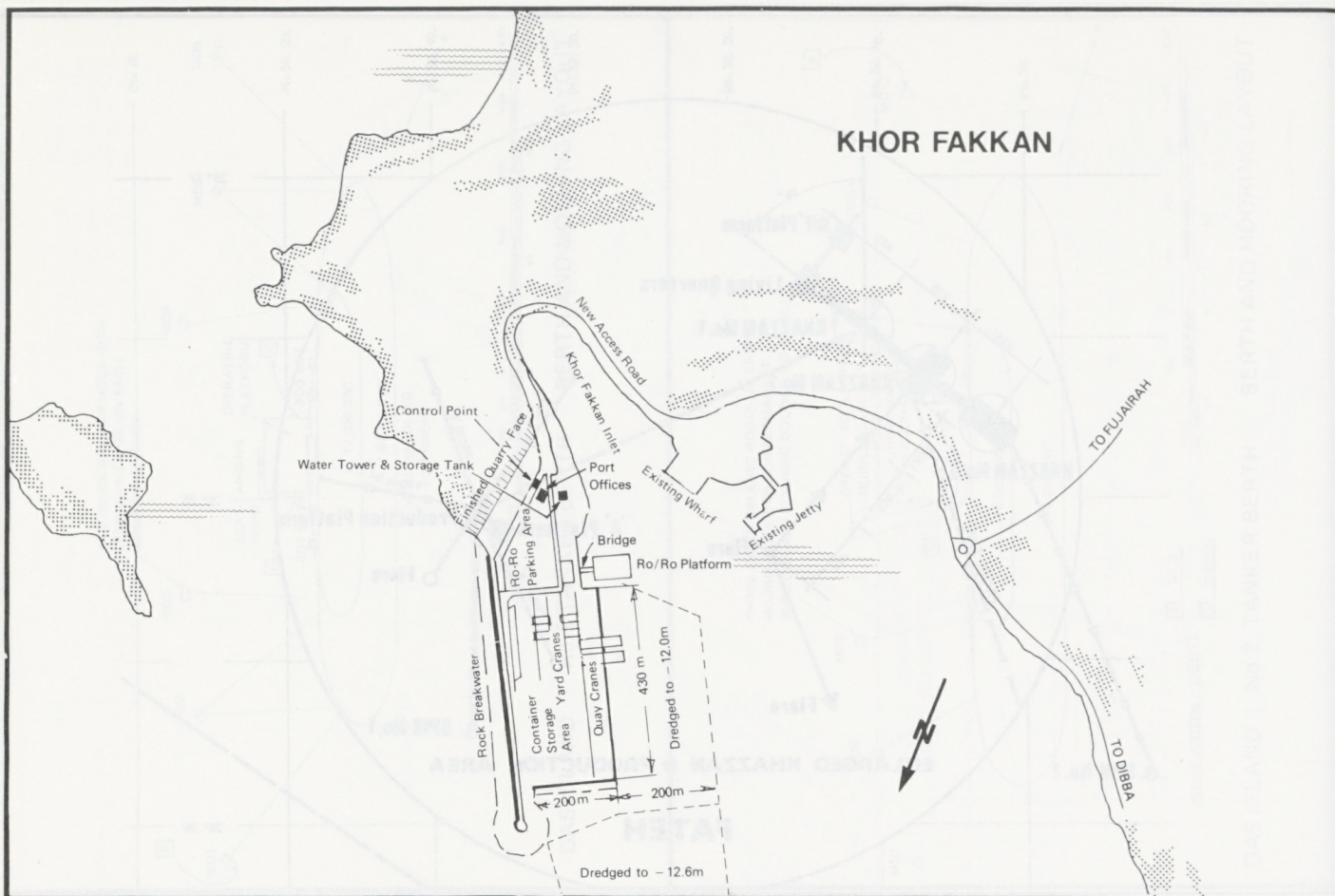
Berth Details:

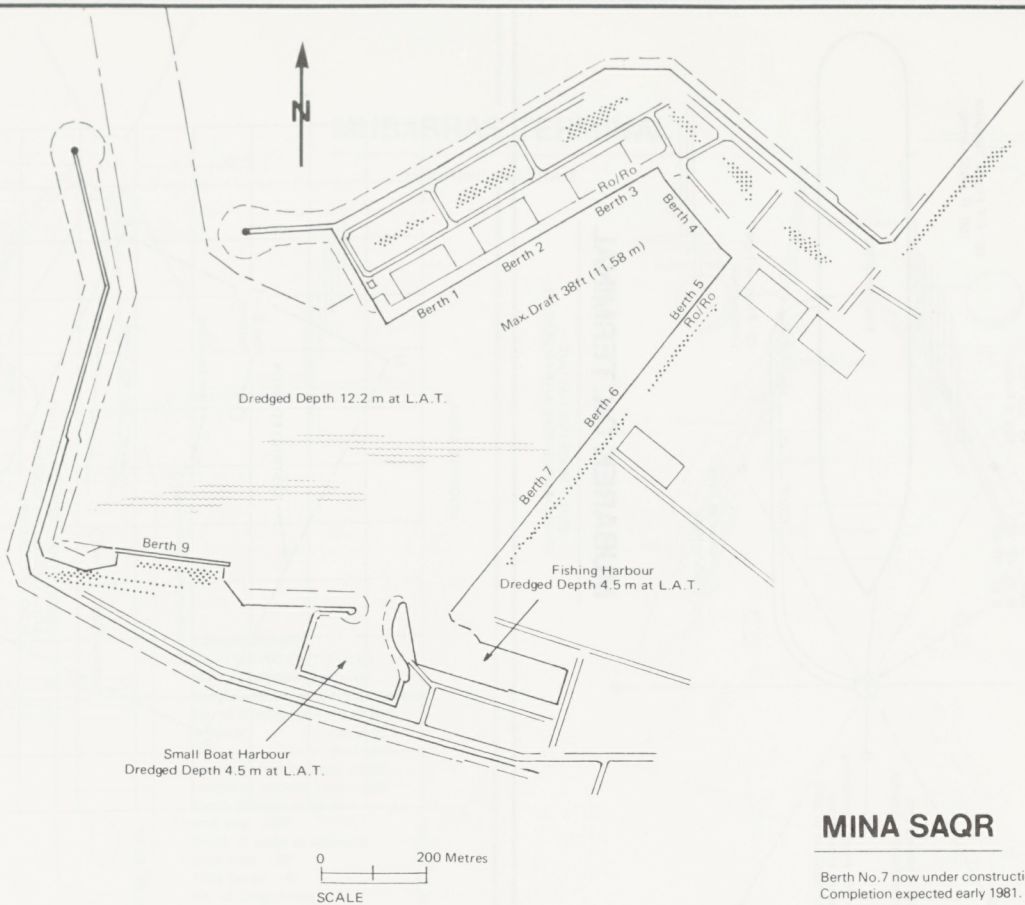
- No. 4 BERTH:** Located at the top left. Pipeline 17,000 feet. FL.R. 4M.
- No. 1 BERTH:** Located below No. 4. Pipeline 16,269 feet. FL.R. 4M.
- No. 2 BERTH:** Located below No. 1. Pipeline 16,427 feet. FL.R. 4M.
- No. 3 BERTH:** Located at the bottom right. Pipeline 19,000 feet. FL.R. 4M.

Approach Tracks: Dashed lines labeled "Approach track to No. 1 berth", "Approach track to No. 2 berth", and "Approach track to No. 3 berth" show the navigation routes for each berth.

Scale and Orientation:

- North Arrow:** Points upwards, labeled "N".
- Metres Scale:** 0 to 1000 Metres.
- Feet Scale:** 0 to 5000 Feet.





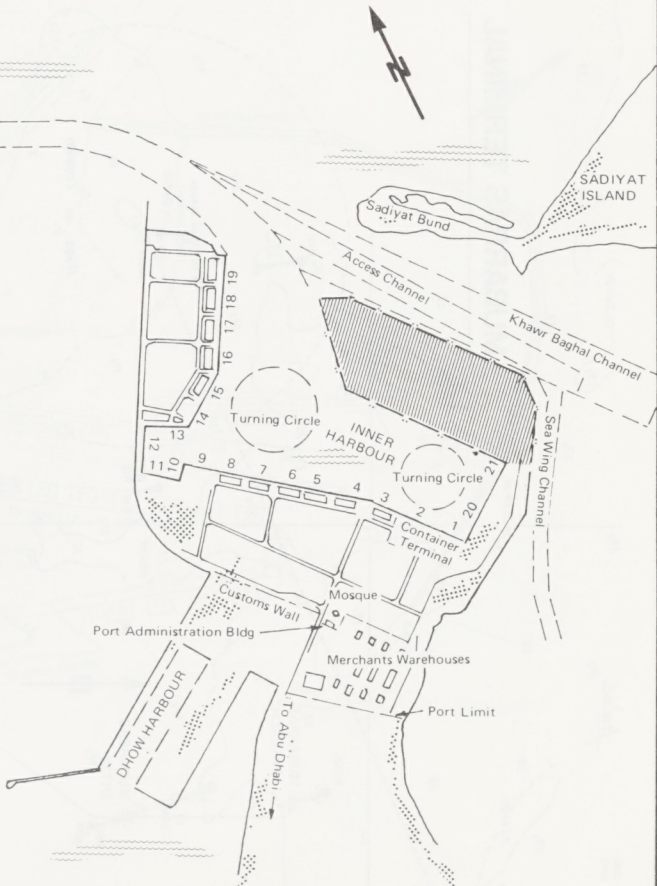
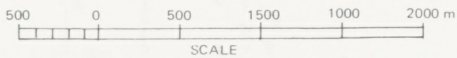
MINA SAQR

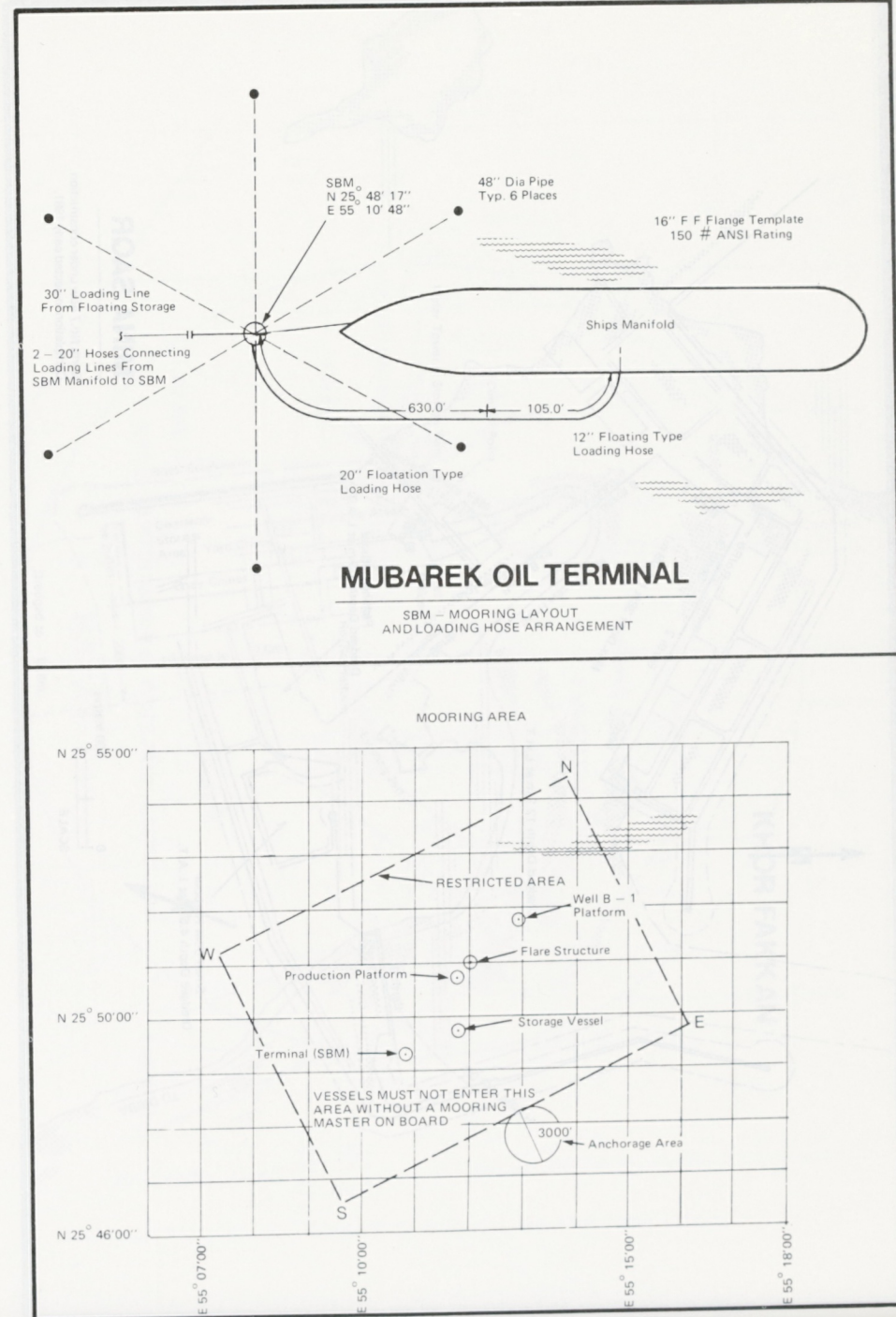
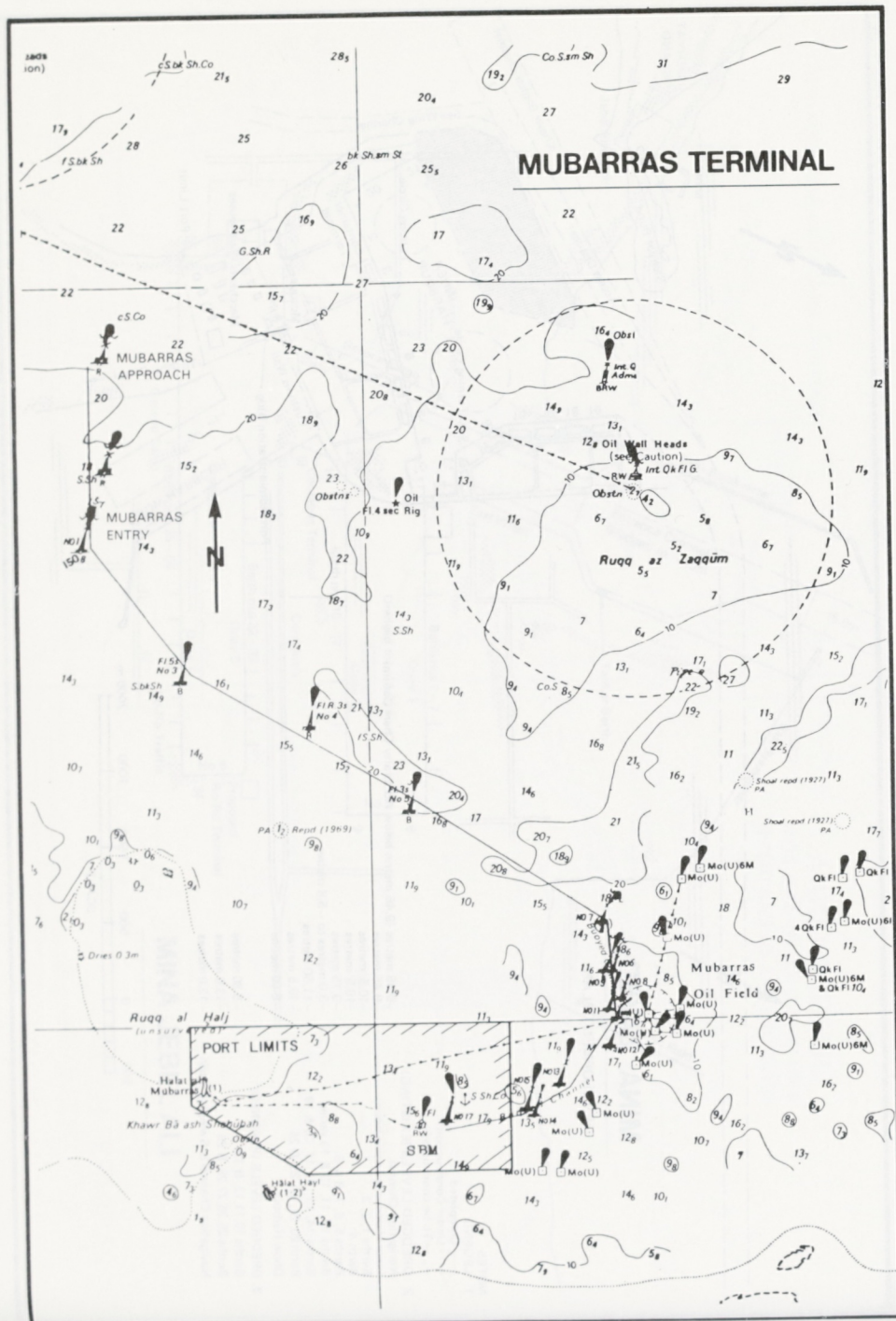
Berth No. 7 now under construction.
Completion expected early 1981.

MINA ZAYED

DEVELOPMENT PLAN

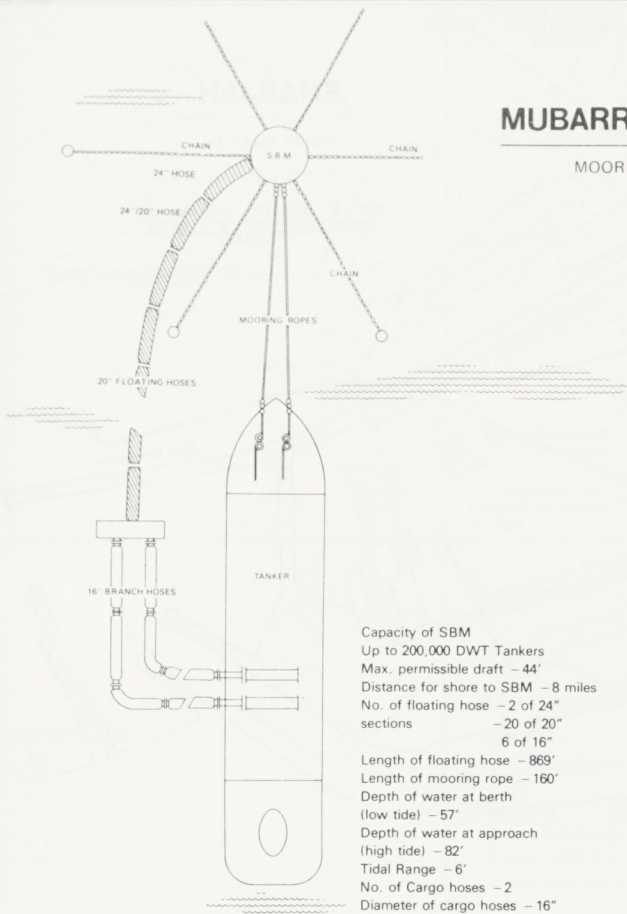
- NOTES
- 1 LEGEND
- Completed
 - - - Under Construction
 - ... To be constructed
- 2 DREDGED LEVELS (EXISTING)
- Navigation Channel: -9.45 metres (9.45 metres below Admiralty Chart Datum)
- Inner Harbour swinging basin: -9.45 metres
- Berths 1, 2, 3: -10.5 metres
- Berth 4: -10.5 metres
- Berths 5, 6, 7, 8 & 9: -9.75 metres
- Berths 10, 11, 12 & 13 varies: -3.0 metres to -5.8 metres
- Berths 14, 15, 16, 17, 18 & 19: -11.50 metres
- Berth 20, 21, 22, 23, & 24: -10.5 metres
- Dhow Harbour: -6.00 metres
- 3 DREDGED LEVELS (PLANNED)
- Berths 10, 11, 12, & 13: -5.80 metres
- Berths 25, 26, 27, 28, & 29: -13.0 metres
- Navigation Channel & Swinging Basin: -13.0 metres



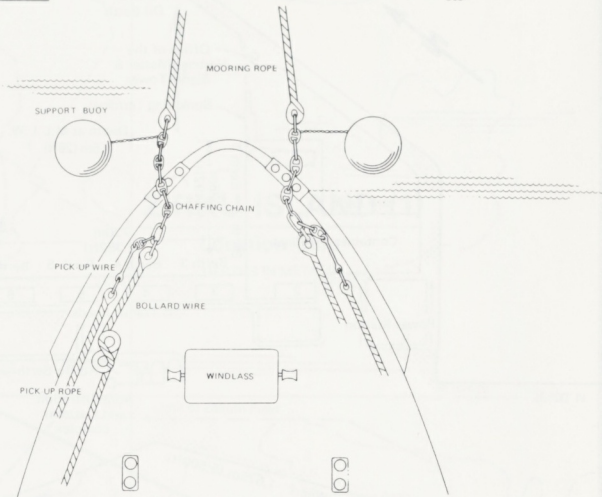


MUBARRAS TERMINAL

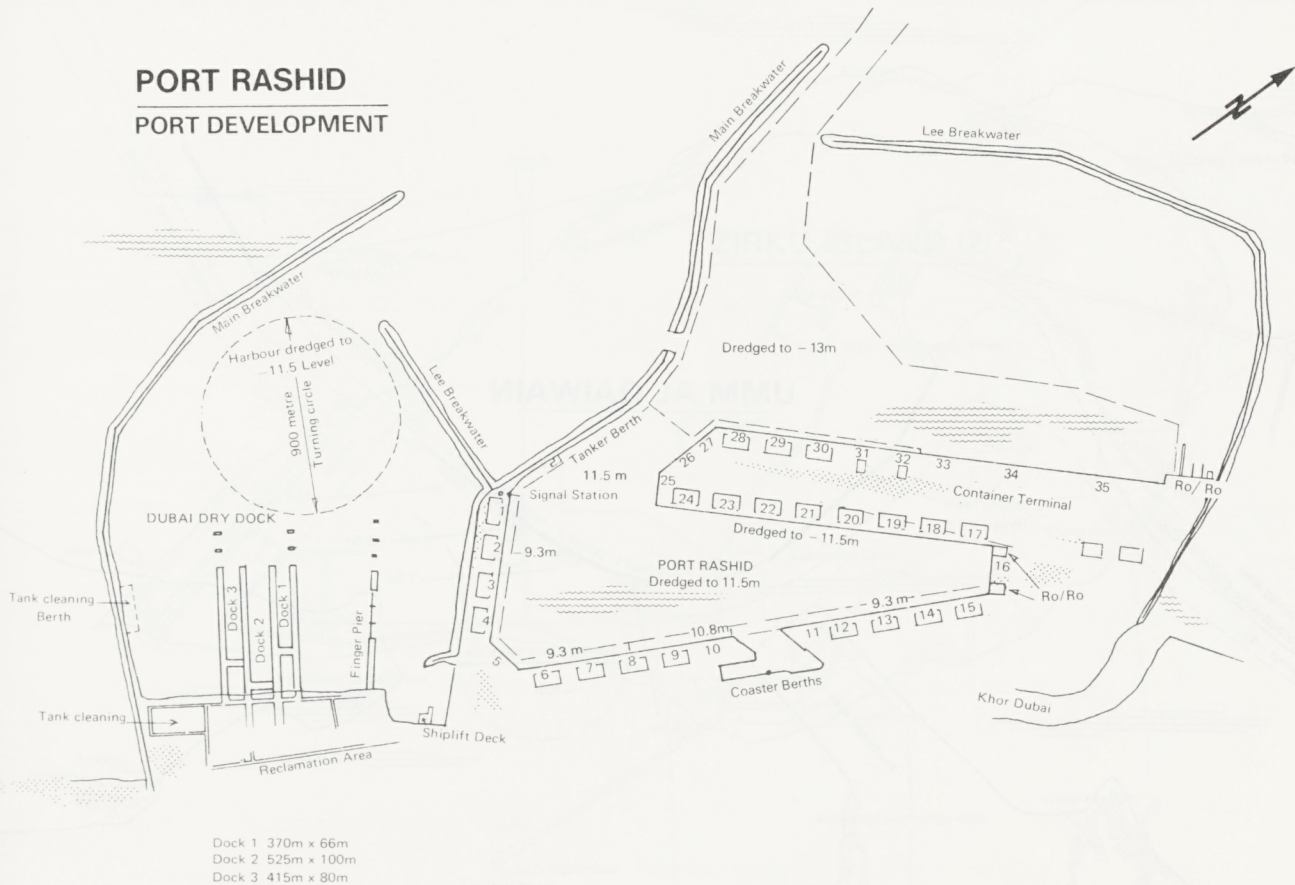
MOORING DIAGRAM



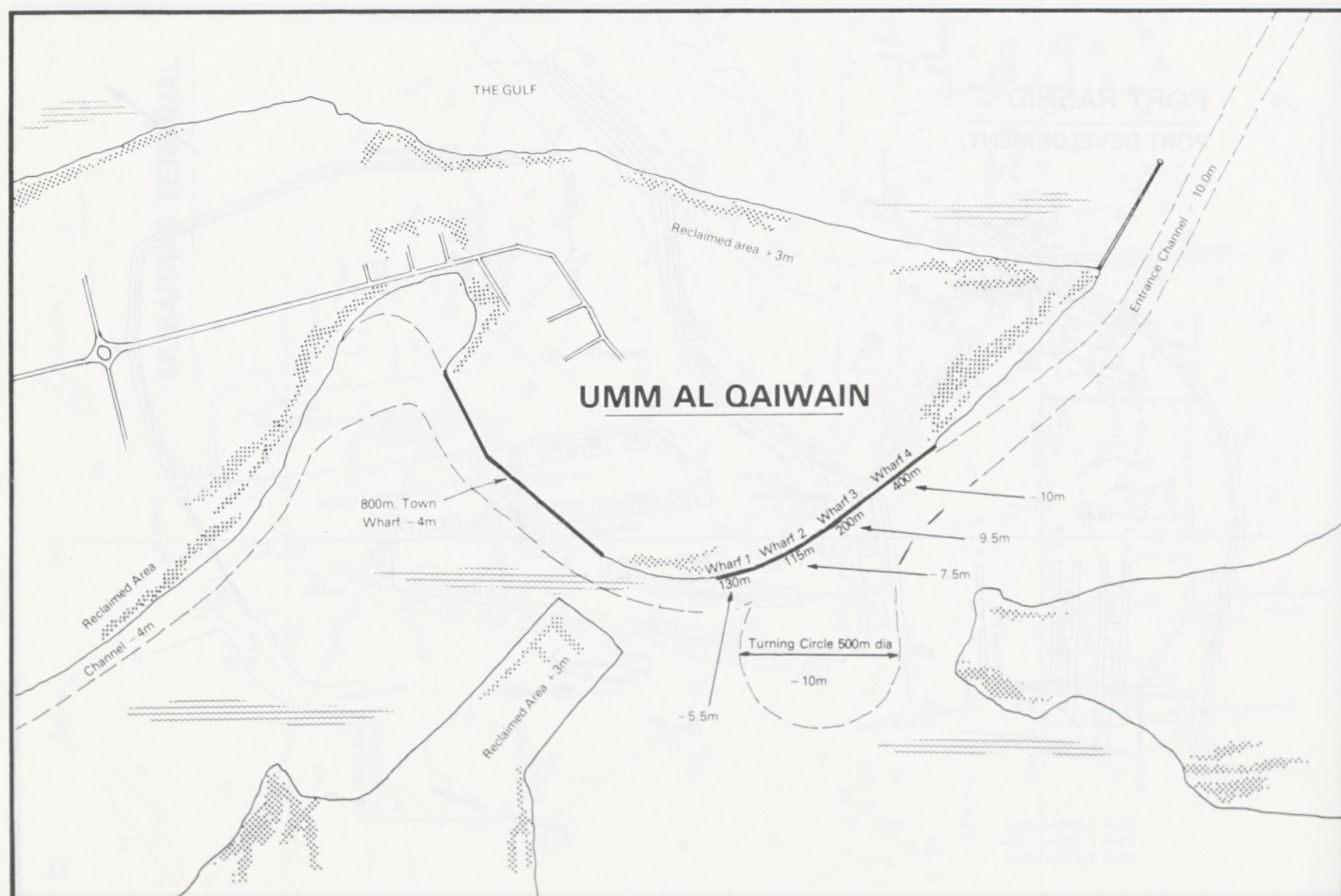
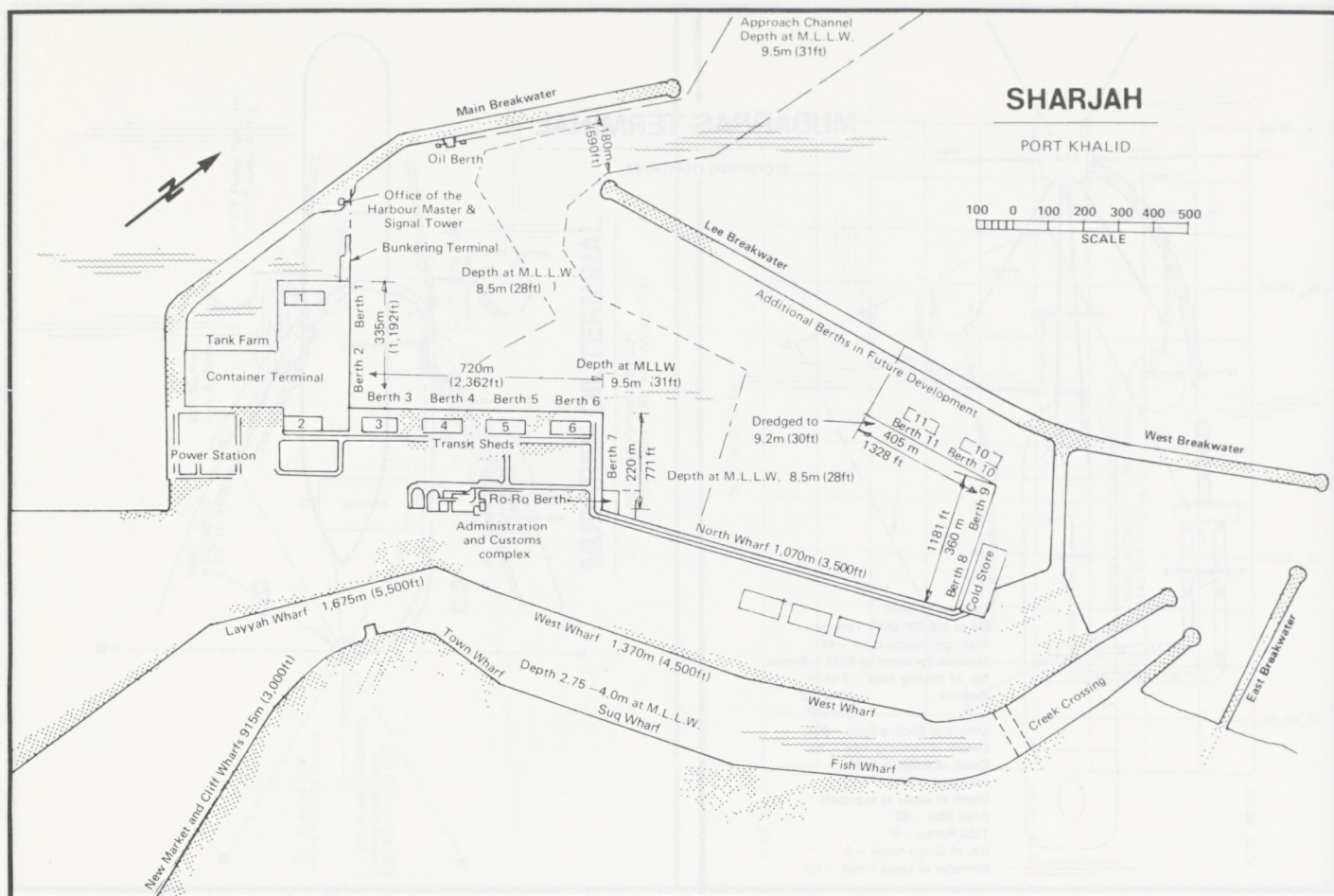
Capacity of SBM
Up to 200,000 DWT Tankers
Max. permissible draft – 44'
Distance for shore to SBM – 8 miles
No. of floating hose – 2 of 24"
 – 20 of 20"
 6 of 16"
Length of floating hose – 869'
Length of mooring rope – 160'
Depth of water at berth
(low tide) – 57'
Depth of water at approach
(high tide) – 82'
Tidal Range – 6'
No. of Cargo hoses – 2
Diameter of cargo hoses – 16"

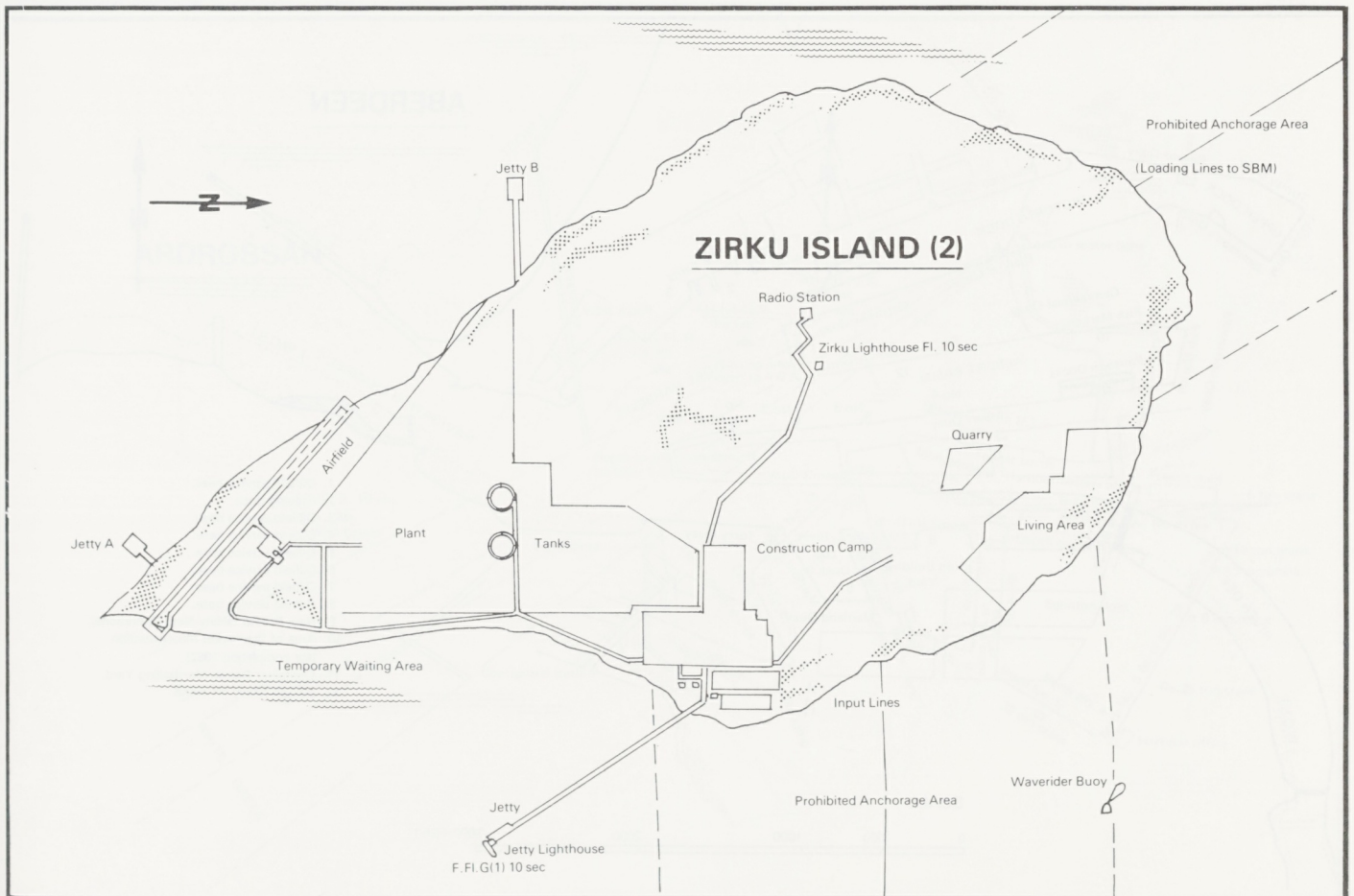
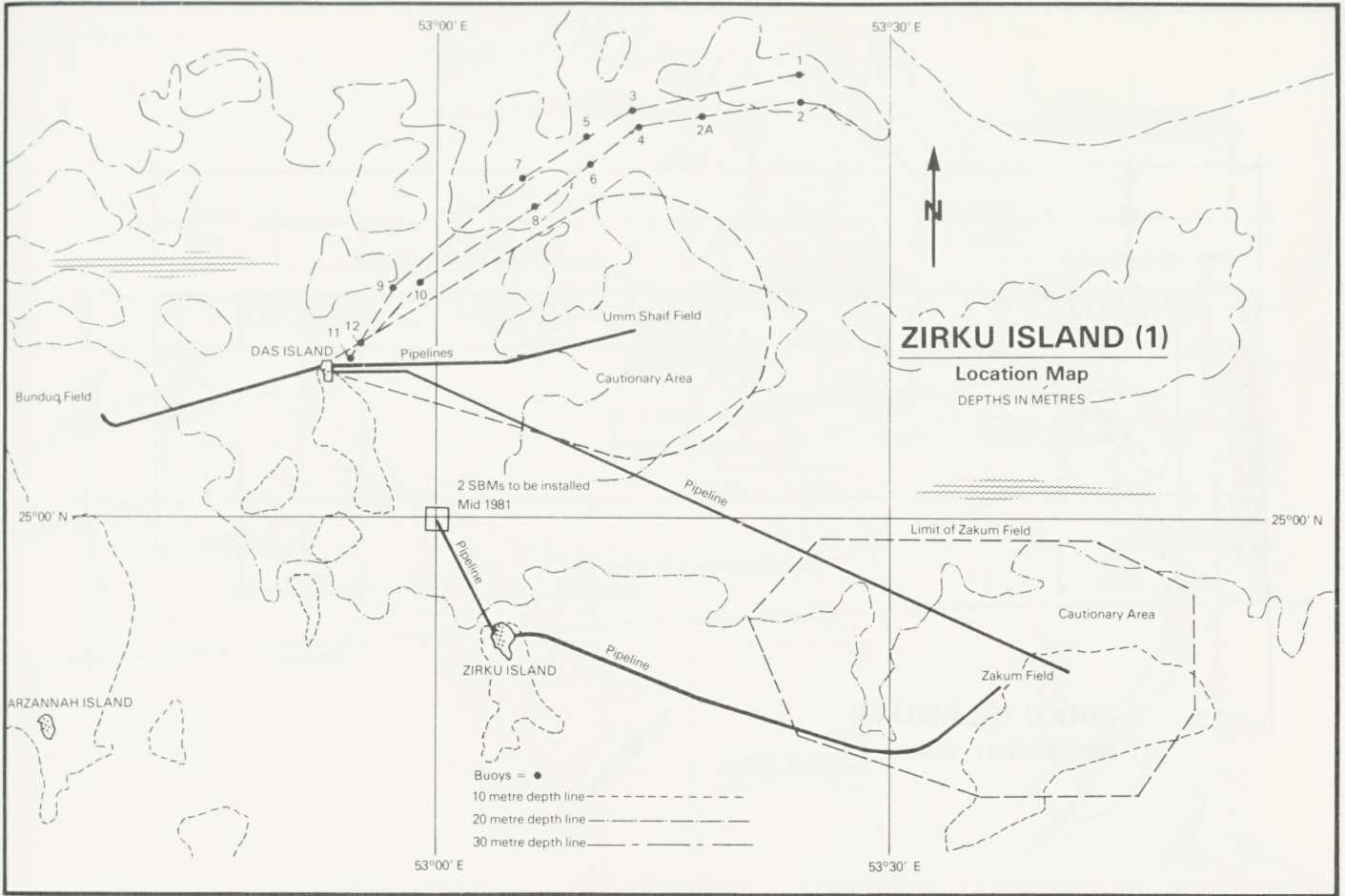


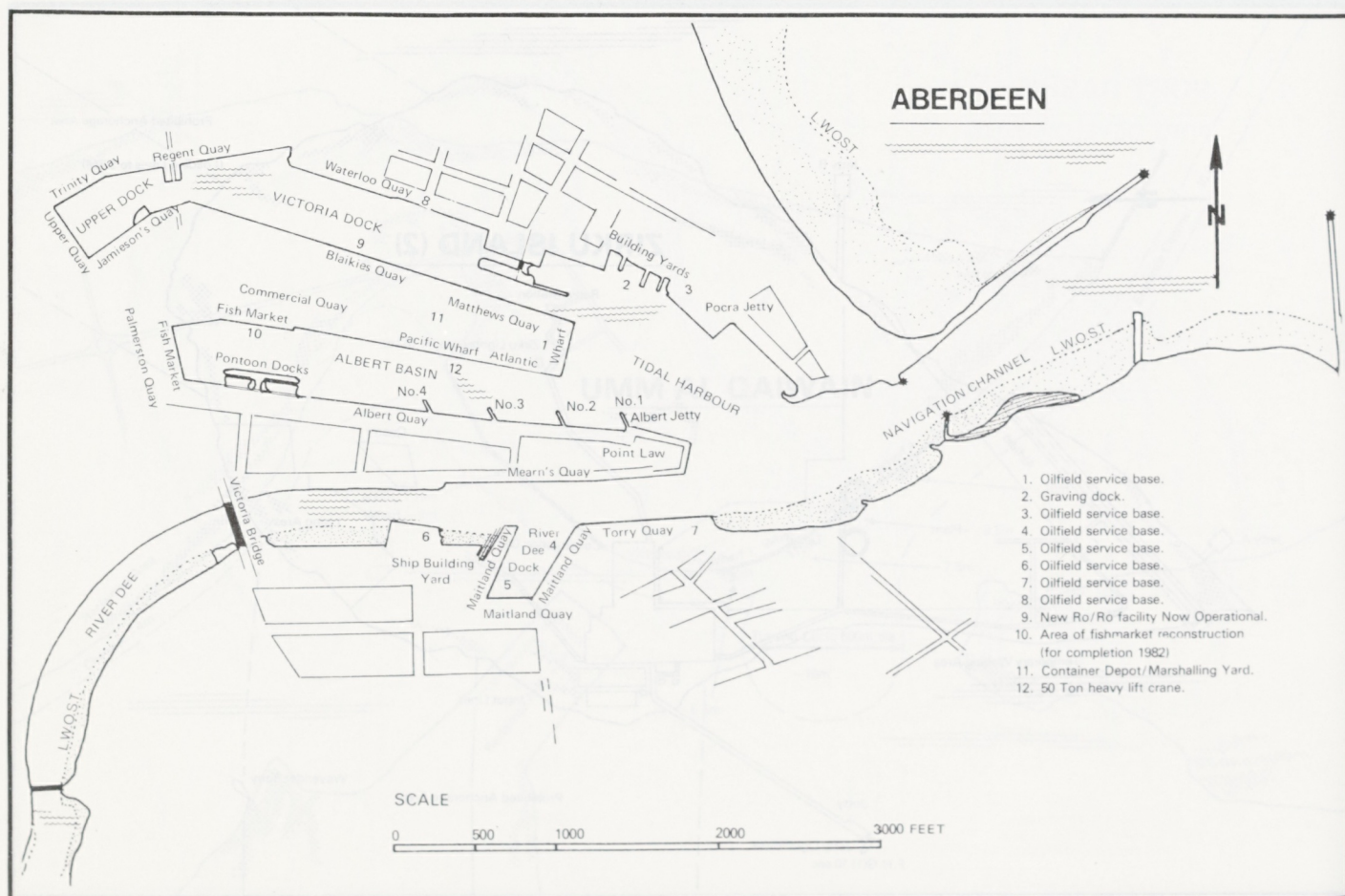
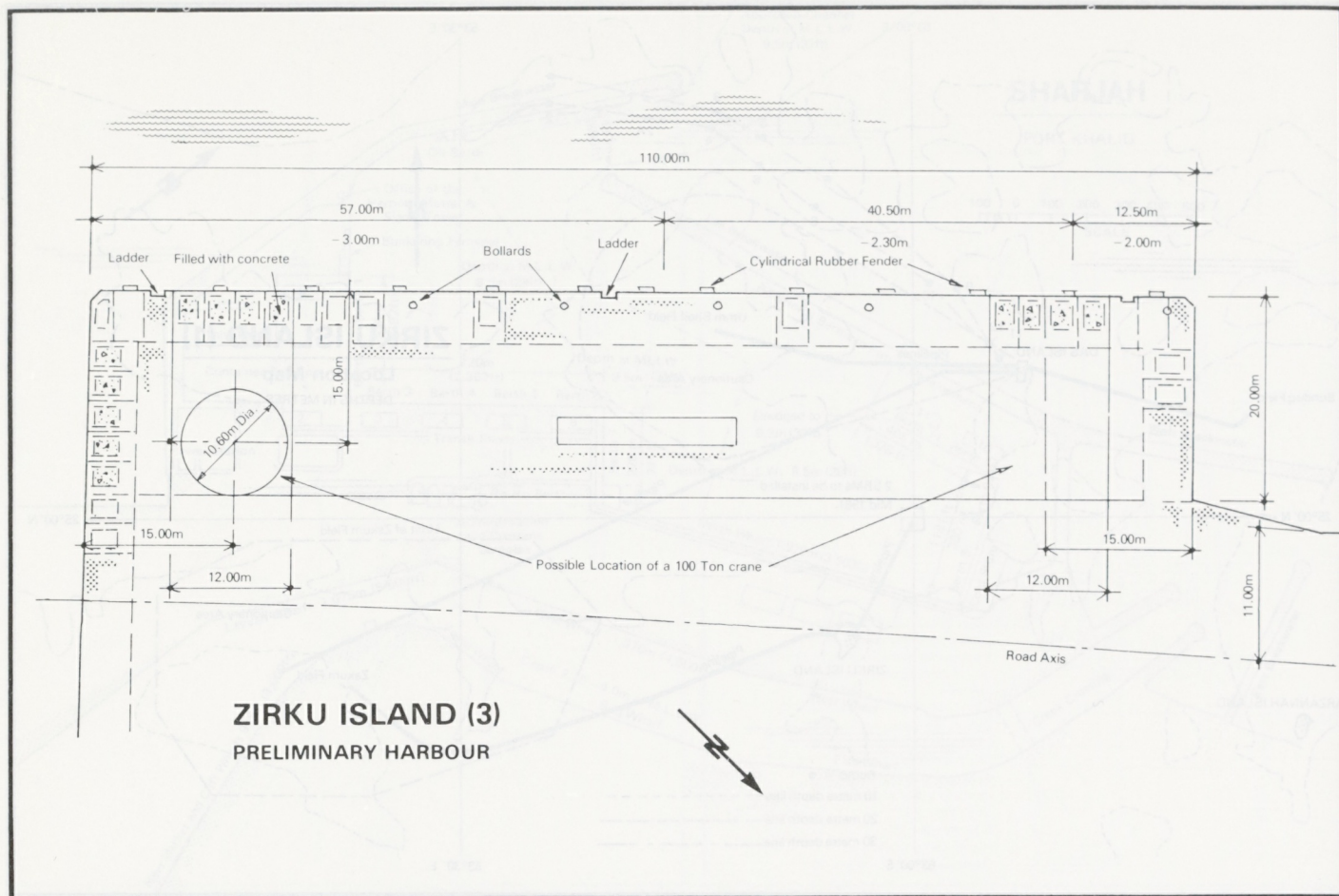
PORT RASHID
PORT DEVELOPMENT

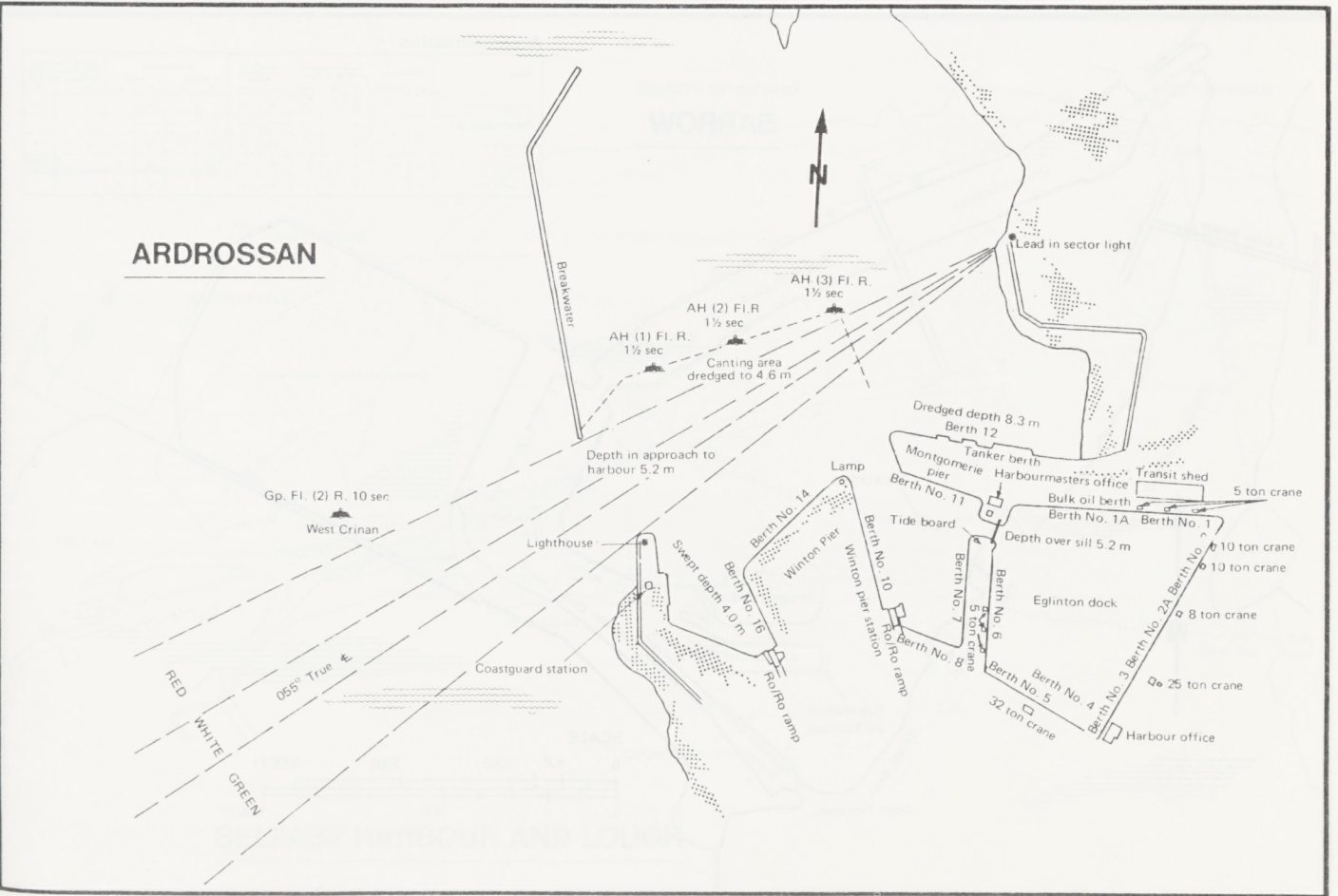
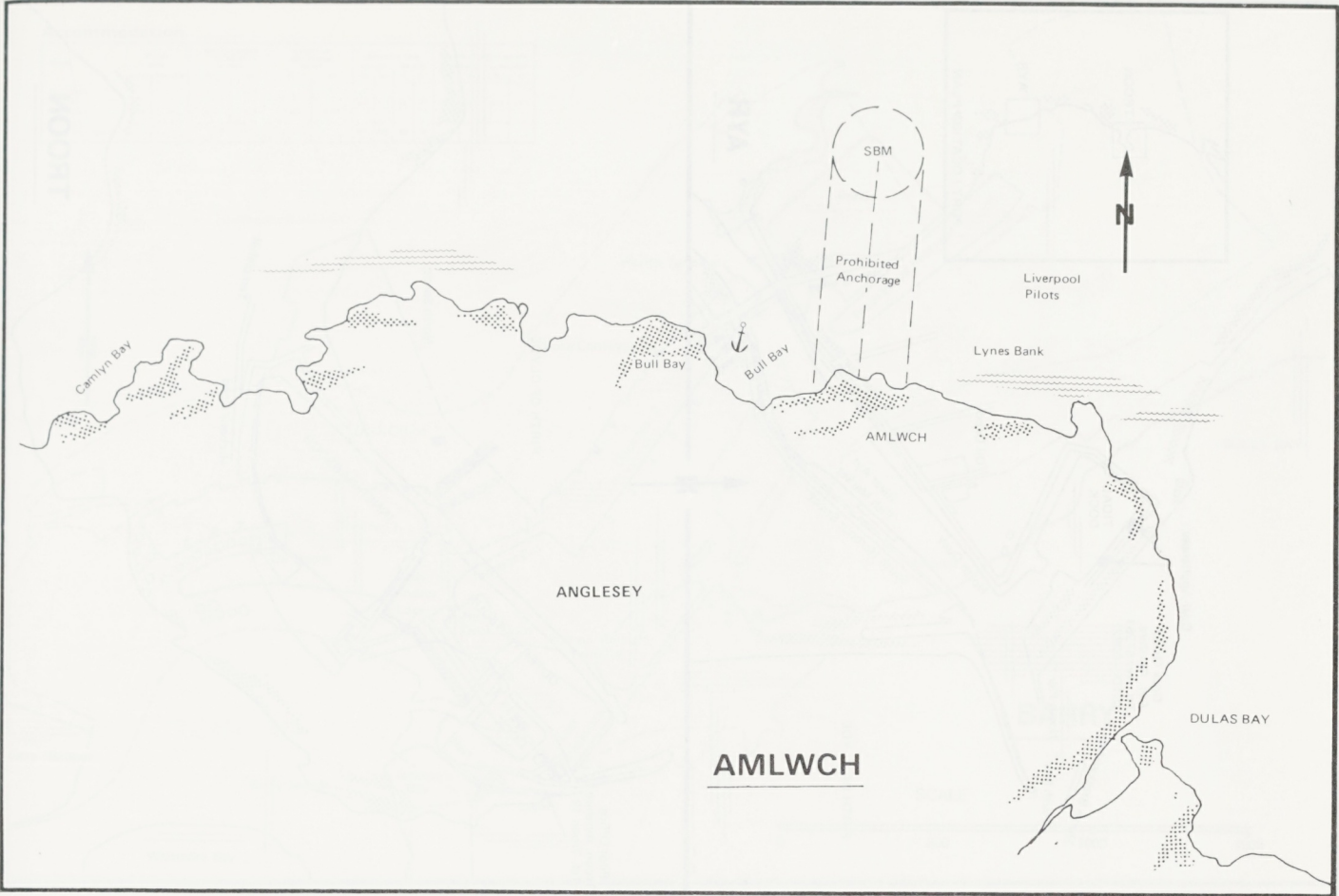


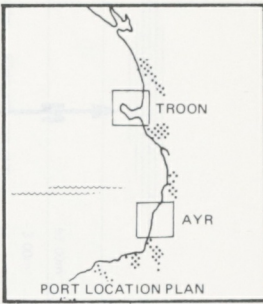
Dock 1 370m x 66m
Dock 2 525m x 100m
Dock 3 415m x 80m











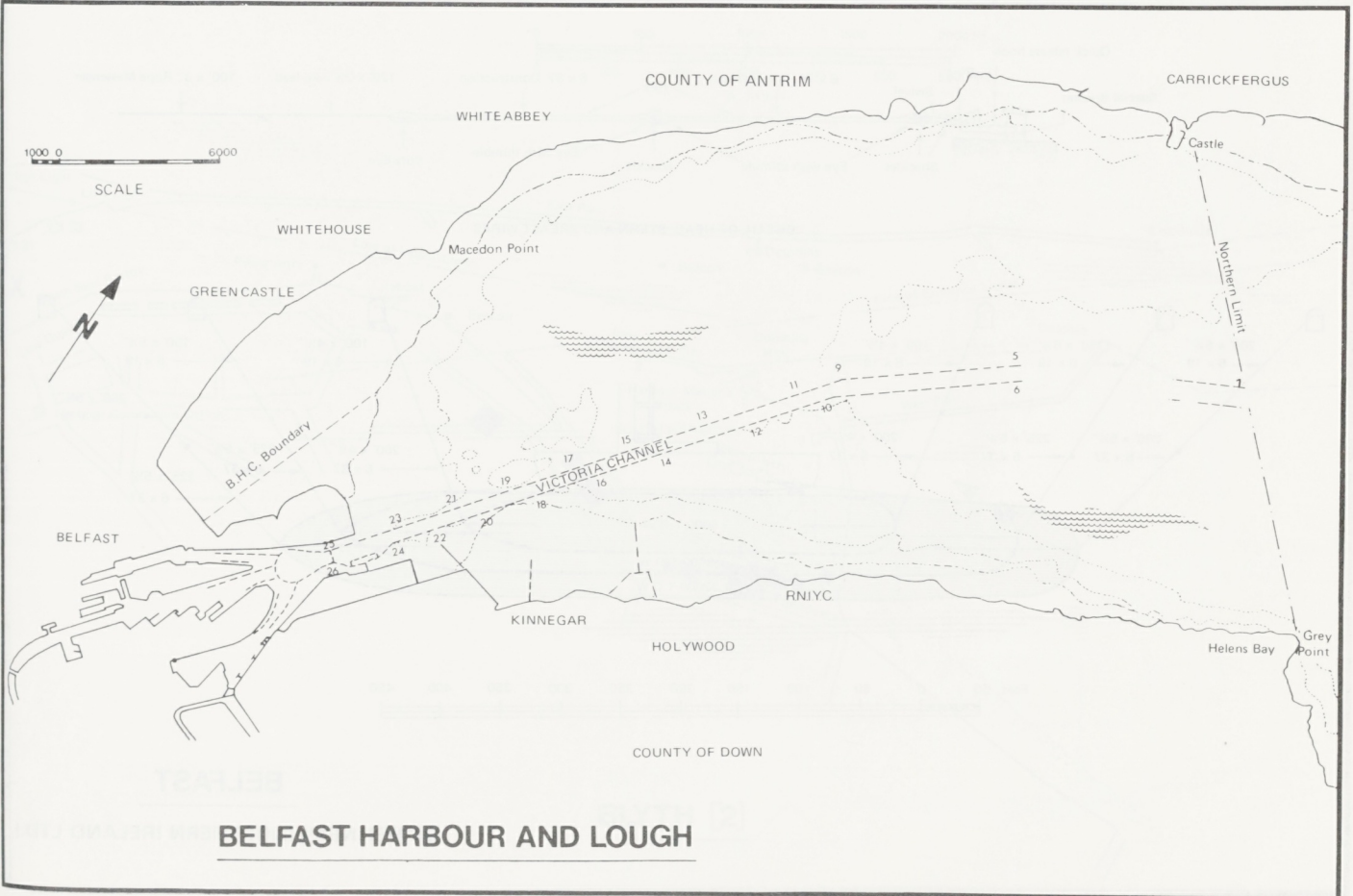
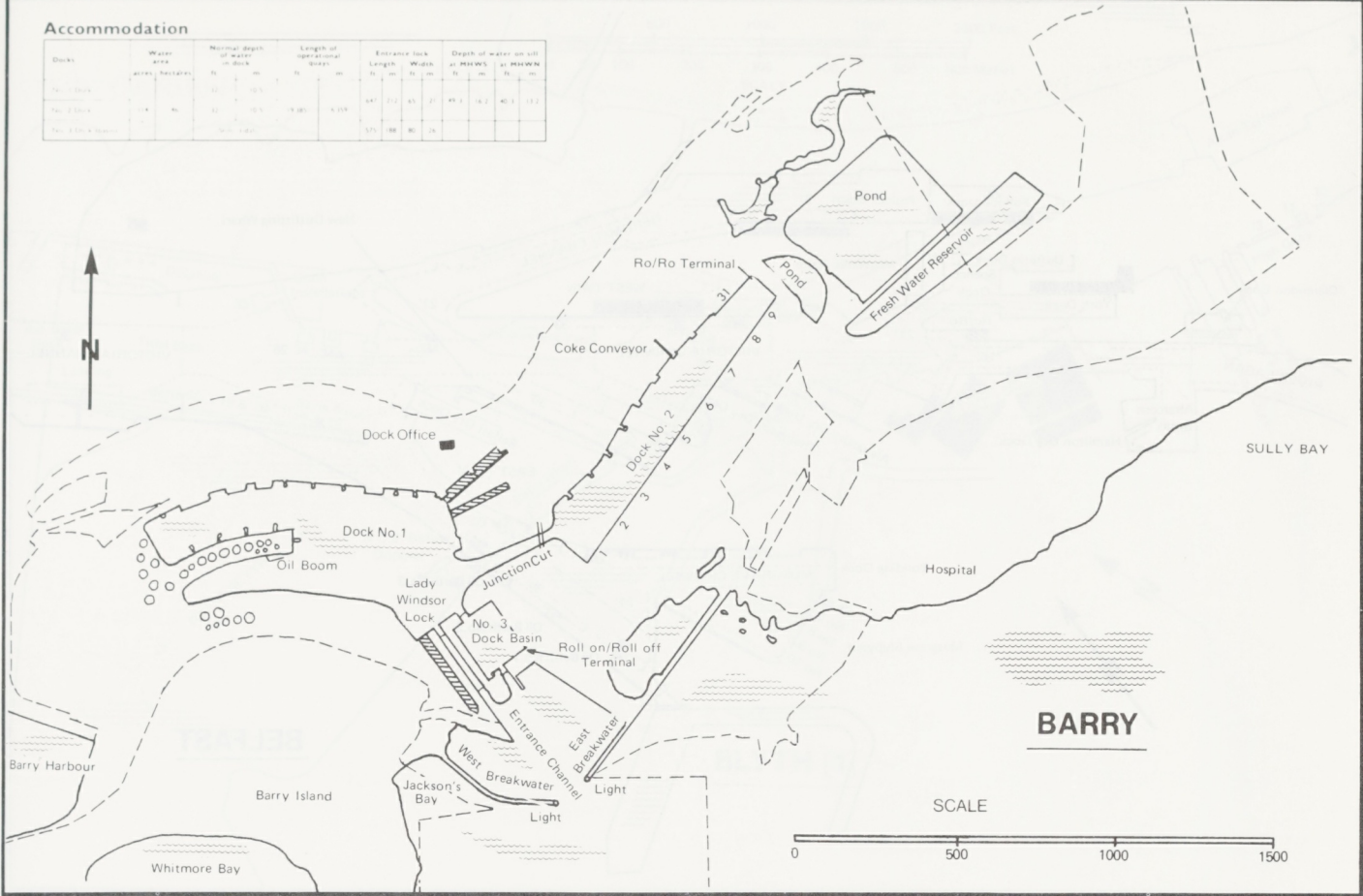
Accommodation									
Dates	Where area	Number days of work or tasks	Length of work (hours) per day	Exercise task		Type of operation		Type of operation	
				to	from	width	height	distance	height
Exercise Date No. 1	5	1-5	1	1000	542	-500	50	24	3
Exercise Date No. 2	12	1-12	1	1000	912	-500	50	24	3
Exercise Date No. 3	16	12-5	2	7-3	1000	912	100	24	3
Exercise Date	18	1-18	3	8-6	1200	100	200	24	3
Exercise Date	22	1-22	3	8-6	1400	140	100	50	3
Exercise Date	28	1-28	3	8-6	1200	742	100	24	3

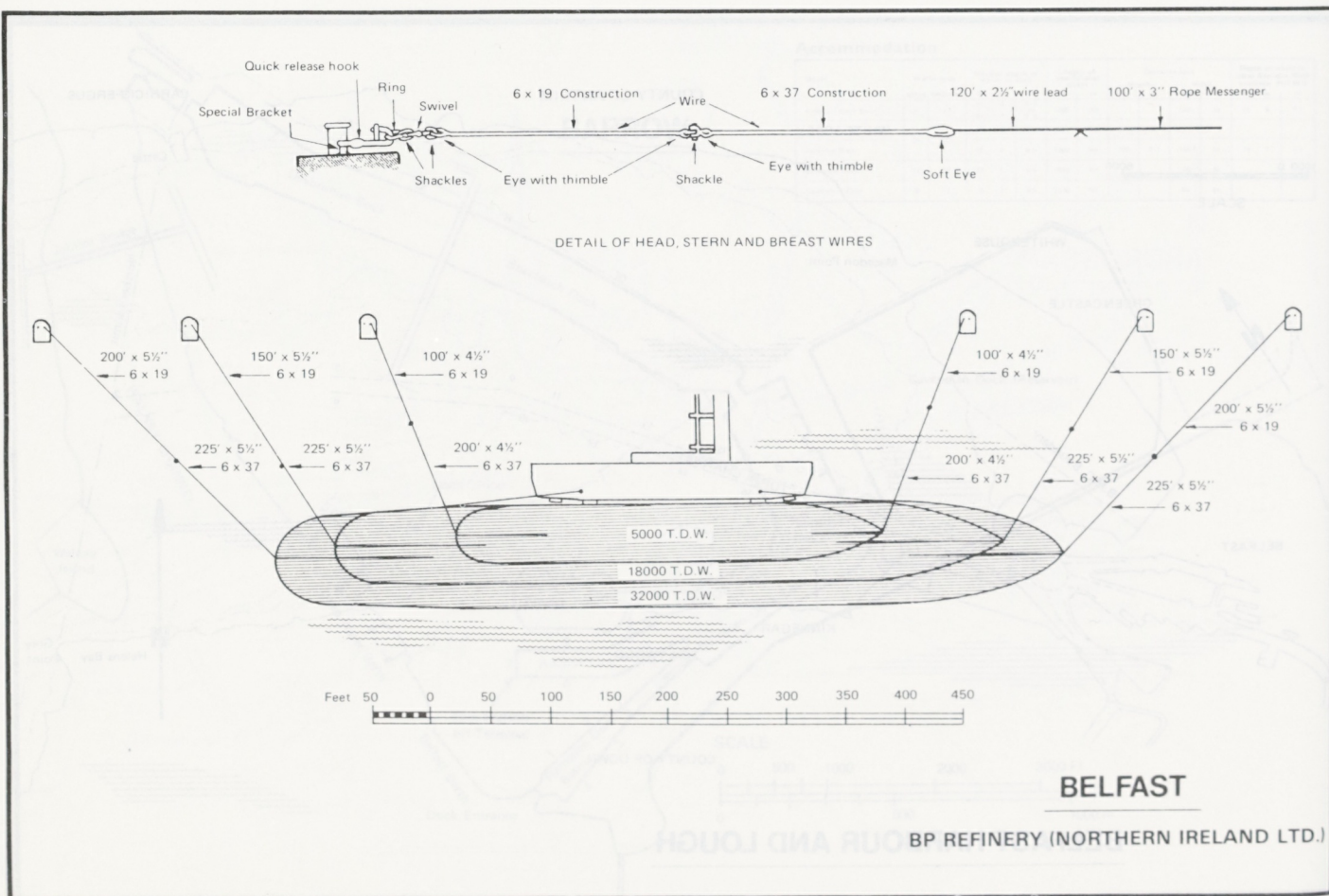
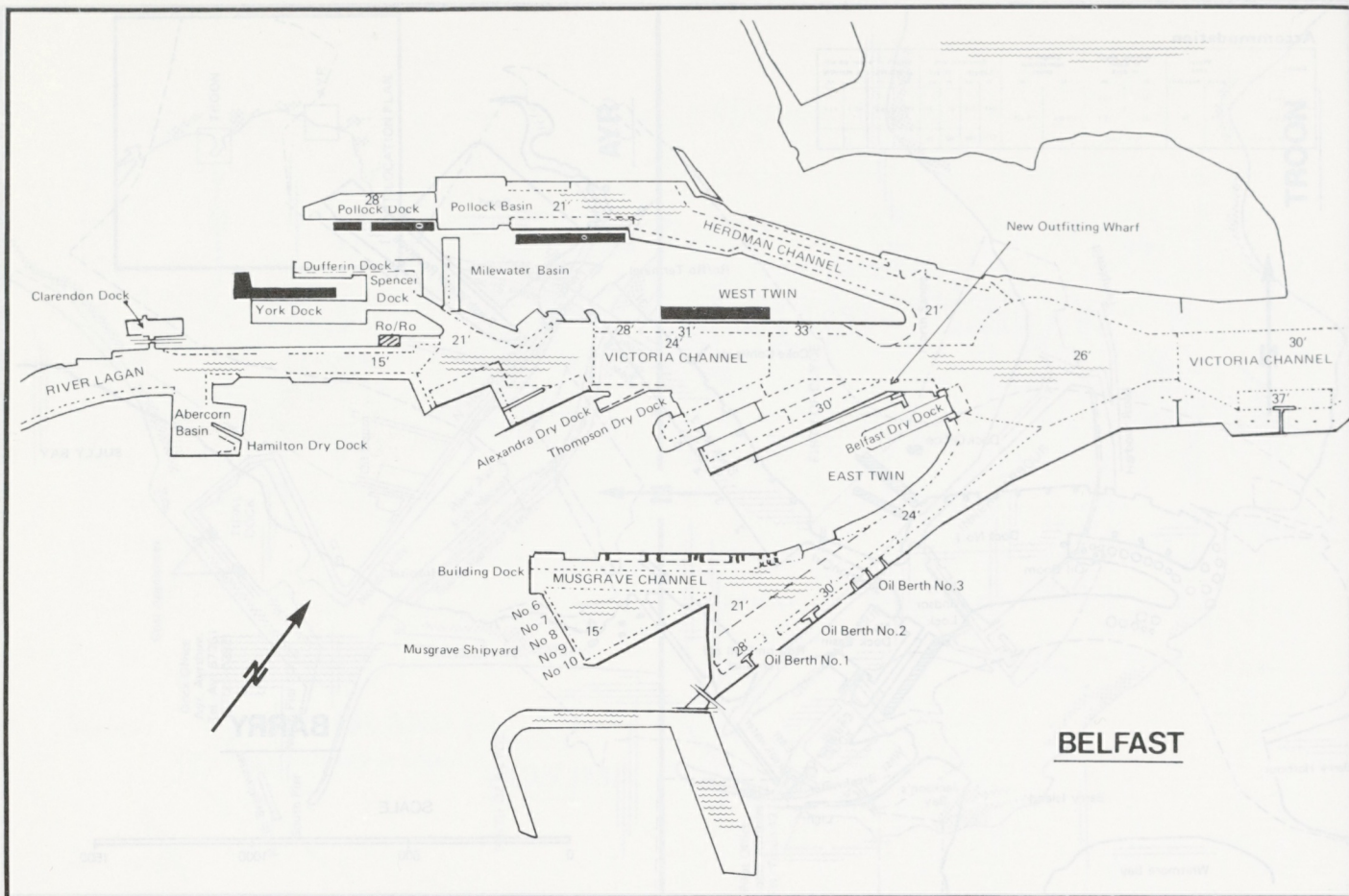
Ducks	Water area acres	Number of ducks per acre			Number of ducks per 1000 sq ft			Ducks in water at 1000 sq ft			Ducks in water at 1000 sq ft		
		1000	2000	3000	1000	2000	3000	1000	2000	3000	1000	2000	3000
Reservoir Duck Farm	6	2.5	10	15	100	150	200	10	24	3	7.5		
Arroyo San Juan	24	0	7.5	100	912								
Reservoir Duck	56	22.5	26	3	1000	100	212	200	24	3	7.5		
Reservoir Duck	12	0	26	3	8.6	1865	161	100	24	3	7.5		
Drainage Duck	55	12	26	3	8.5	1206	742	661	24				

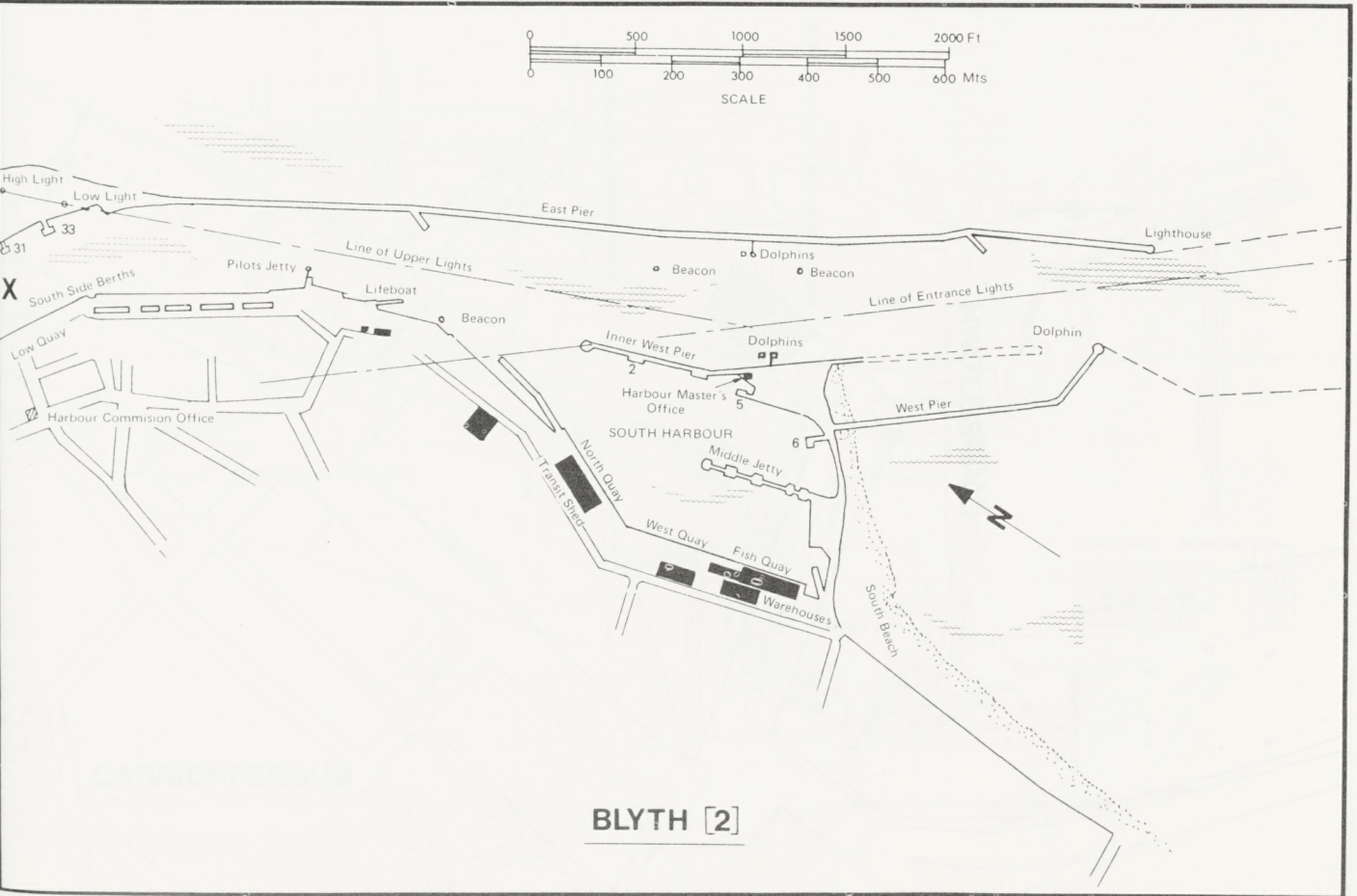
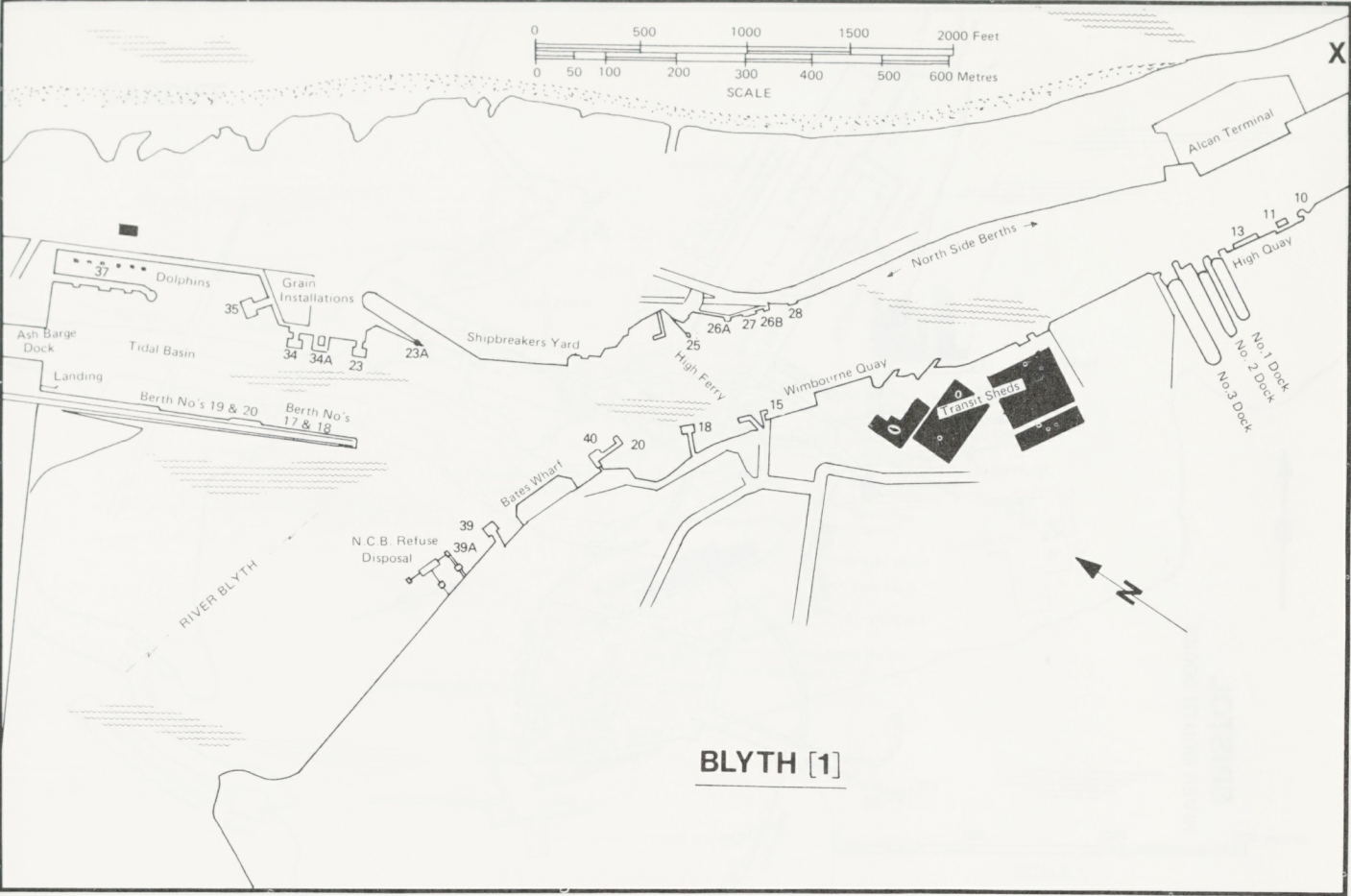


Accommodation

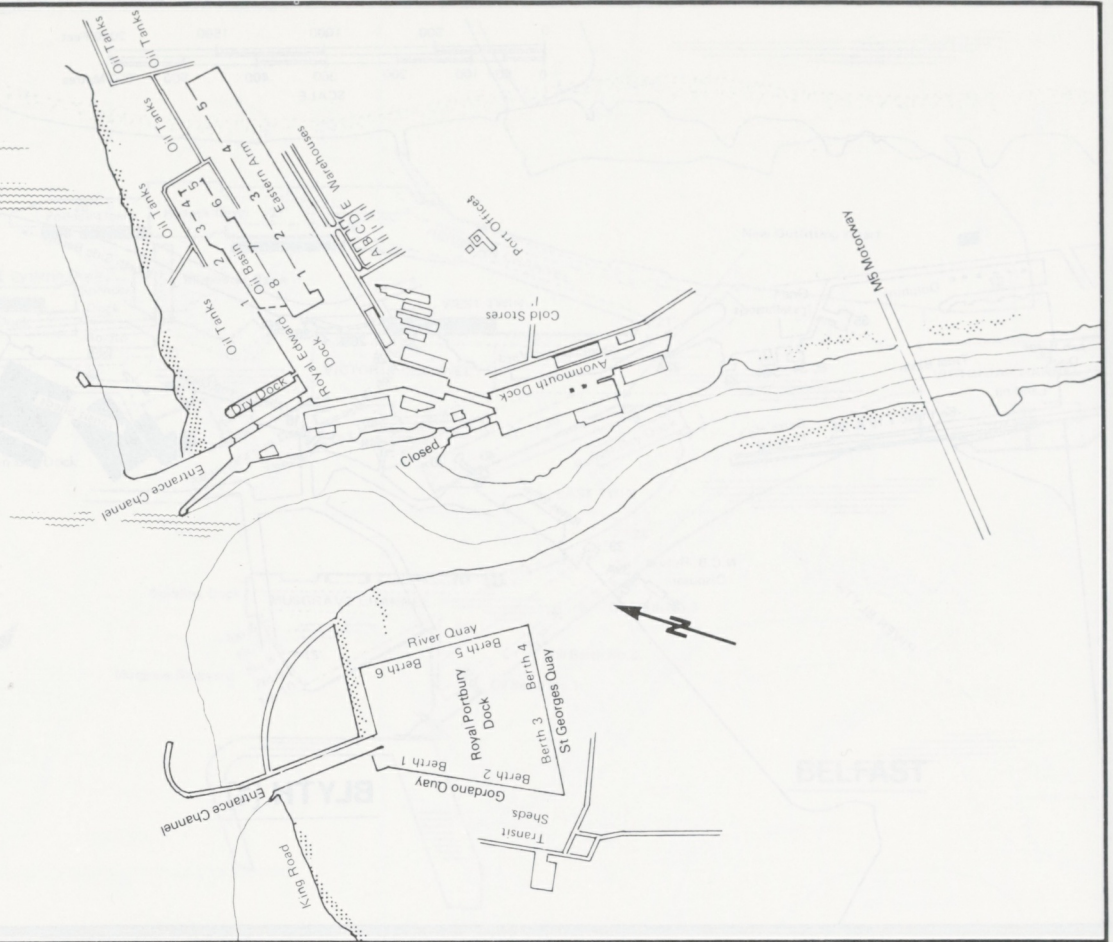
Docks	Water area acres Hectares	Normal depth of water in dock		Length of operational basins		Entrance lock		Depth of water on sill at HIGH TIDE	
		ft	m	ft	m	Length ft m	ft m	ft m	ft m
No. 1 Dock	14	40	12.2	10.5		647	212	45	13.7
No. 2 Dock	14	40	12.2	10.5	19.05	5.19			
No. 3 Dock & Basins	14	40	12.2	10.5		575	176	40	12.2



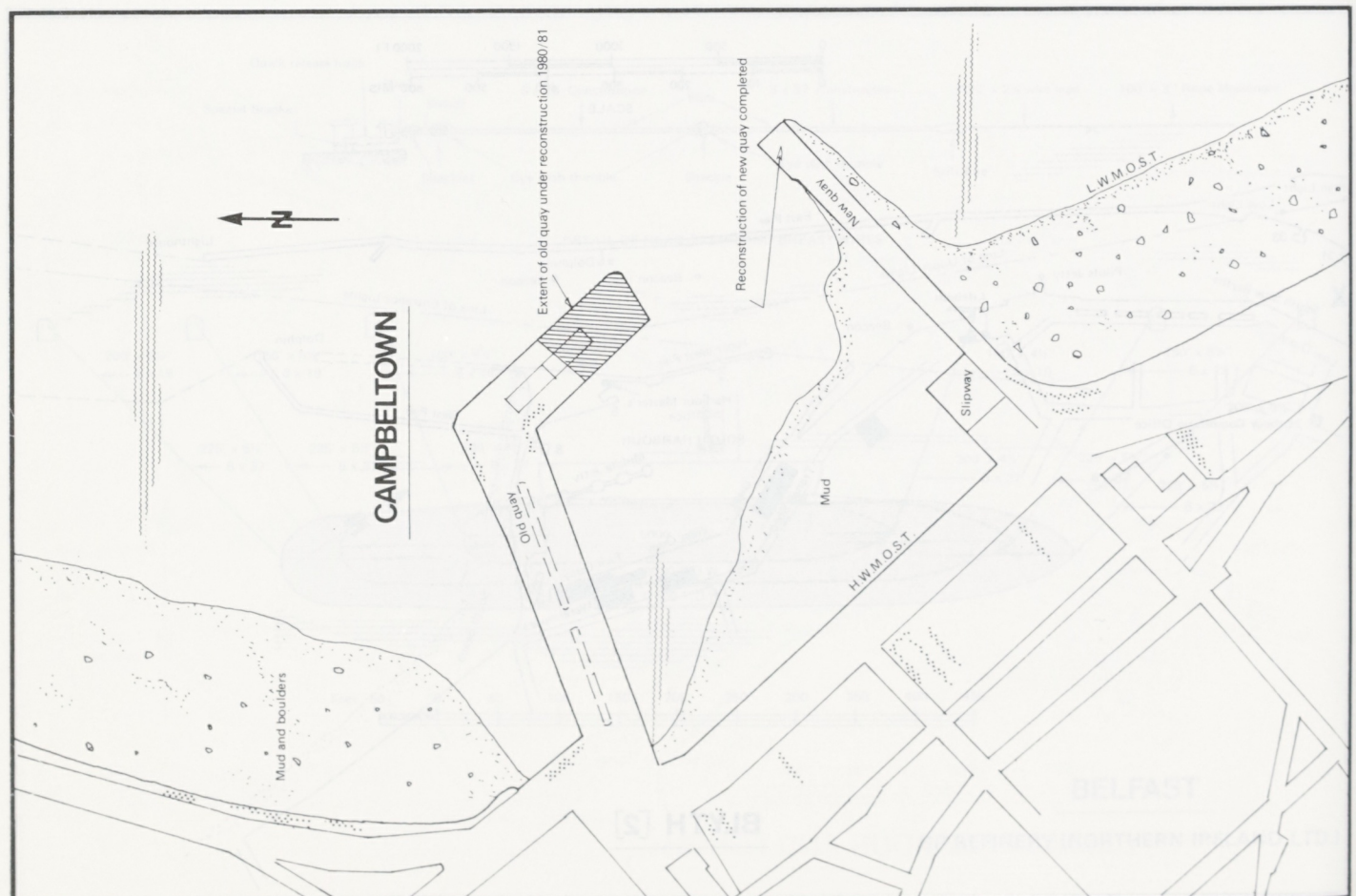




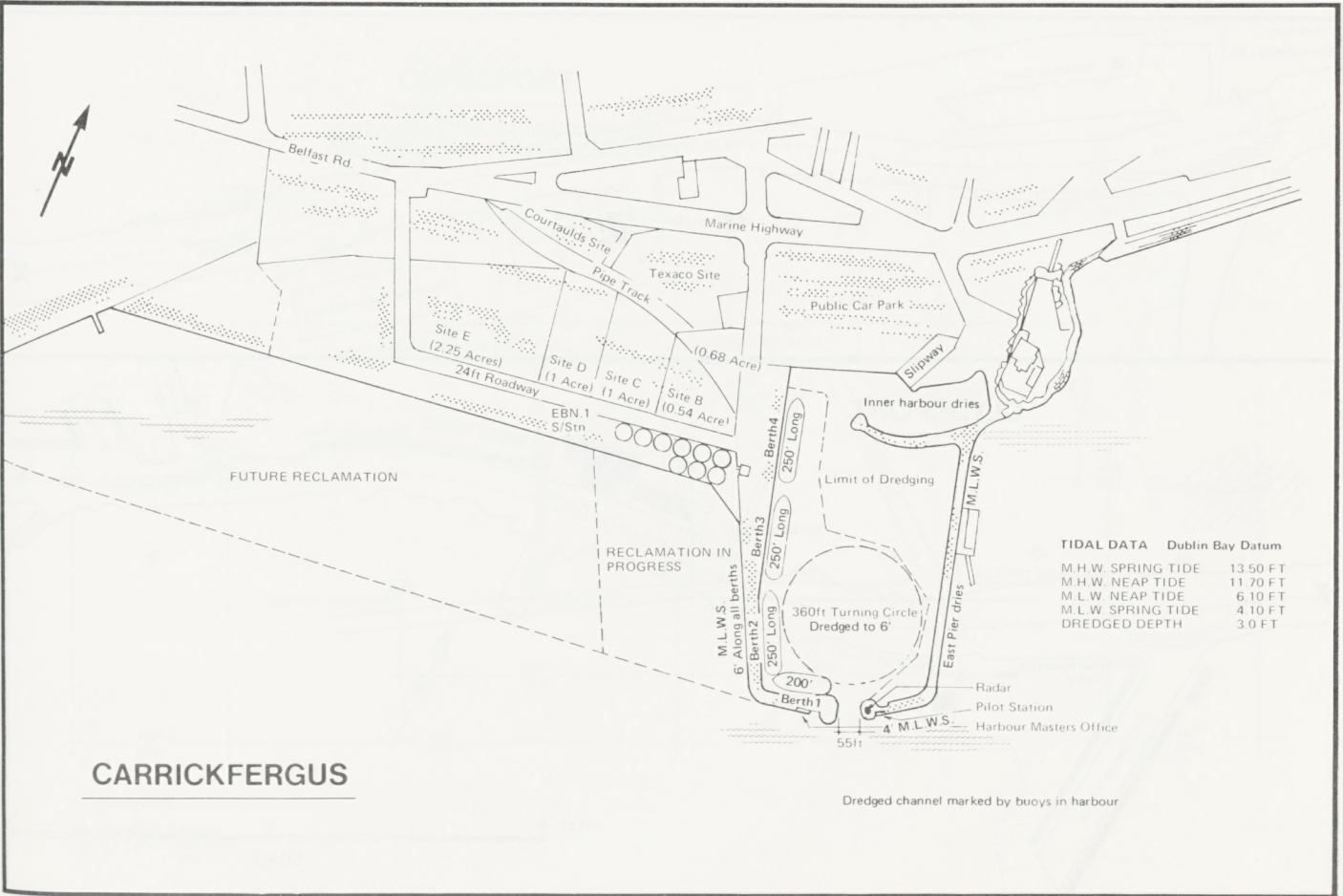
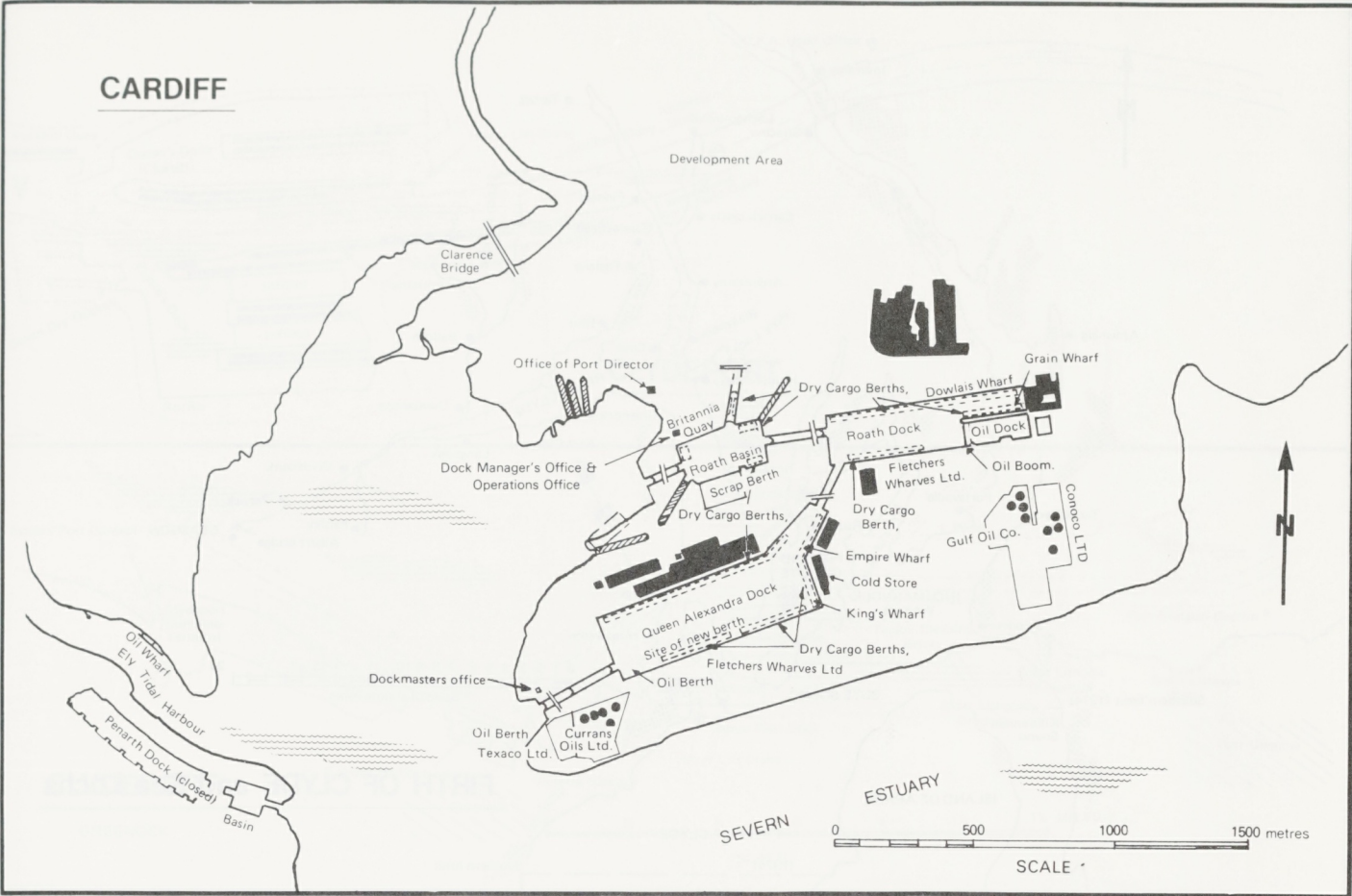
BRISTOL RIVER MOUTH DOCKS



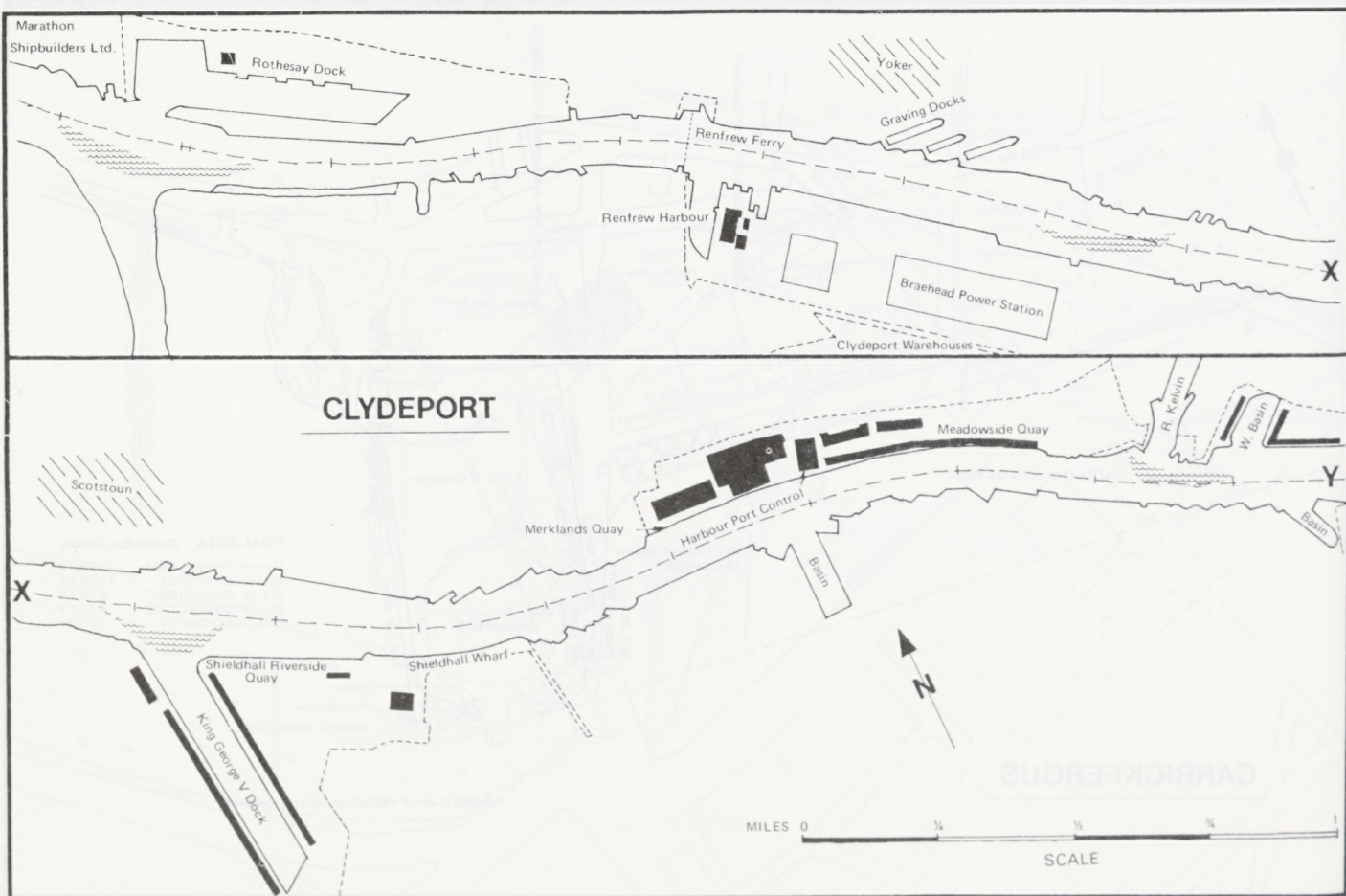
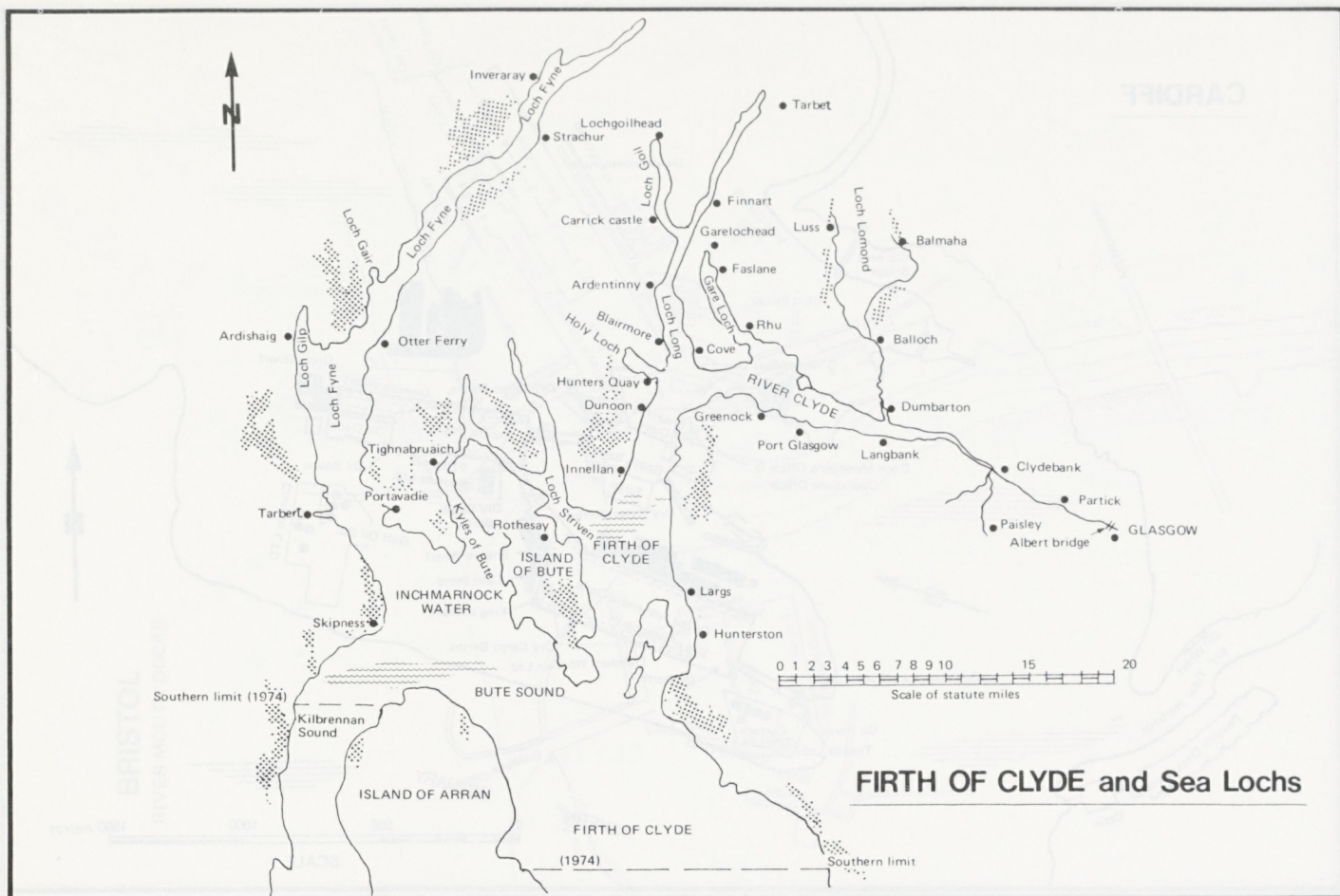
CAMPBELTOWN

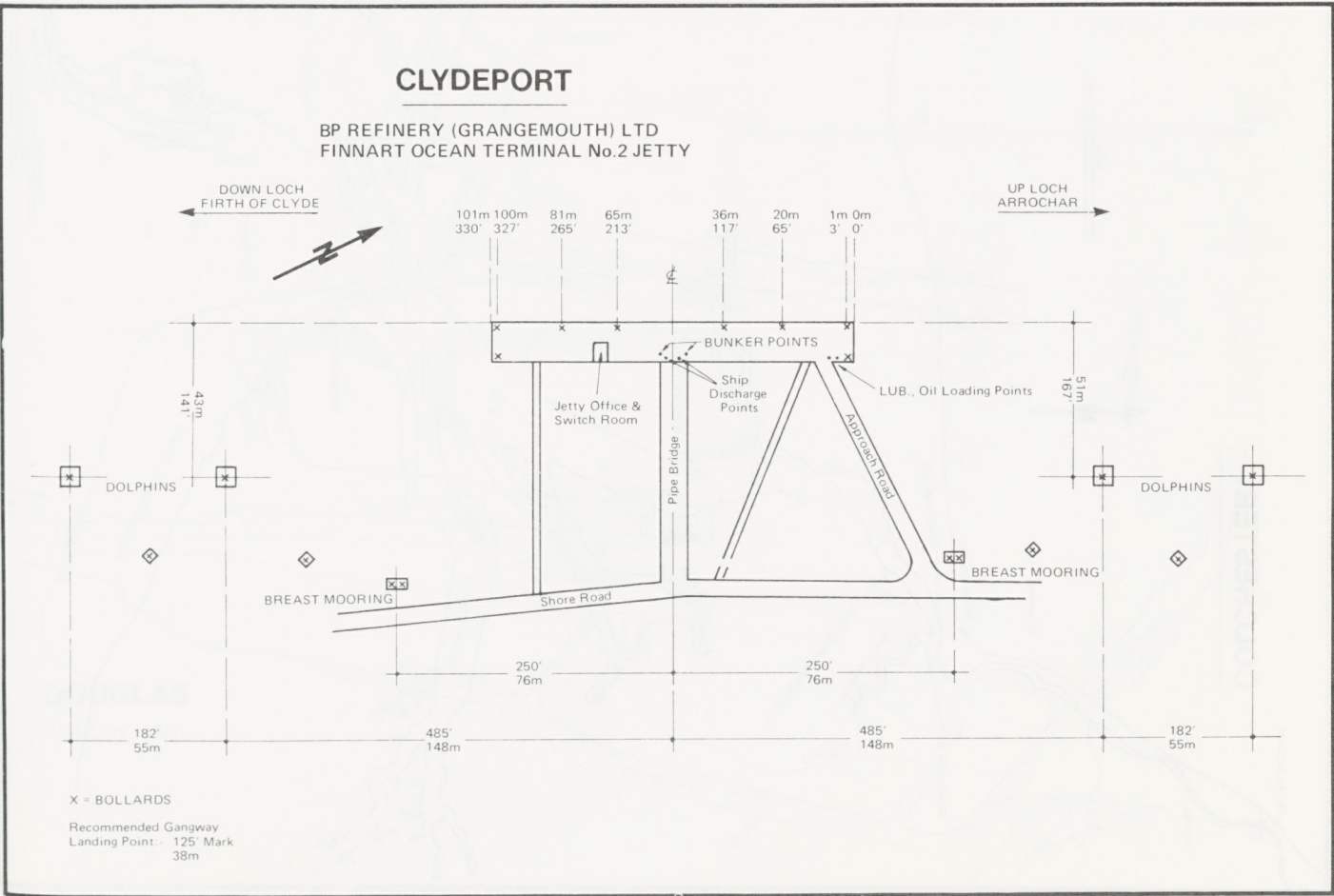
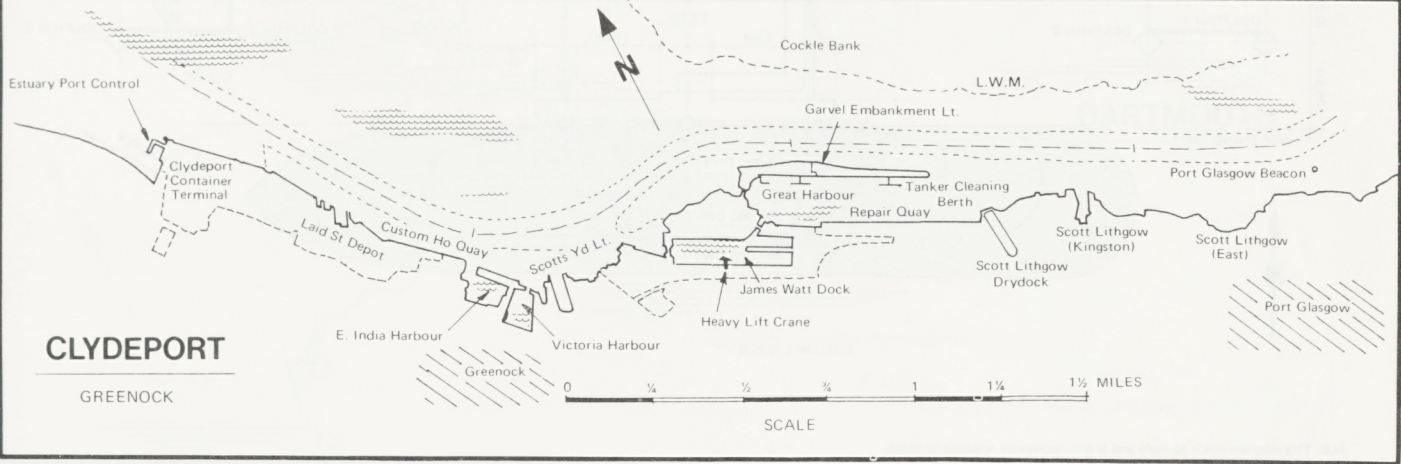
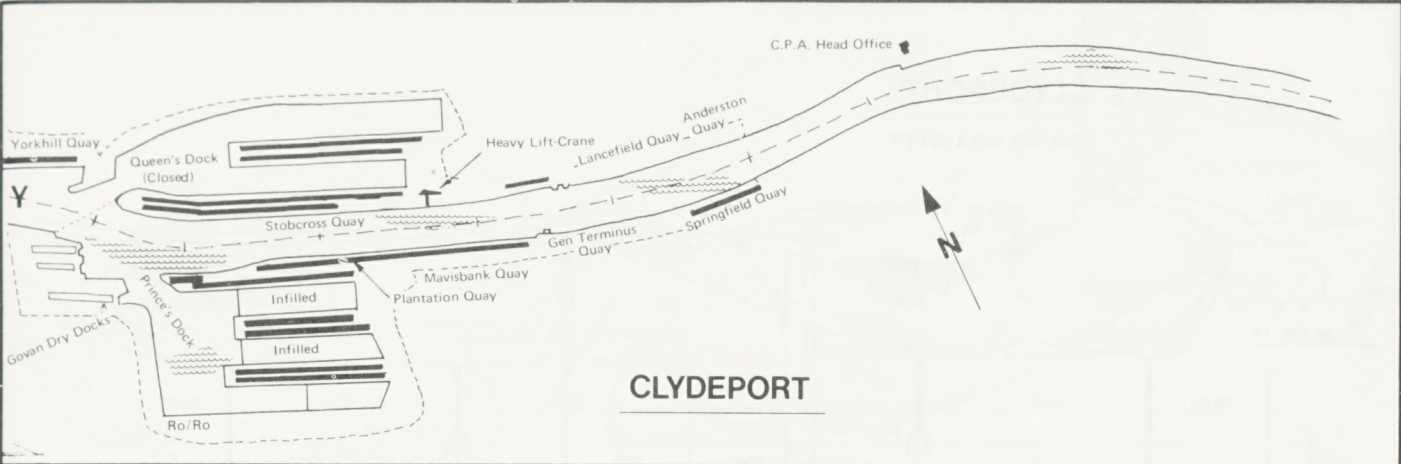


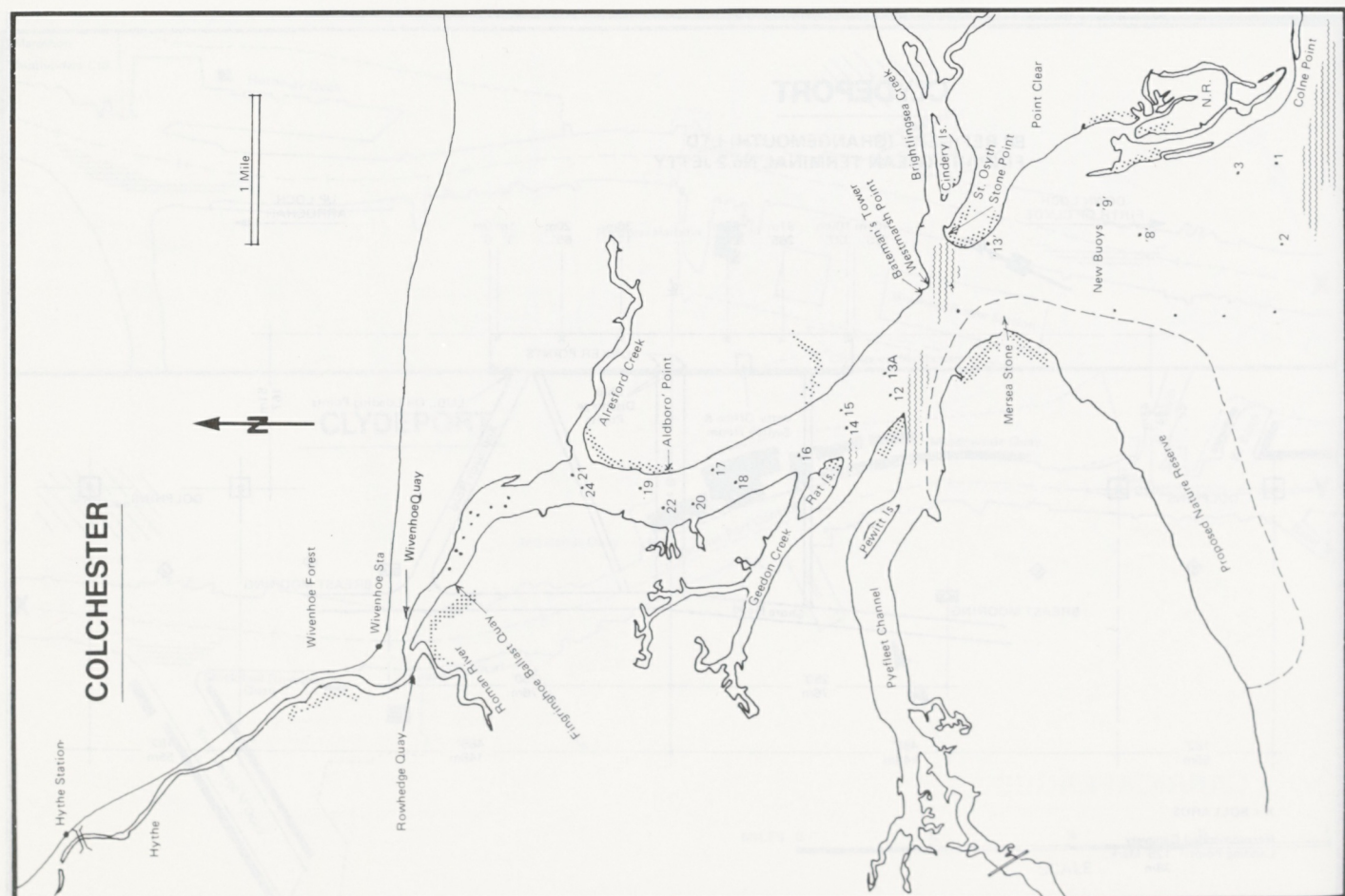
CARDIFF

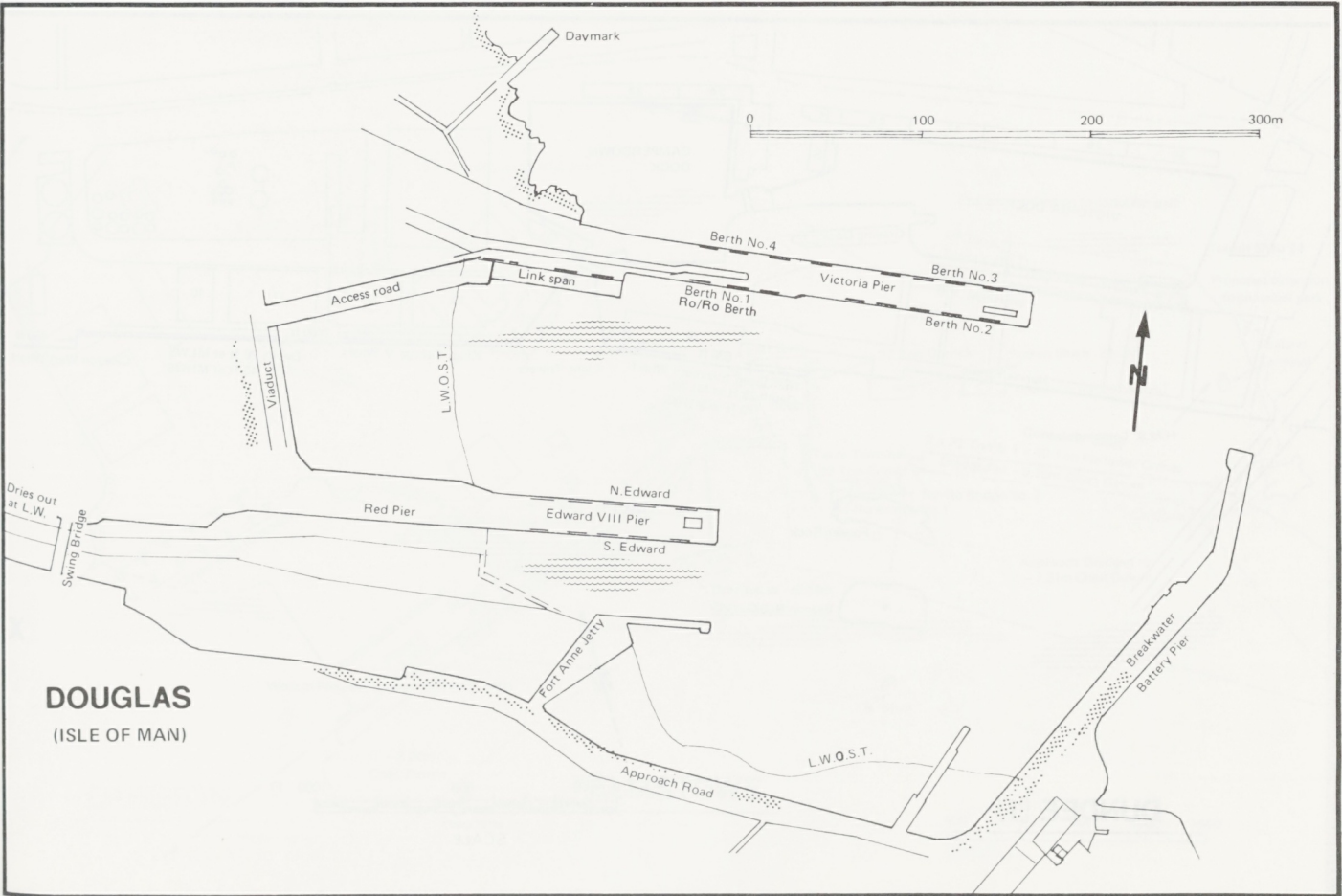
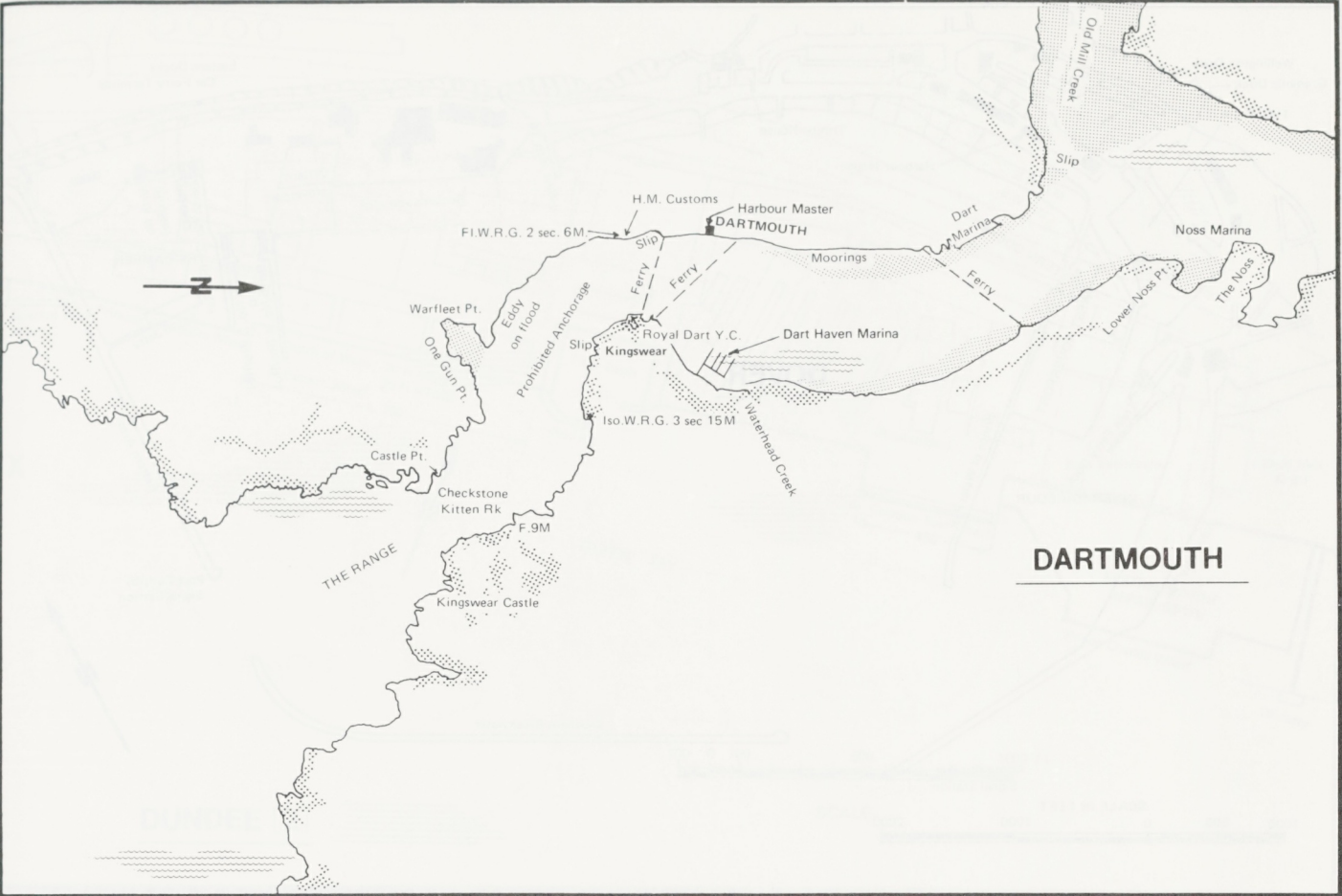


CARRICKFERGUS

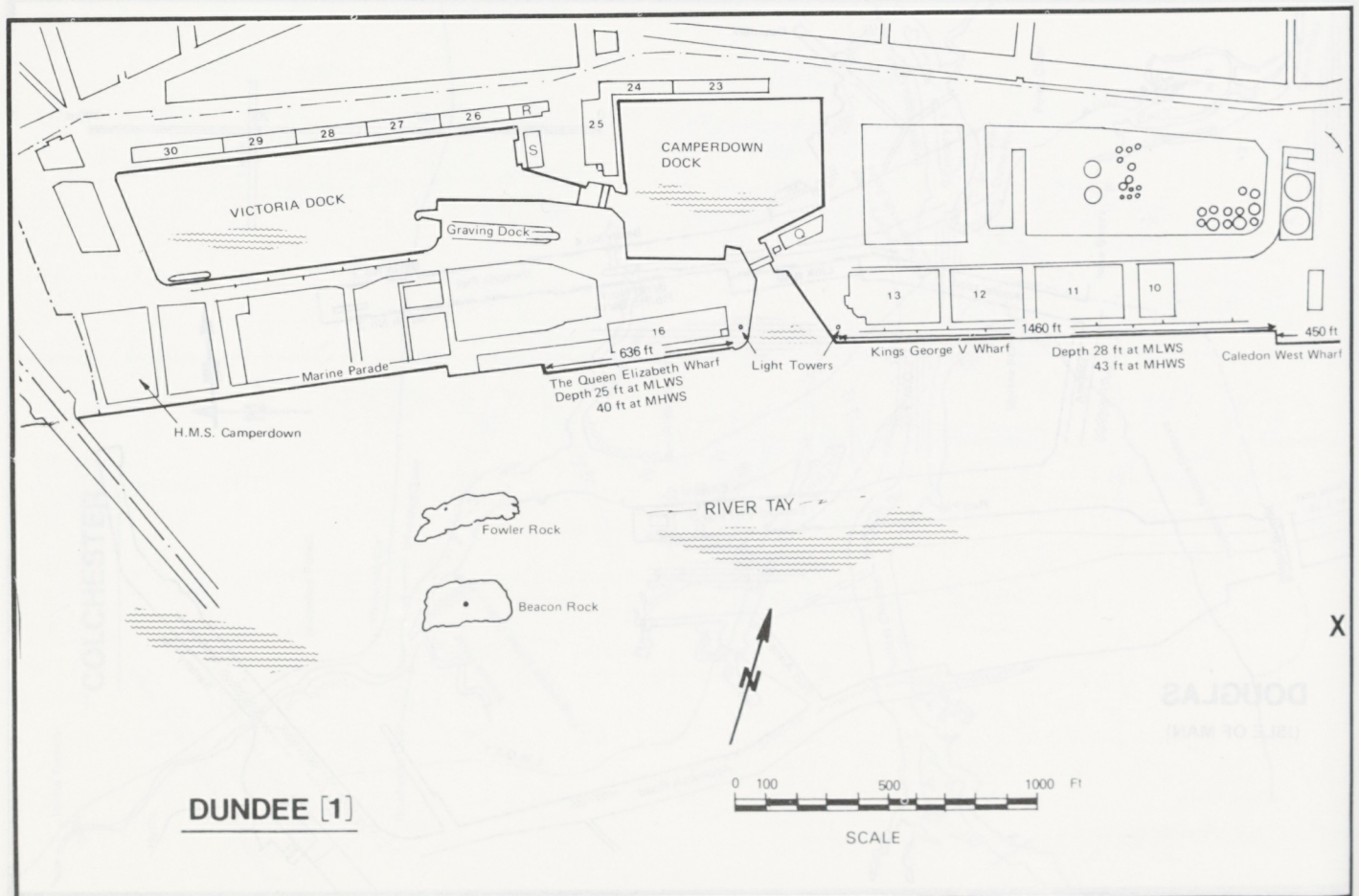
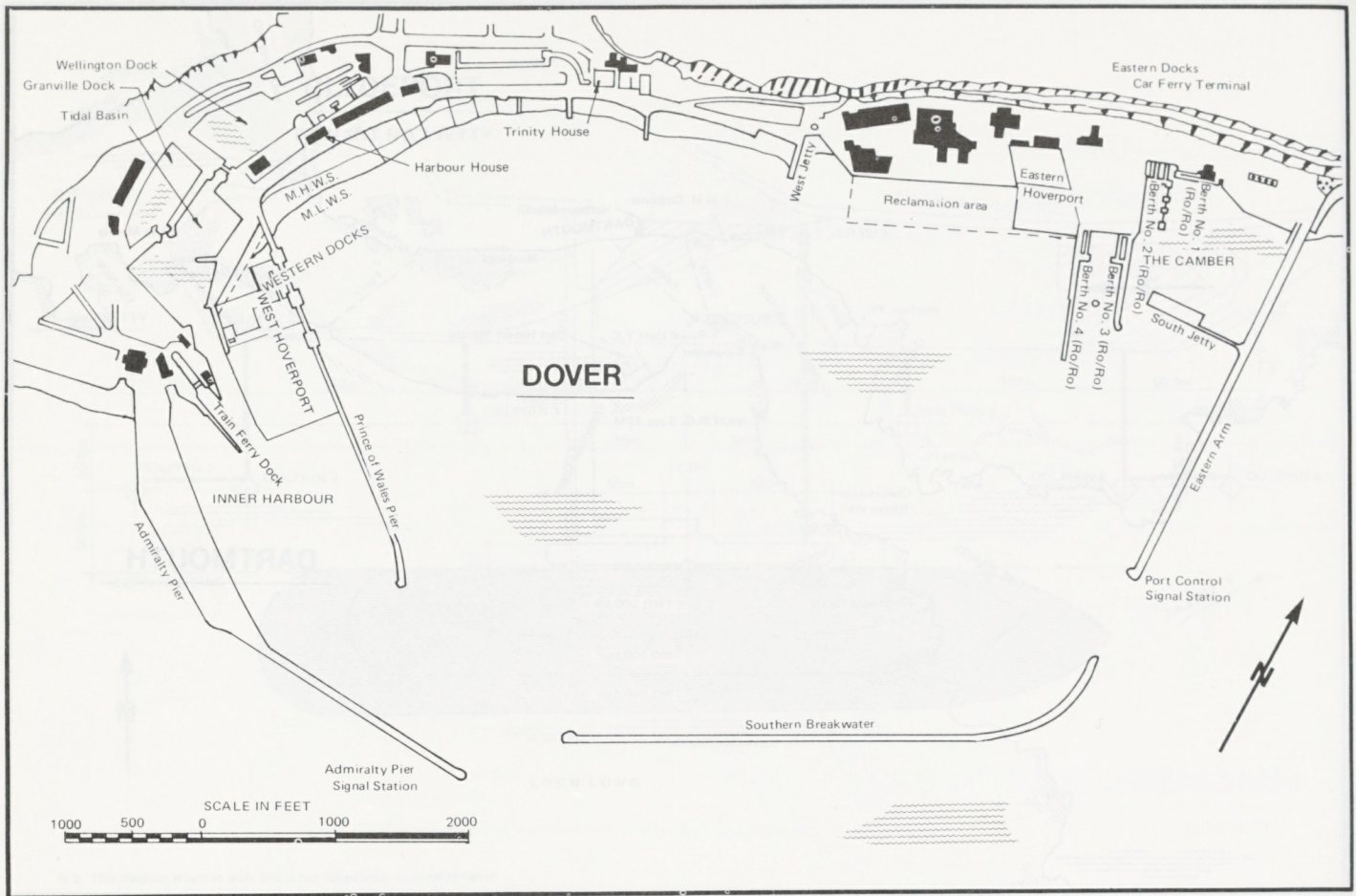


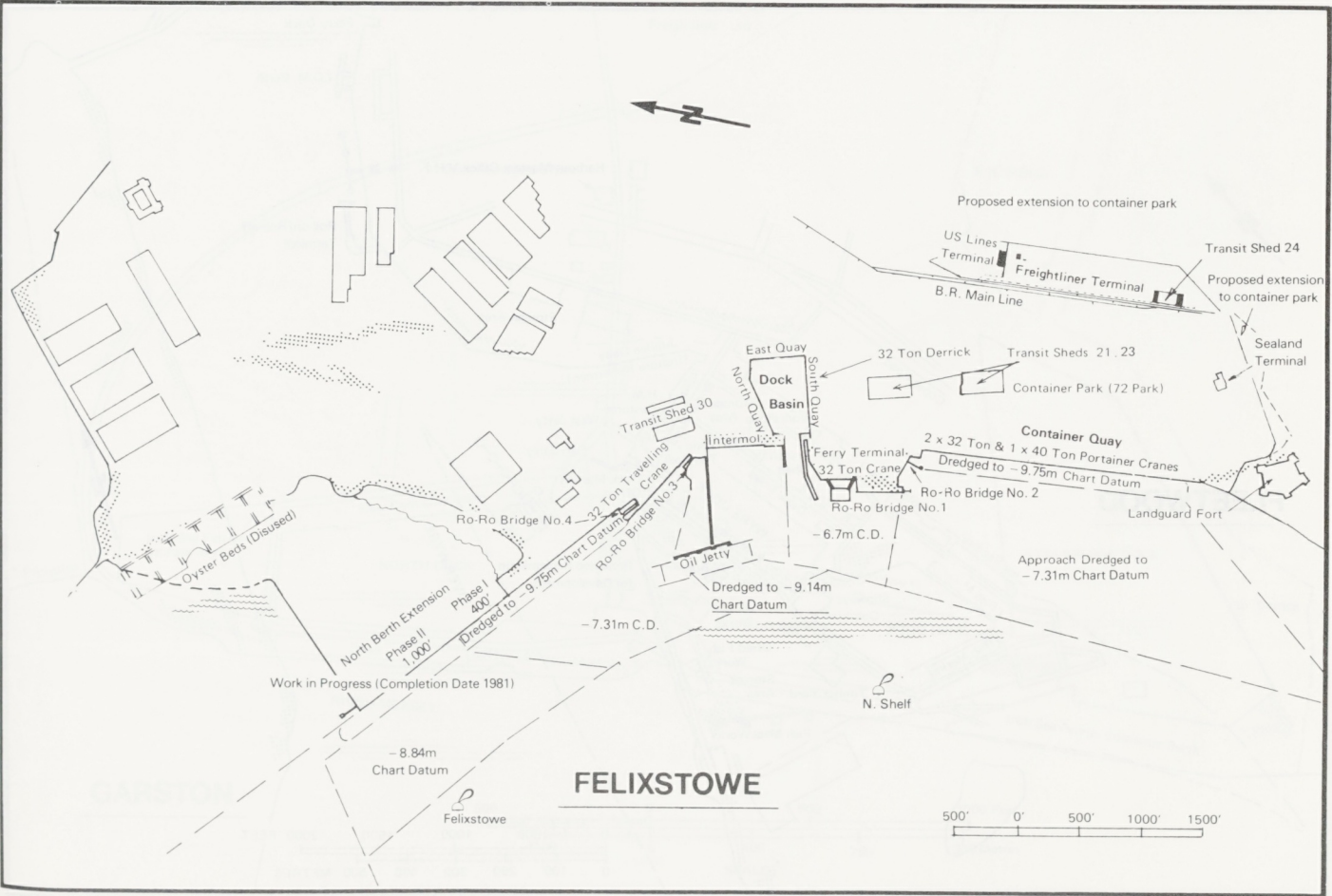
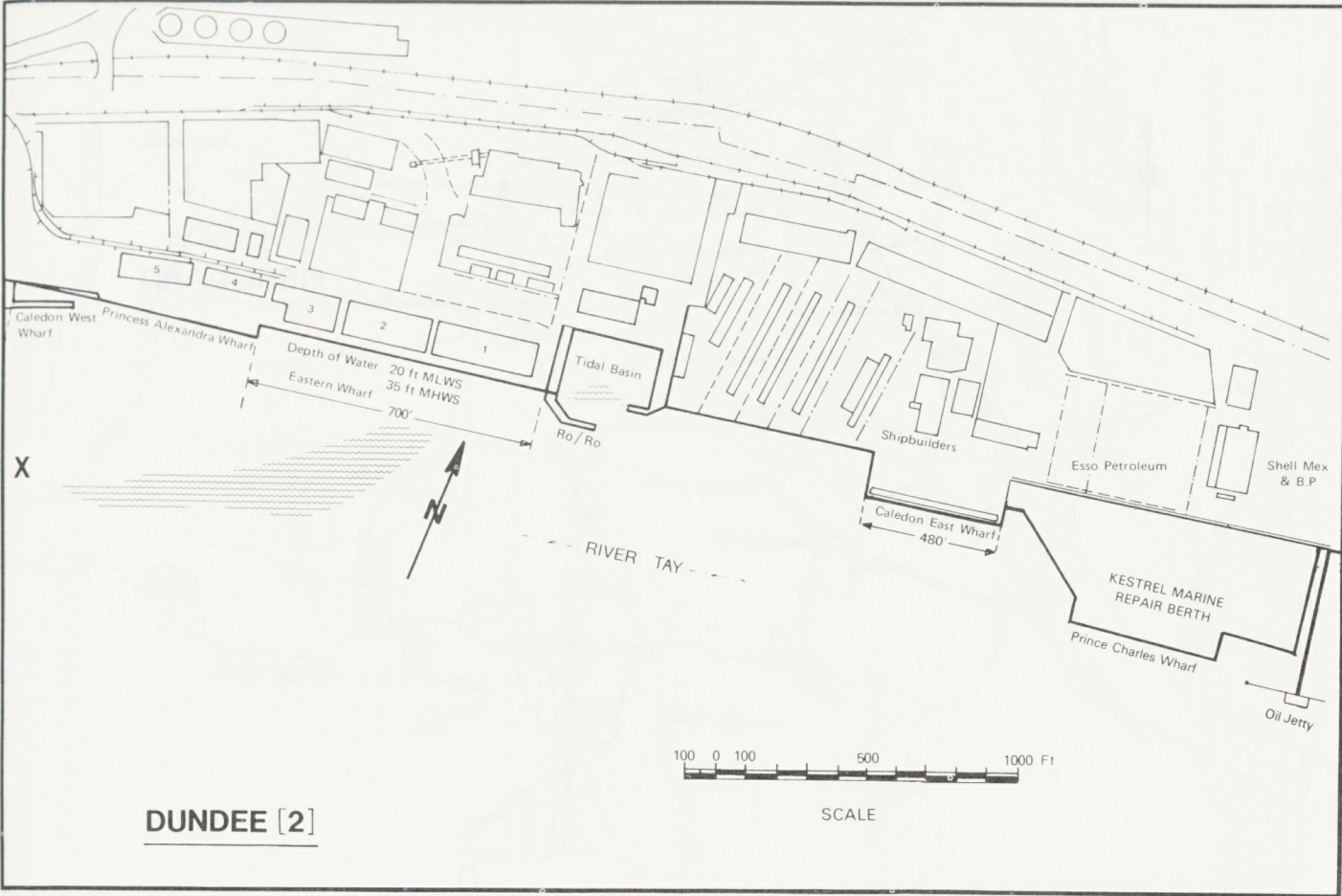


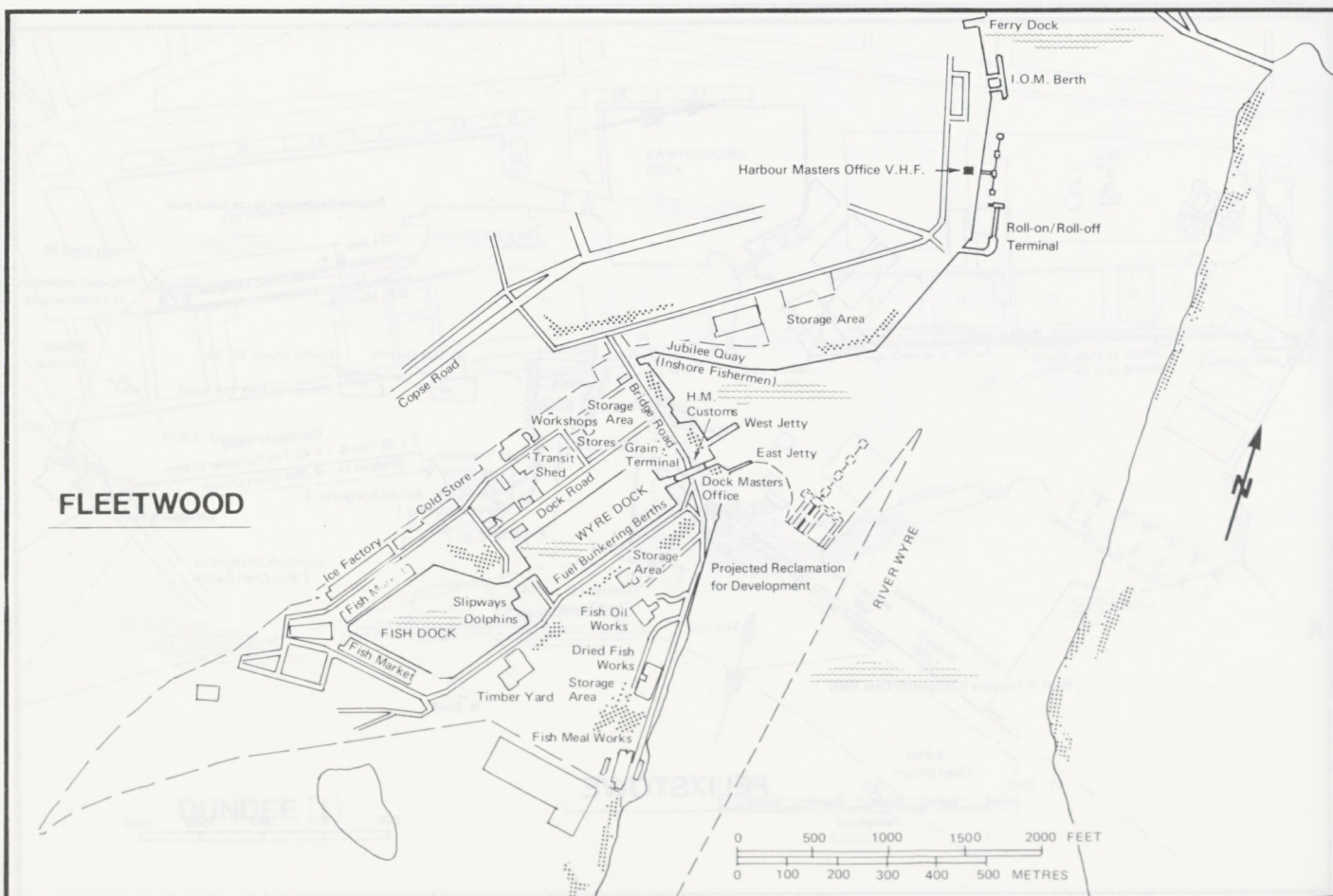
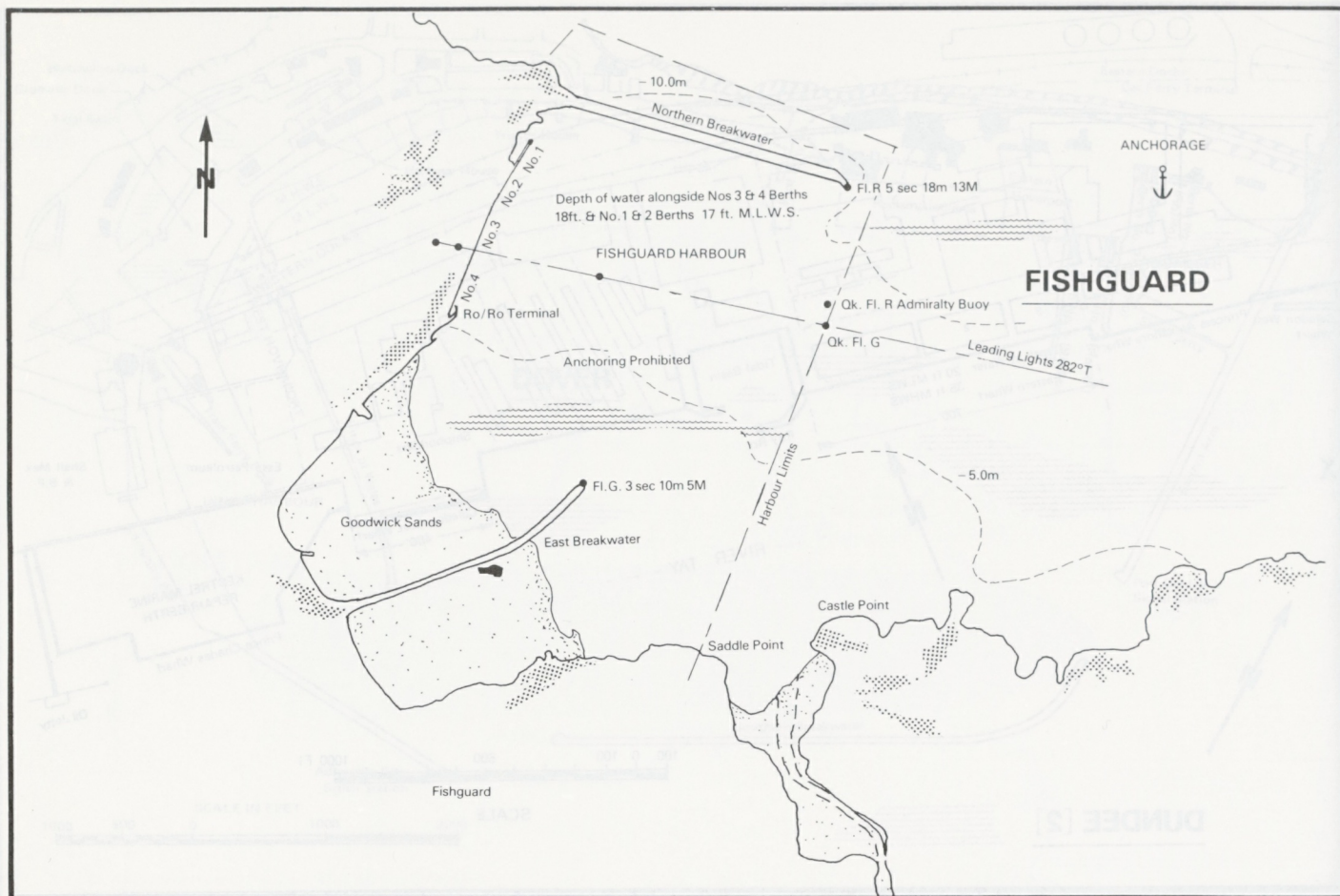


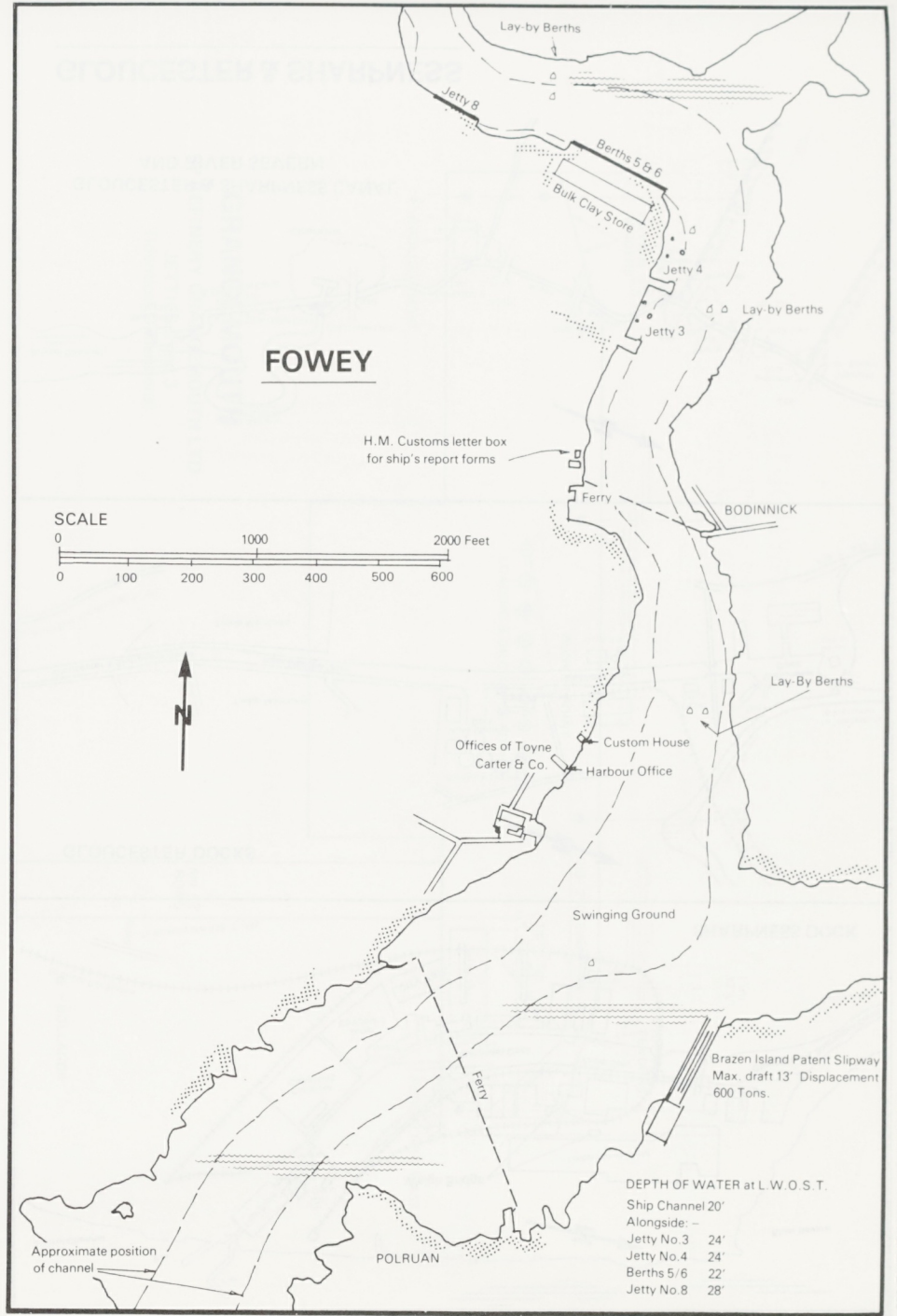
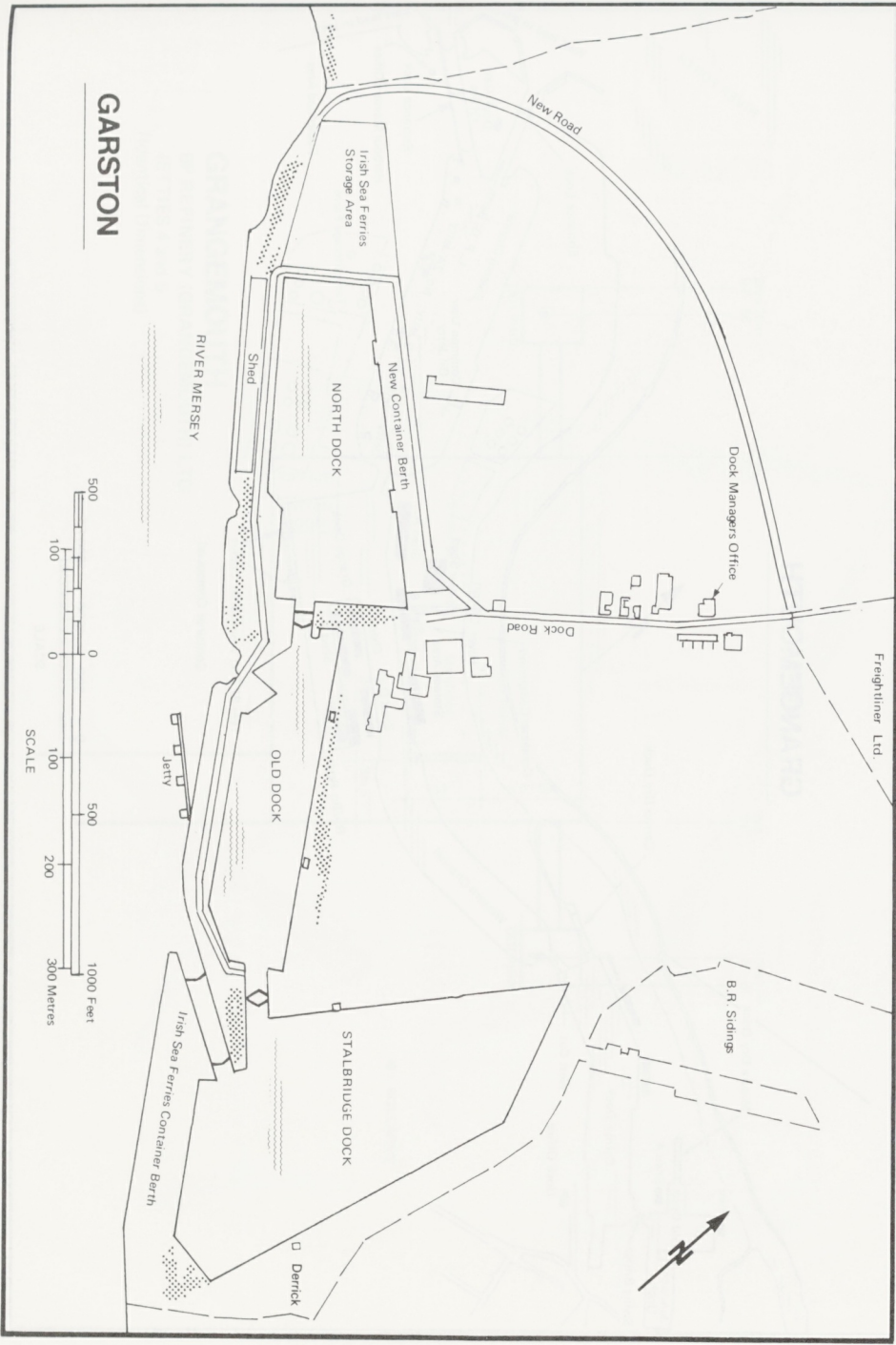


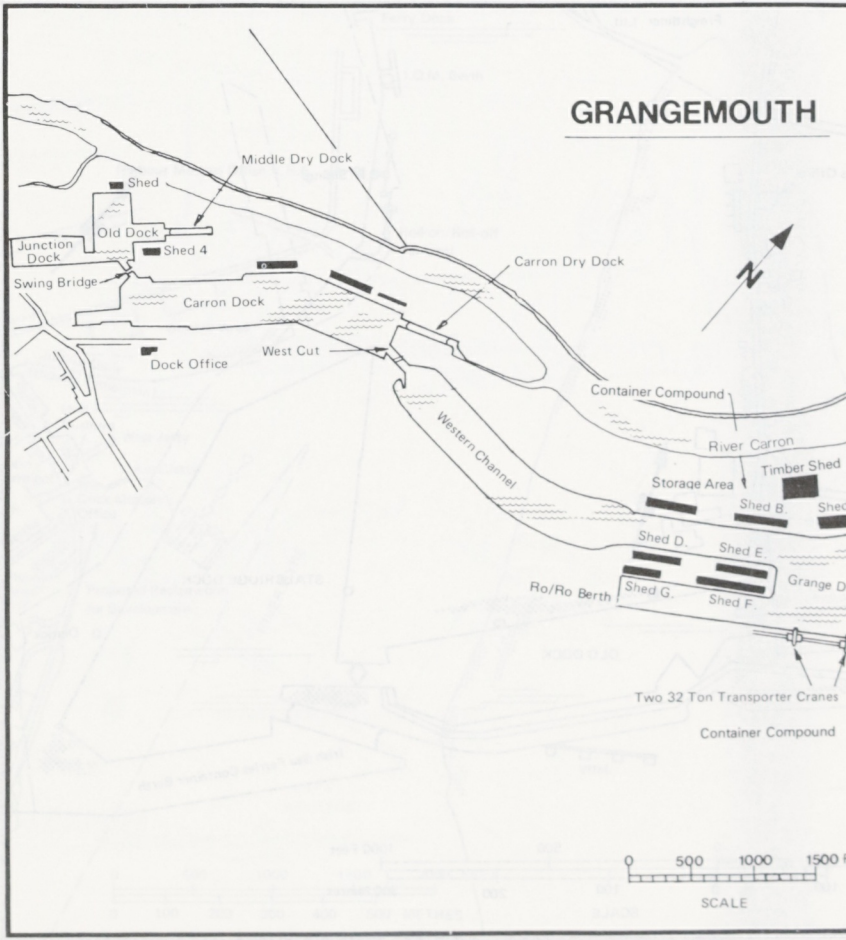
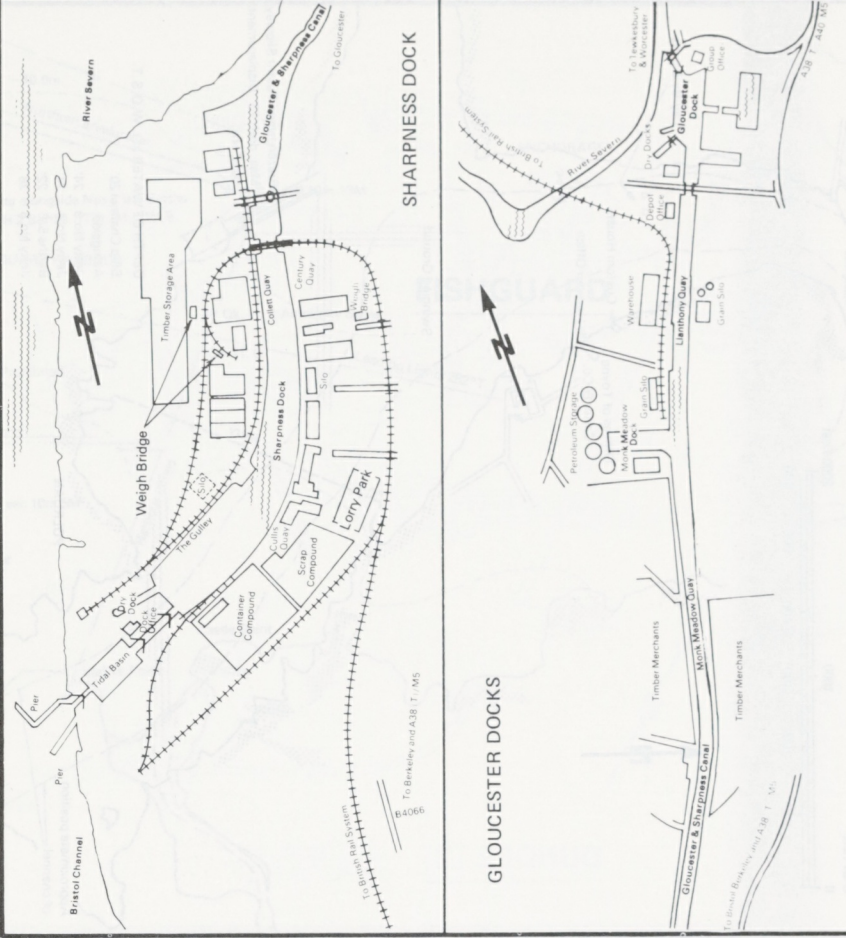
UNITED KINGDOM

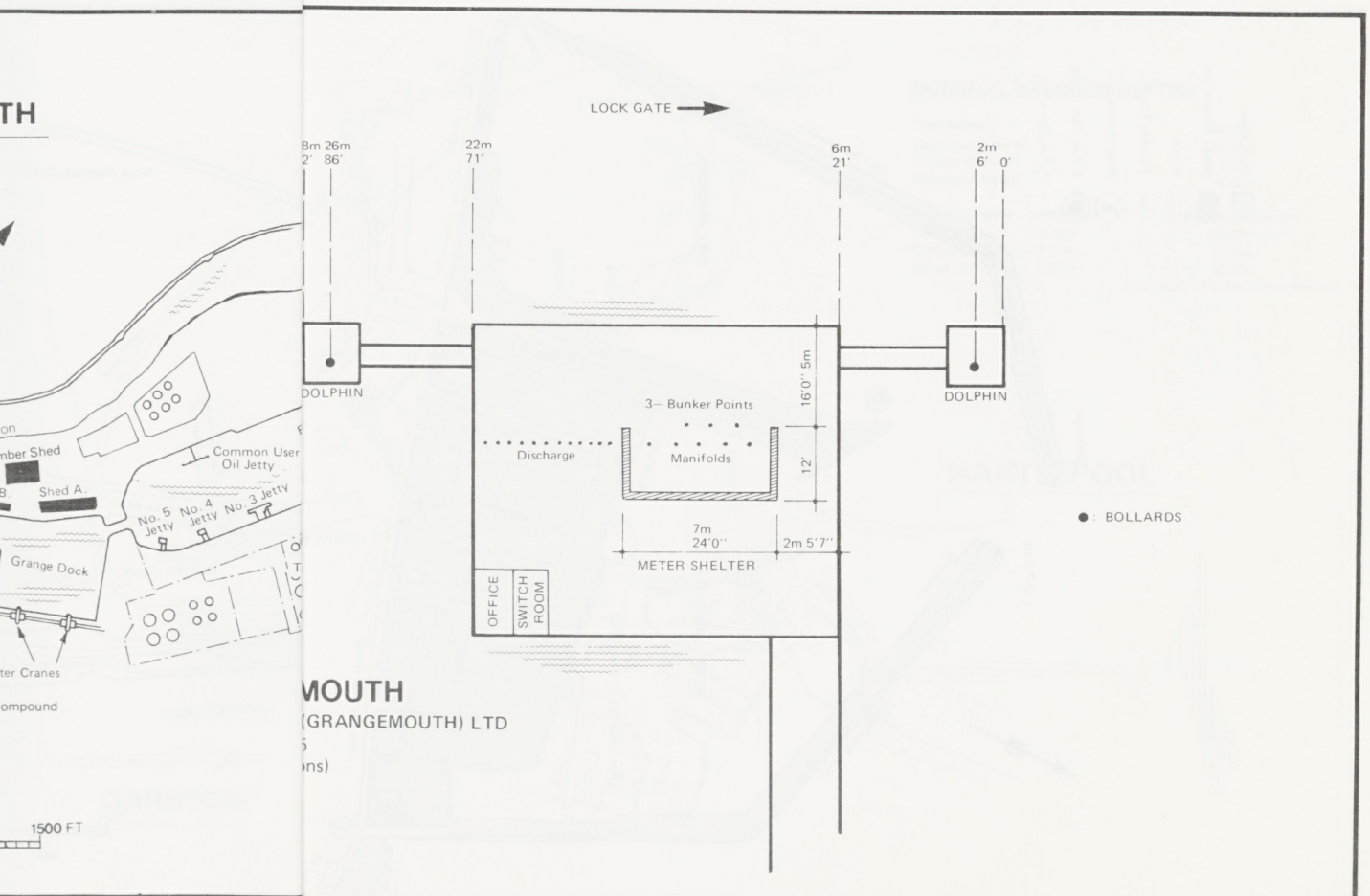


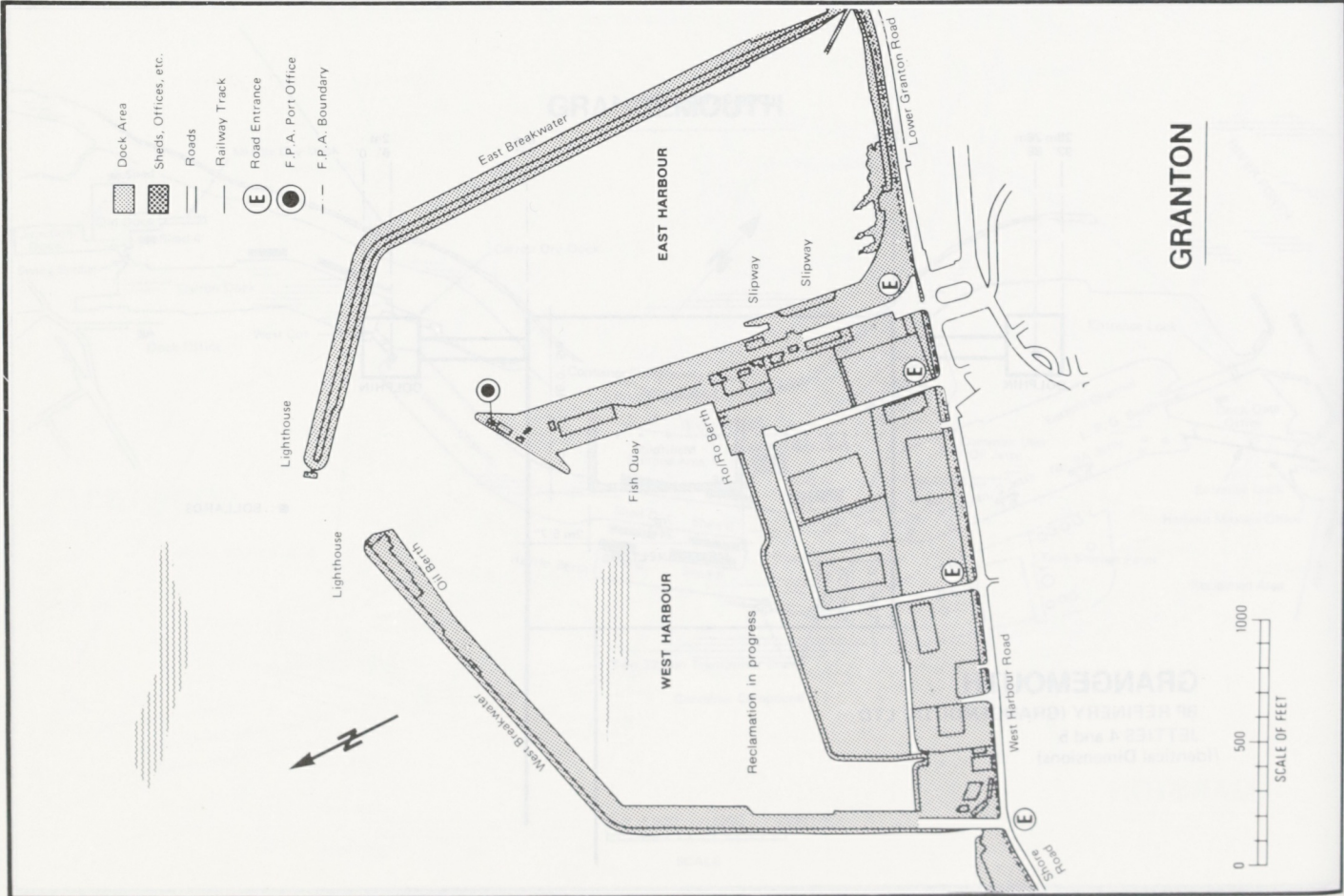
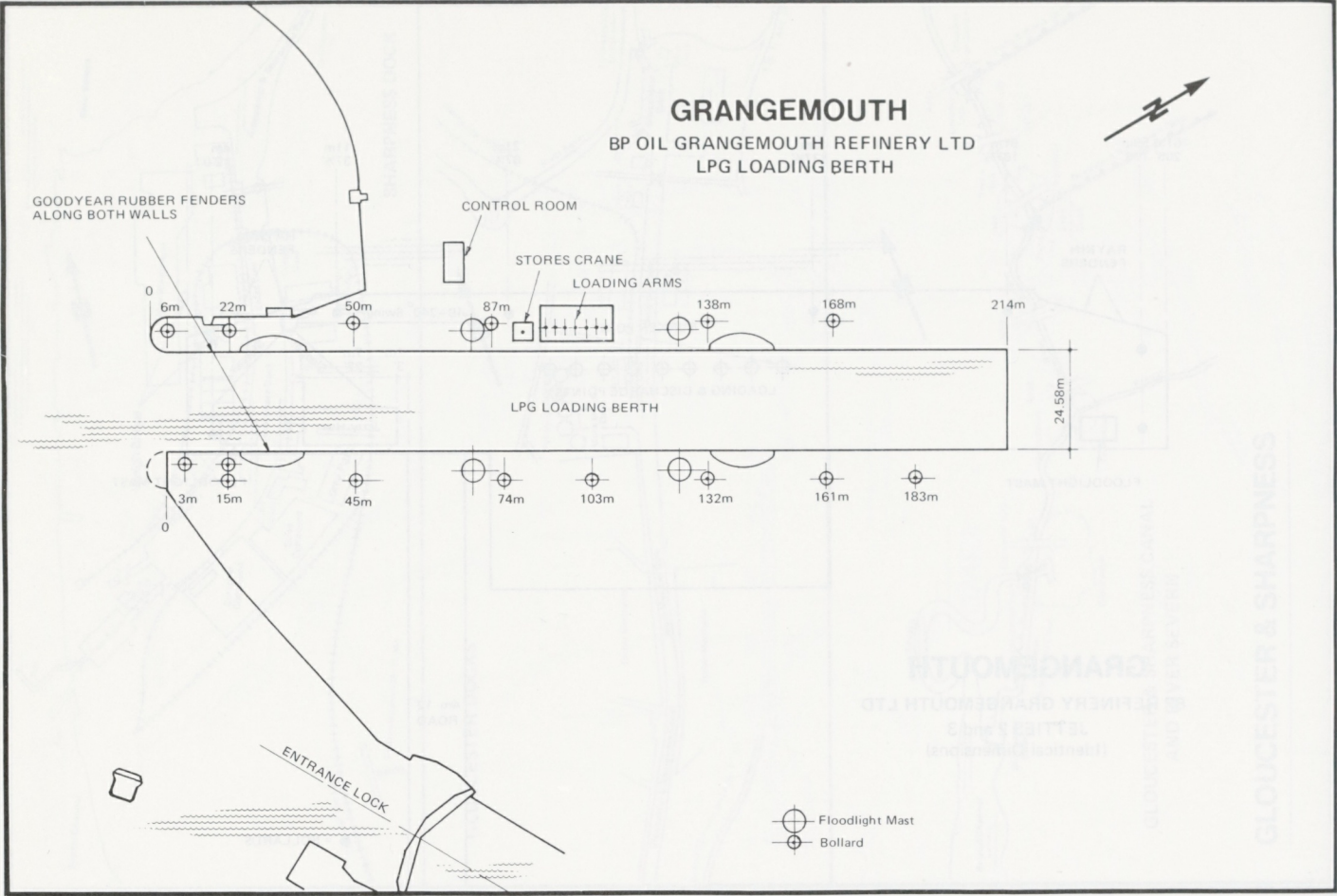


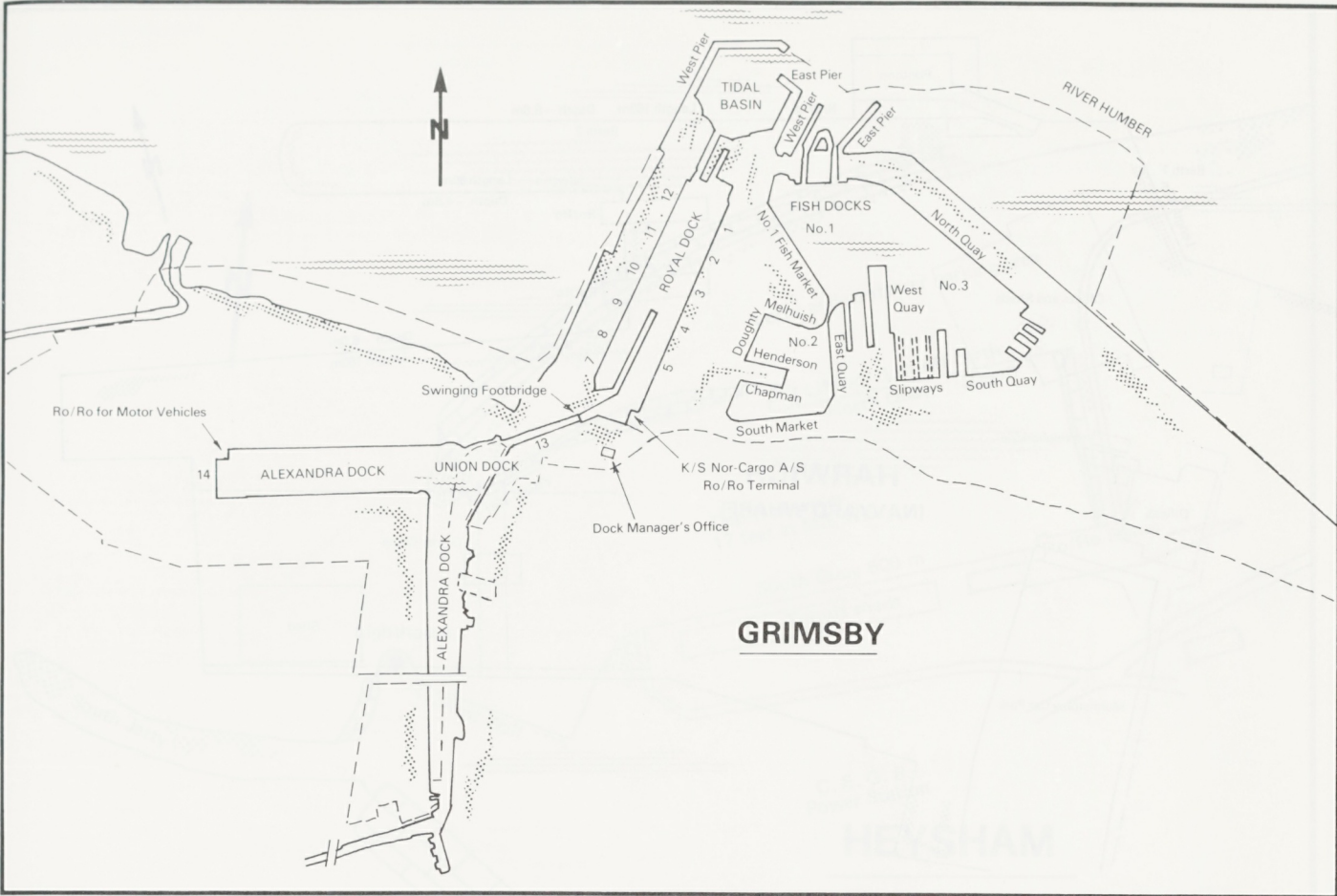




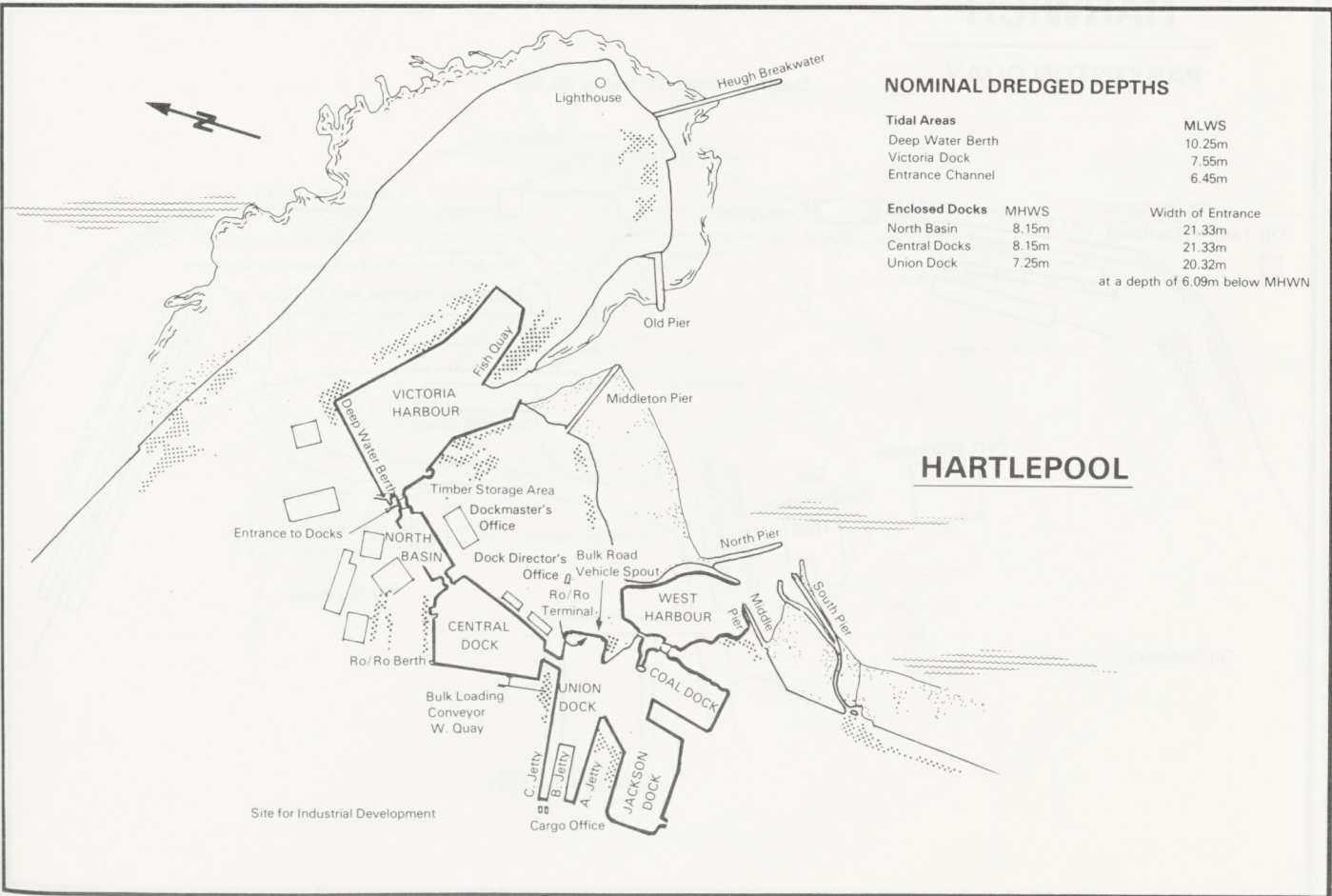








GRIMSBY

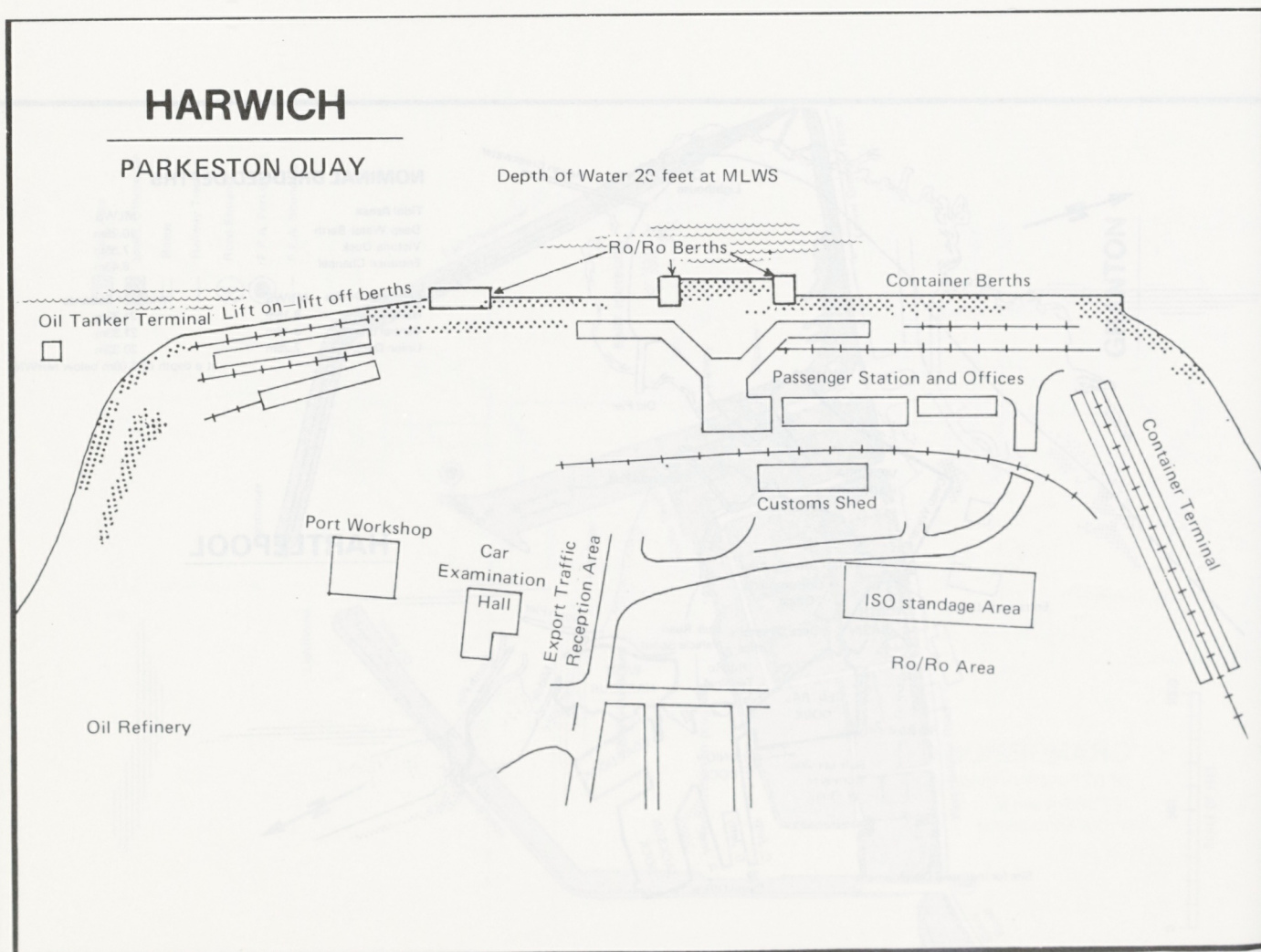
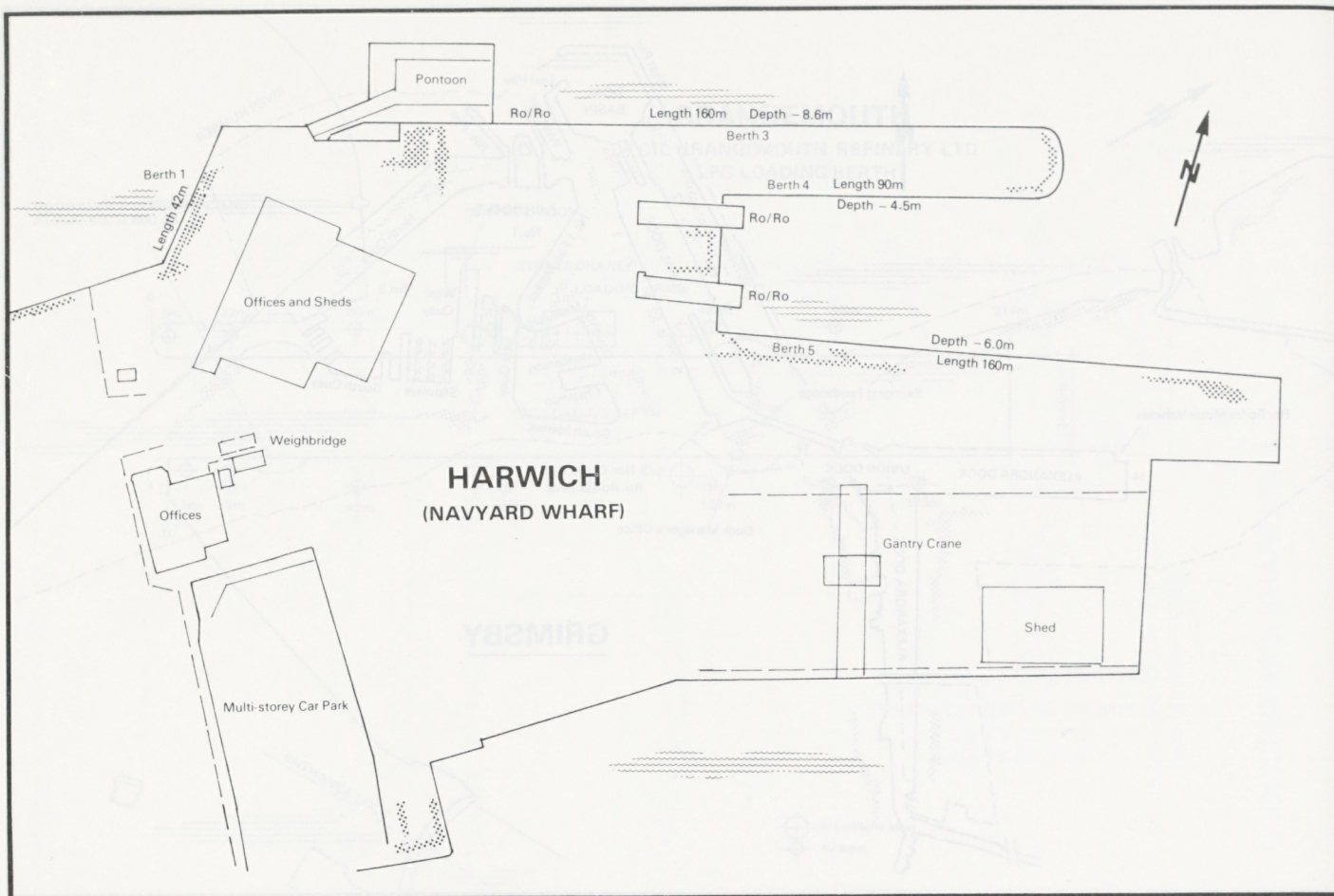


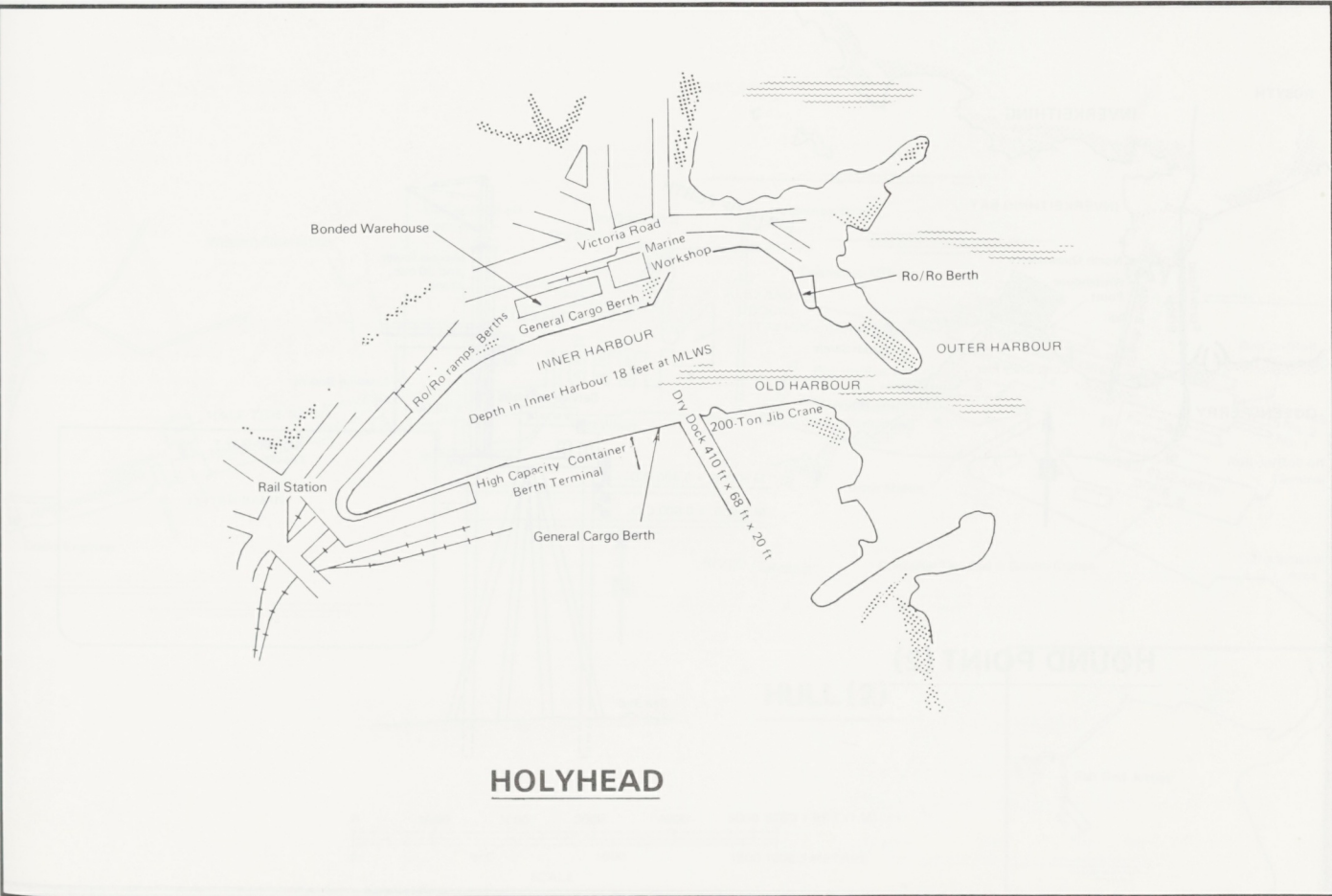
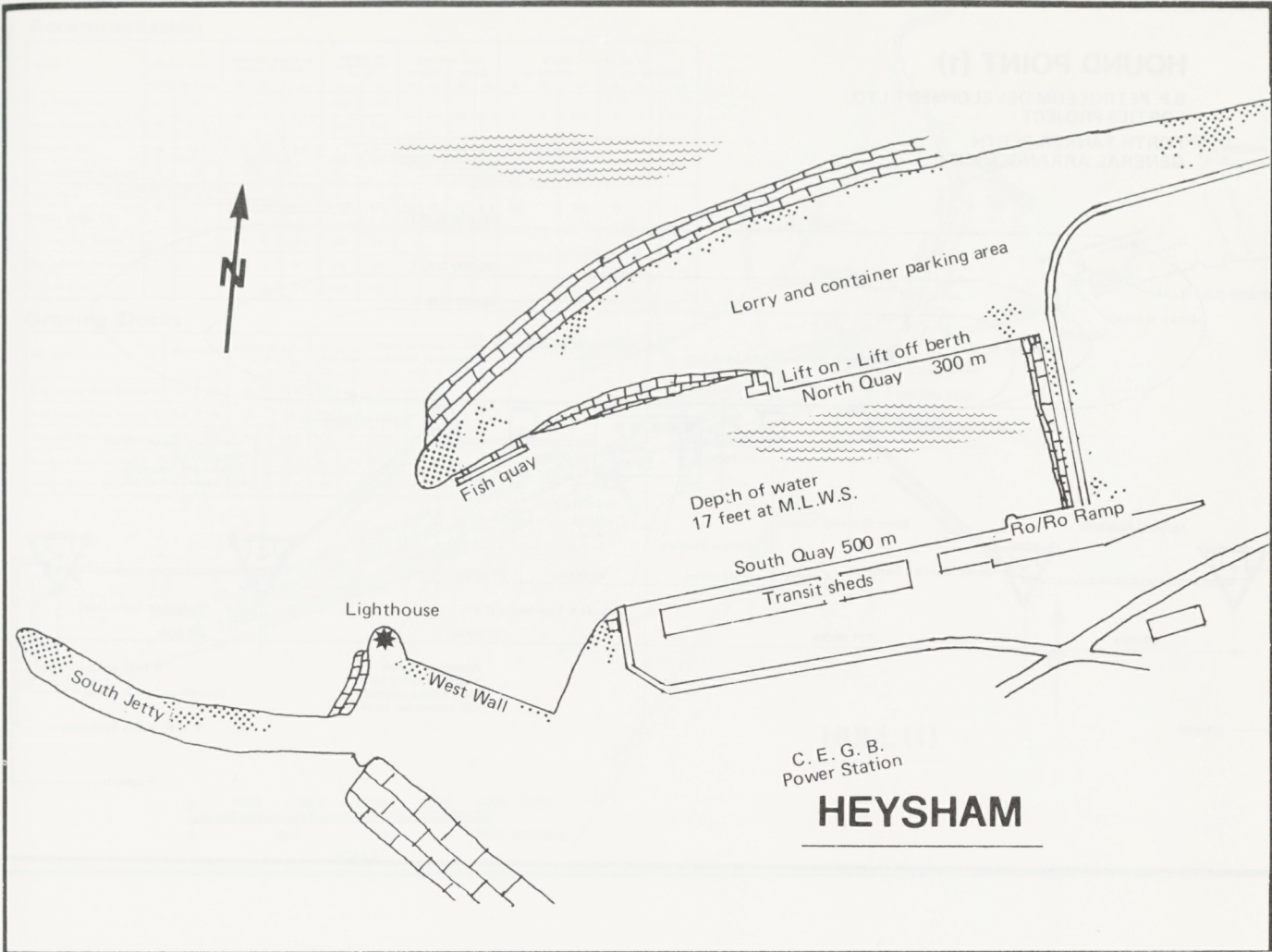
NOMINAL DREDGED DEPTHS

Tidal Areas		MLWS
Deep Water Berth		10.25m
Victoria Dock		7.55m
Entrance Channel		6.45m
Enclosed Docks		MHWS
North Basin	8.15m	21.33m
Central Docks	8.15m	21.33m
Union Dock	7.25m	20.32m

at a depth of 6.09m below MHWN

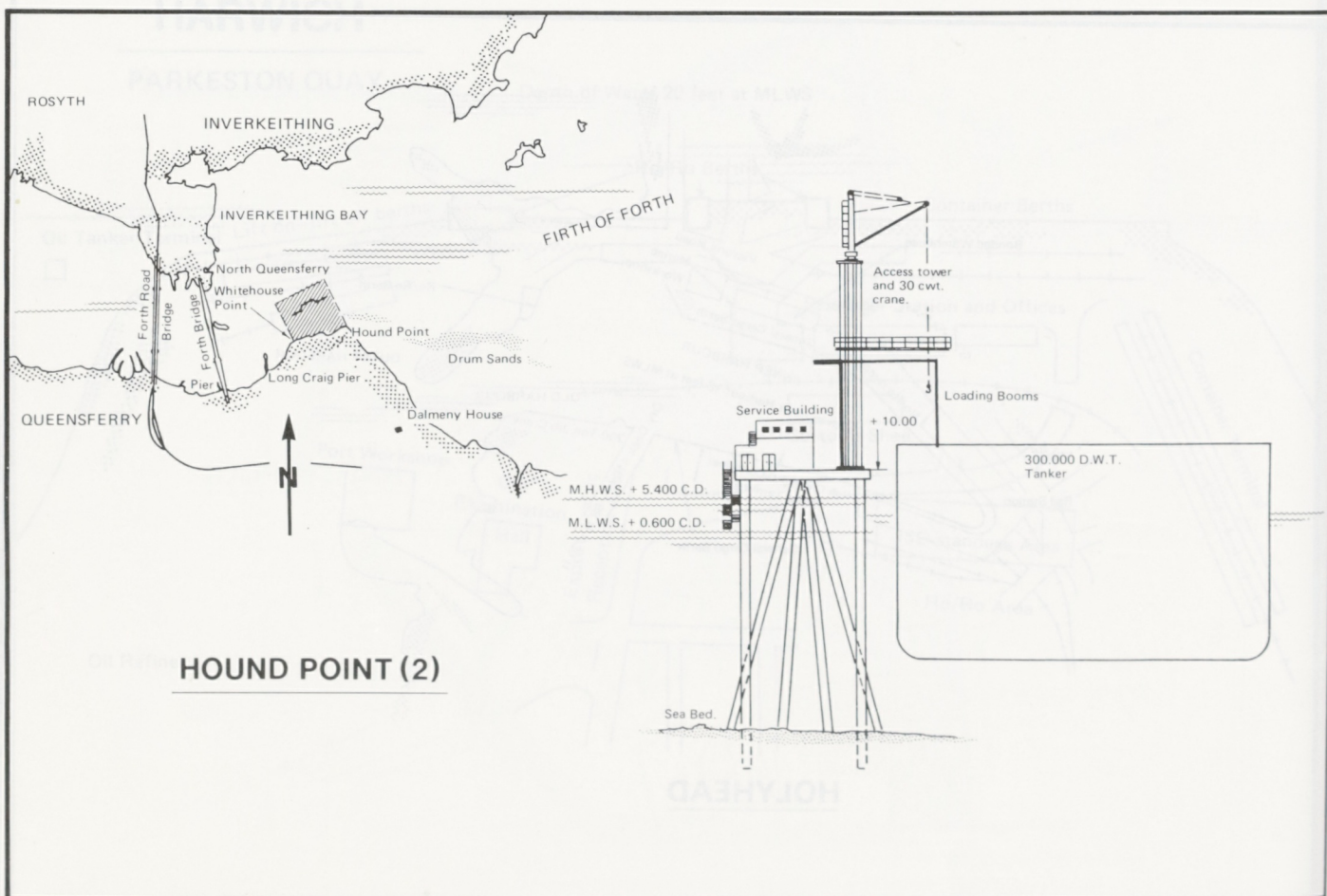
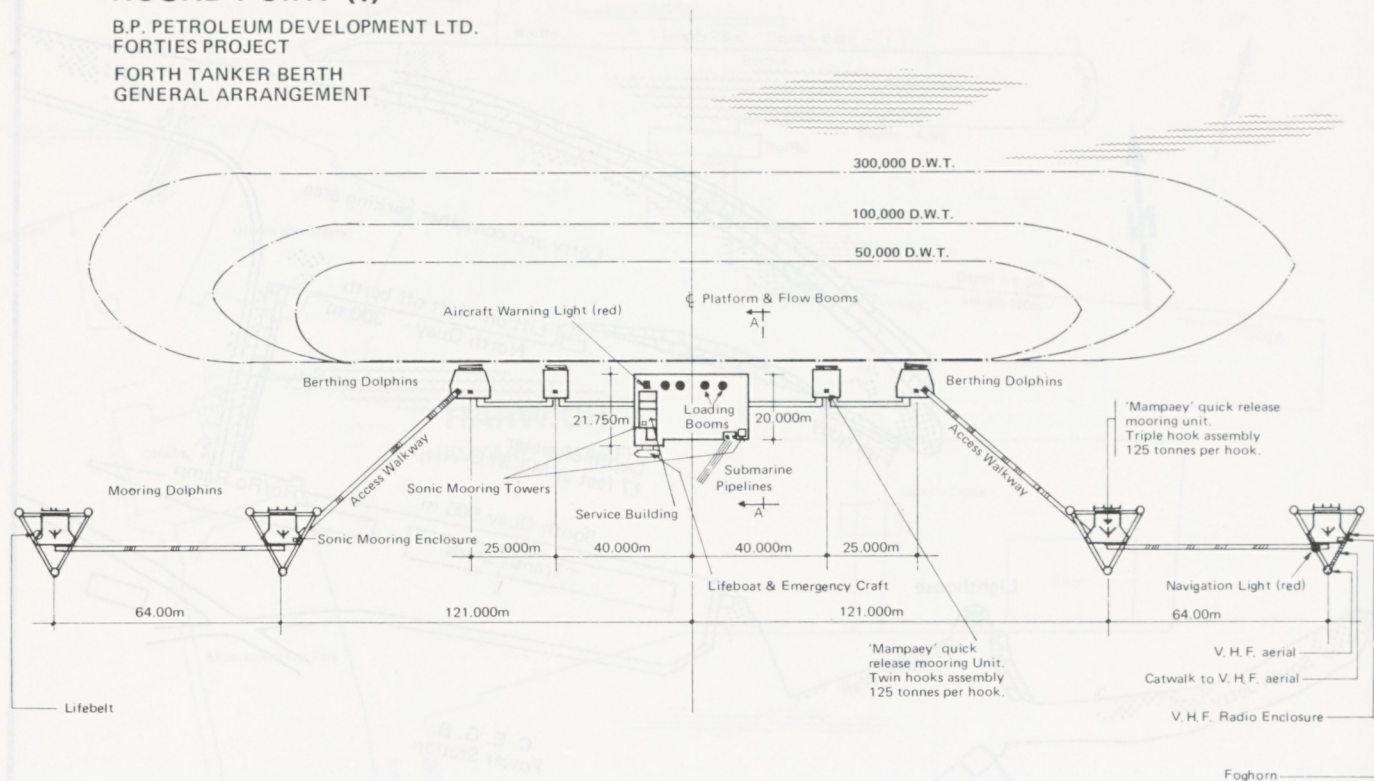
HARTLEPOOL





HOUND POINT (1)

B.P. PETROLEUM DEVELOPMENT LTD.
FORTIES PROJECT
FORTH TANKER BERTH
GENERAL ARRANGEMENT

**HOUND POINT (2)**

Accommodation

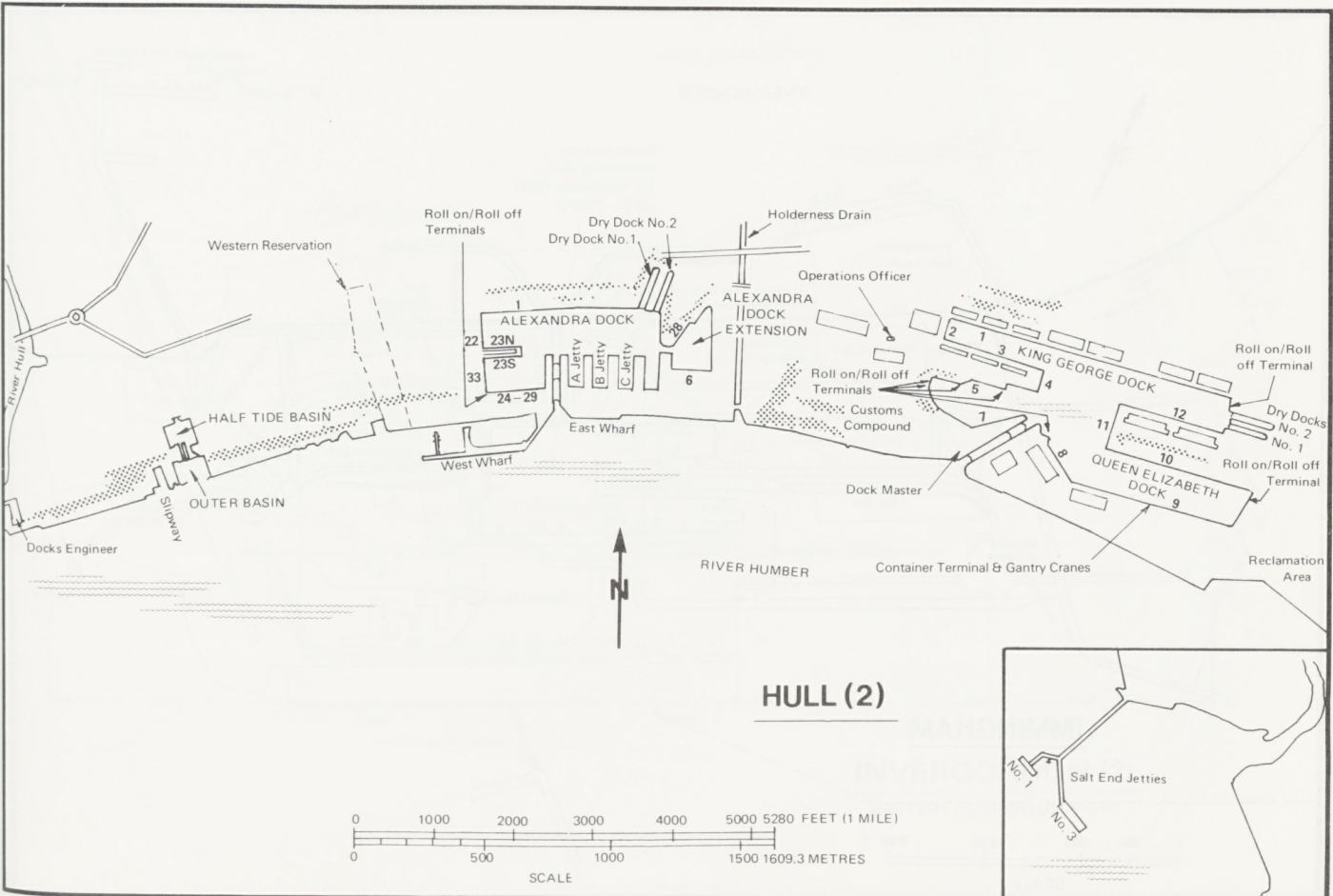
Docks	Water area acres he. tars		Normal depth of water in dock		Length of operational quays		Entrance lock		Depth of water on sill					
			ft	m	ft	m	ft	m	ft	m	ft	m	ft	m
King George Dock	61	24.7	37	7	11	46	11229	3423	750	228	85	25.9	42	0
Queen Elizabeth Dock	29	11.7				5400	1646						12	8
Alexandra Dock	46	18.6	1	6	0	46	13391	4082	550	167	6	70	21	3
Alexandra Dock Extension	8	3.2											33	4
Albert Dock													10	2
William Wright Dock	28	11				as High Water	11329	3453	320	97	80	24.3	28	1
Salt End Jetty Number 1			35	0	10	7	258	79					8	6
Salt End Jetty Number 3			35	0	10	7	396	121					23	2
Riverside Quay			18	6	5	6	1065	325						

Graving Docks

Dry dock	Net length		Width of dock at Cope		Width at Entrance		Depth of water on sill		
	ft	m	ft	m	ft	m	ft	m	
King George Dock Number 1	417	127	86	26.2	66	20.1	27.9	8.5	23
King George Dock Number 2	520	158	92	28	72	21.9	27.9	8.5	23
Alexandra Dock Number 1	457.2	139	81	24.6	56.5	17.2	18.7	5.7	13.8
Alexandra Dock Number 2	504.9	153	89	27.1	61.1	18.6	21.3	6.5	16.3
William Wright Dock	450	137	85	25.9	50	15.2	21.5	6.6	16.6



HULL (1)



HULL (2)



INVERGORDON (1)

Reclamation Areas

Dingwall

A9

Evanton

CROMARTY FIRTH

A836

A9

Invergordon

Cromarty

South Sutor

Works in Progress (B.N.Q.C.
Marine Oil Terminal)
Completion Date May 1981

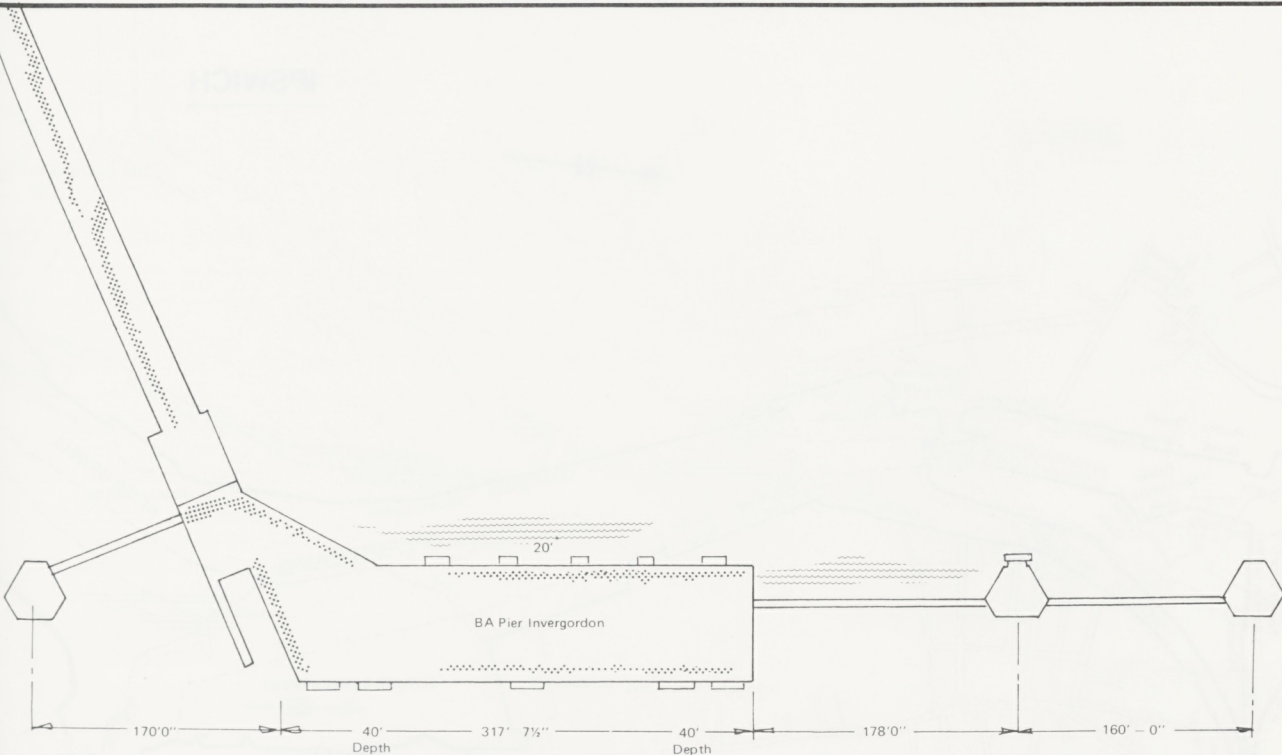
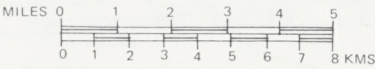
North Sutor

Port Limit

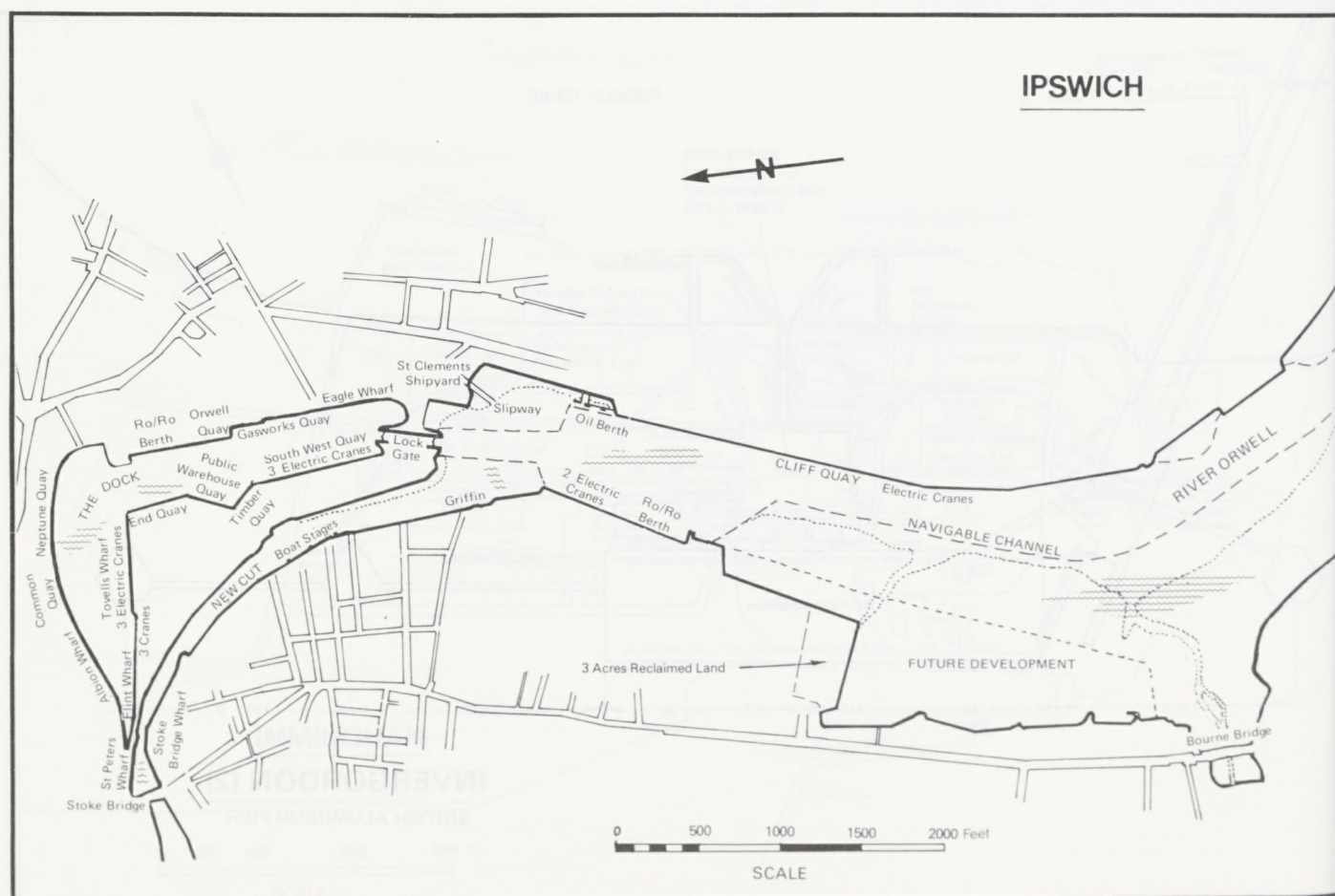
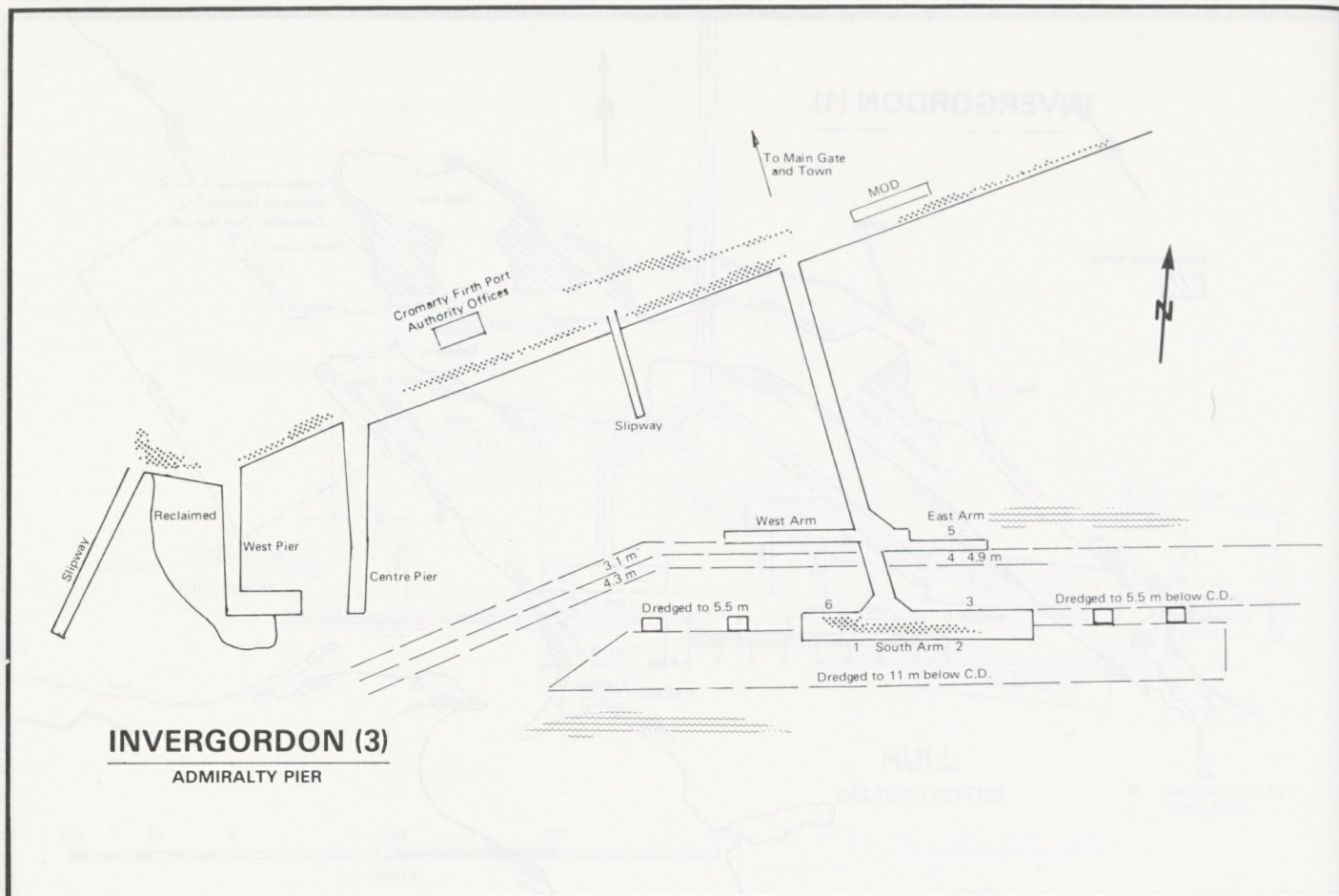
MORAY FIRTH

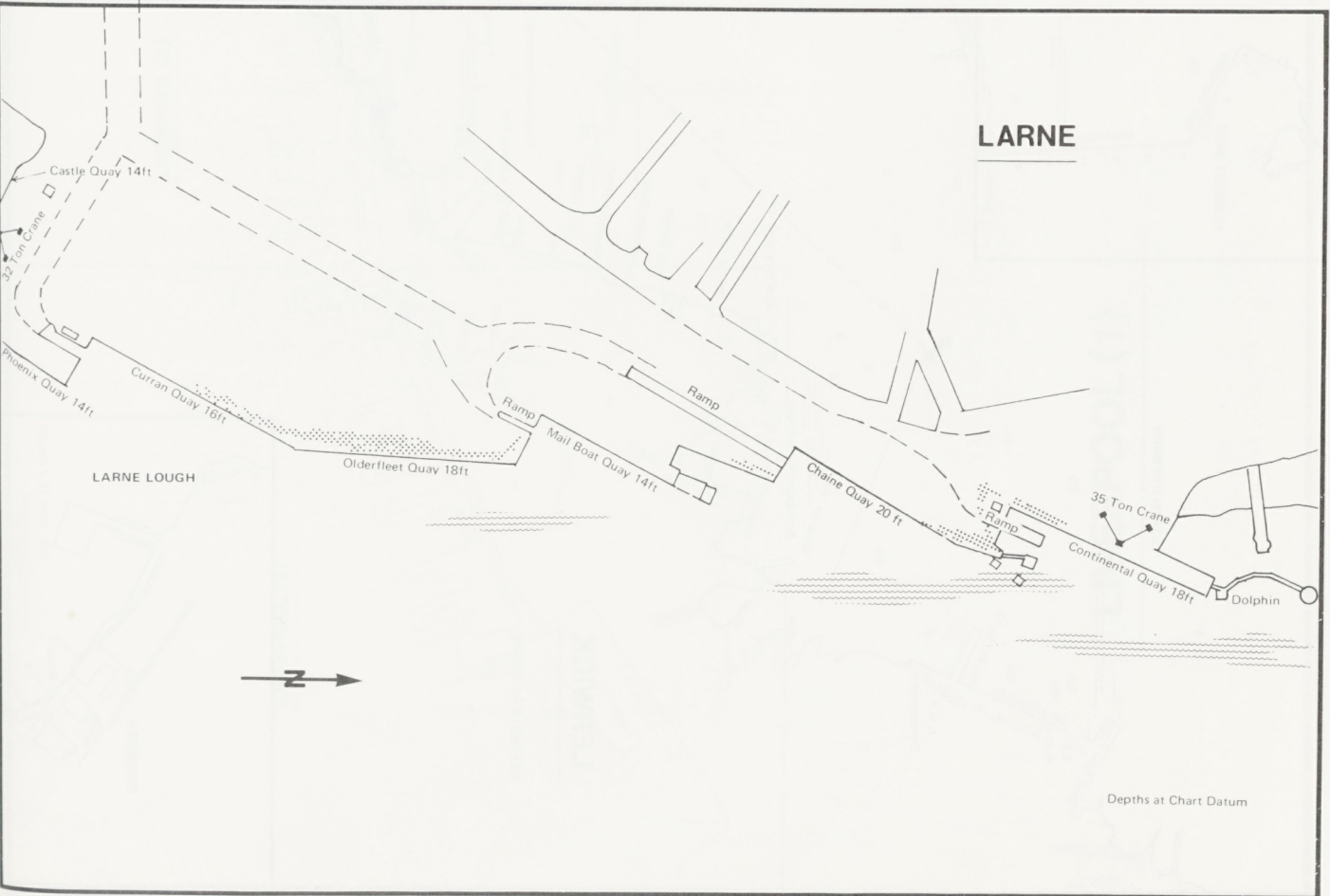
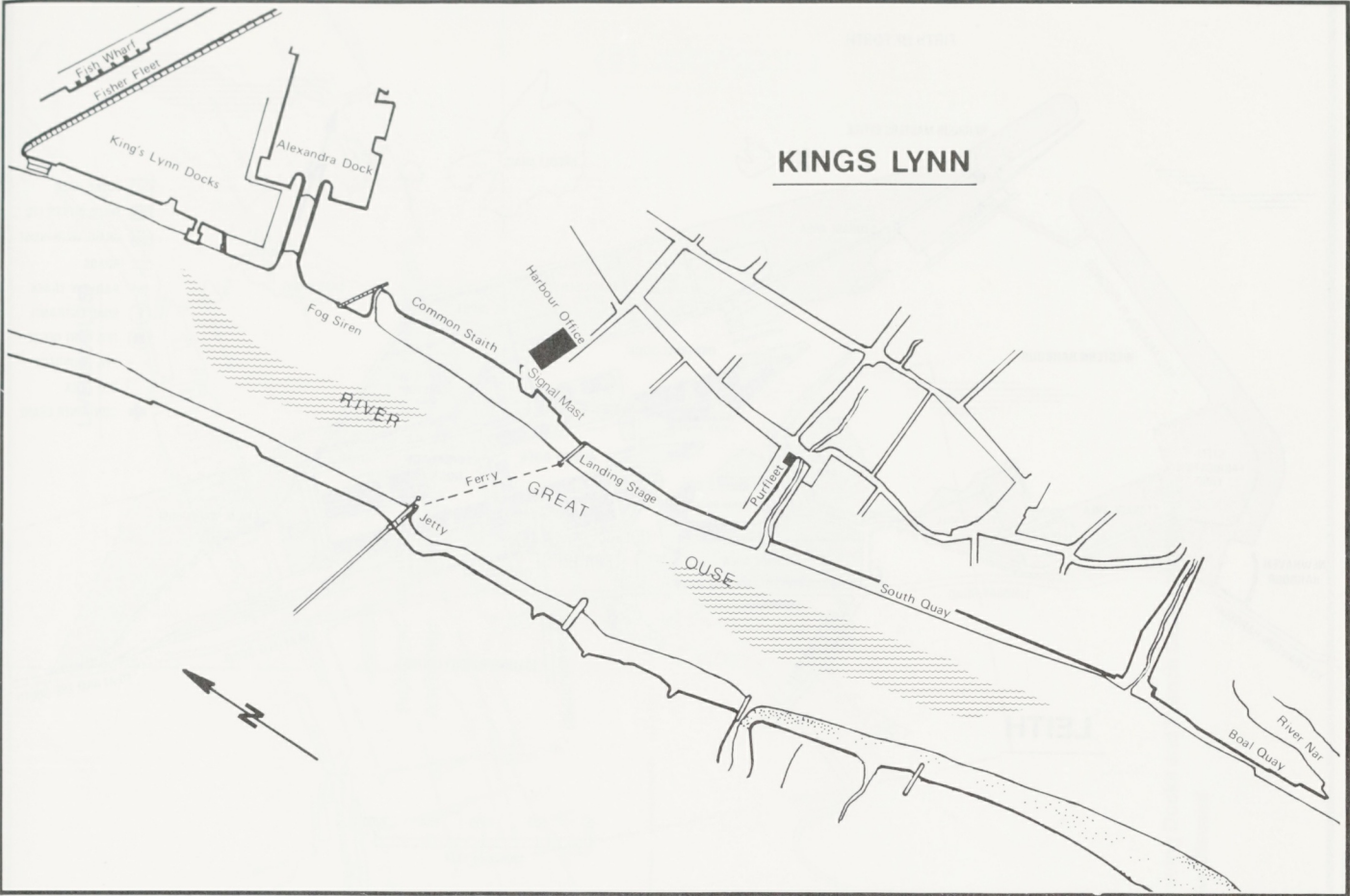
Nairn

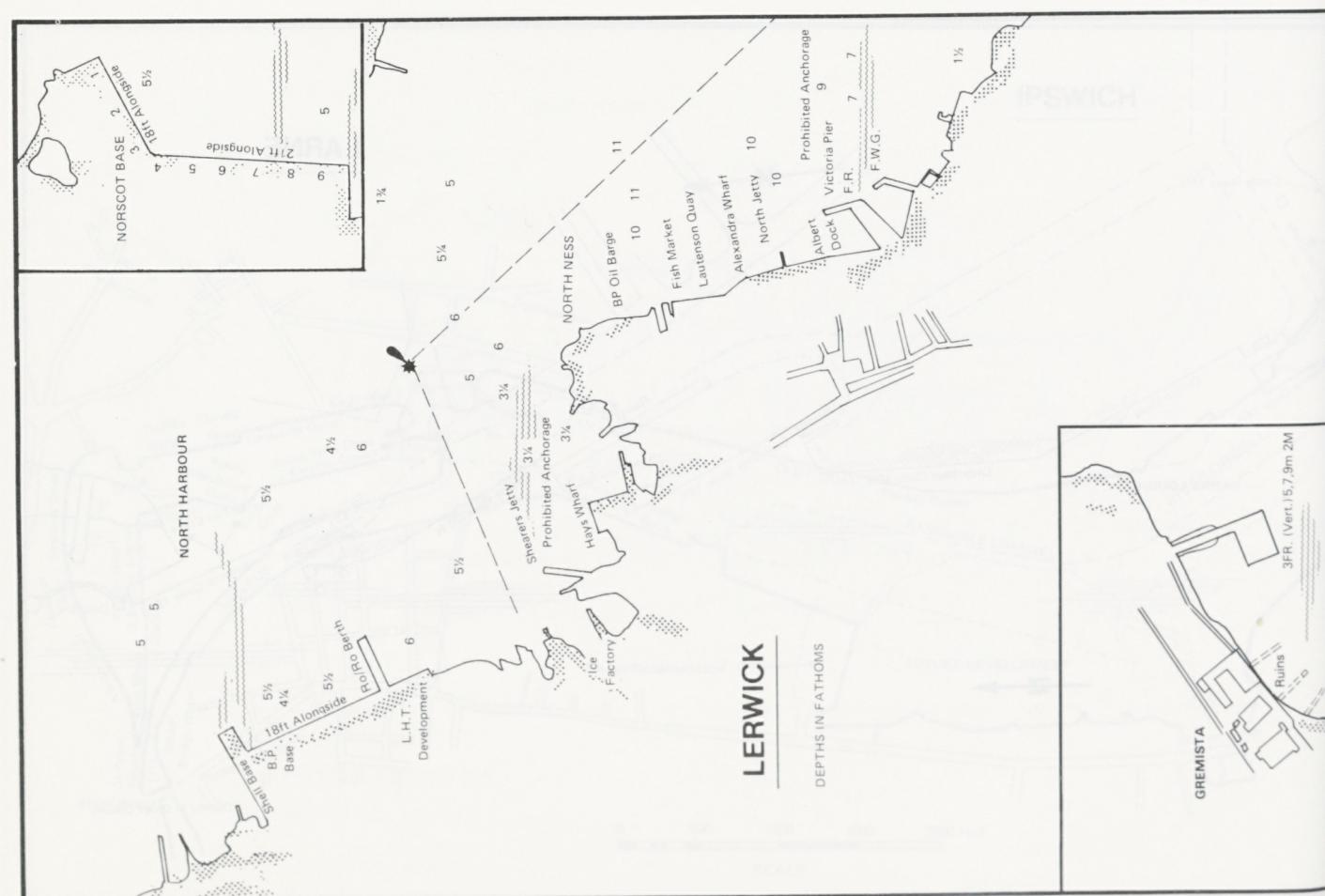
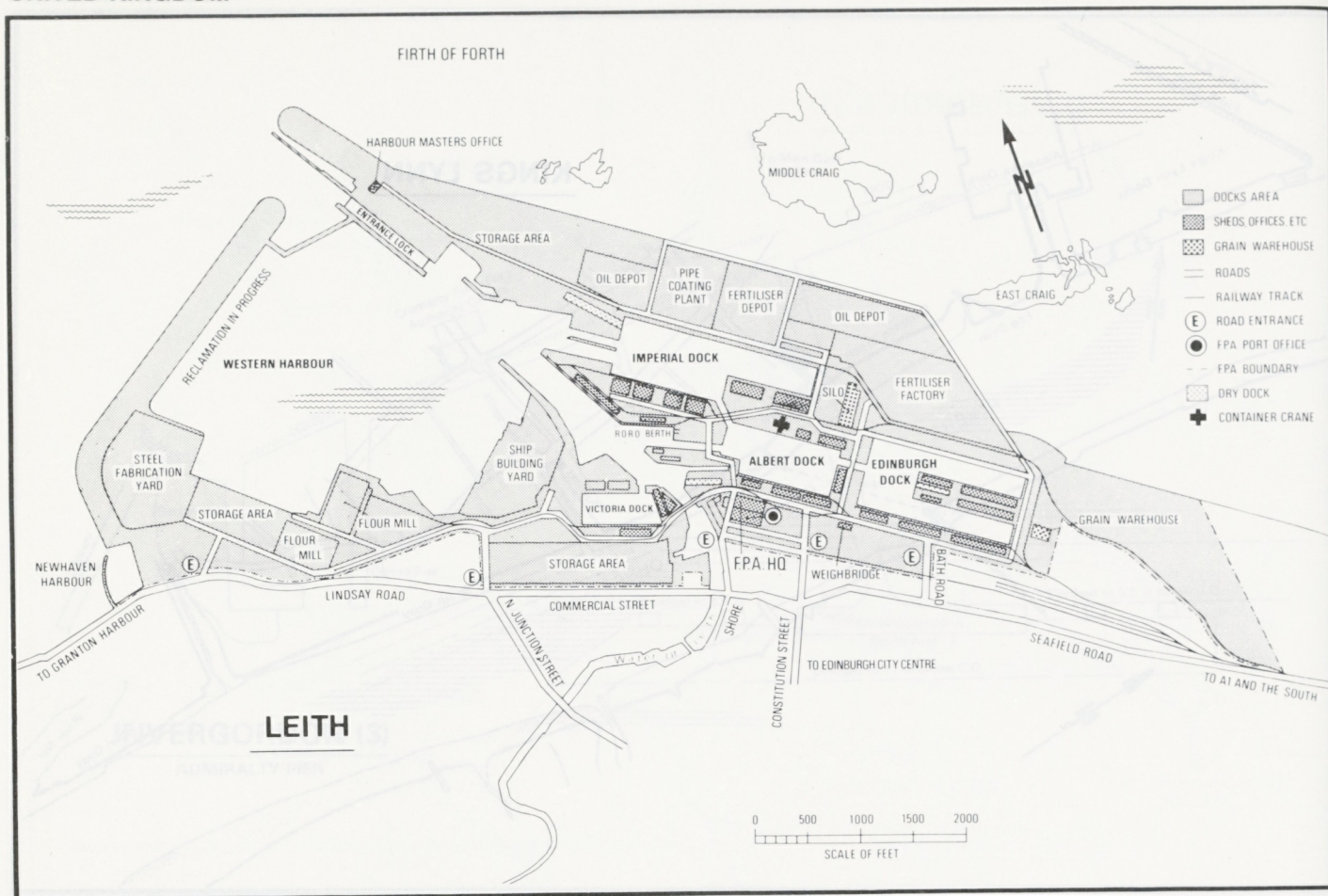
Fortrose



INVERGORDON (2)
BRITISH ALUMINIUM PIER



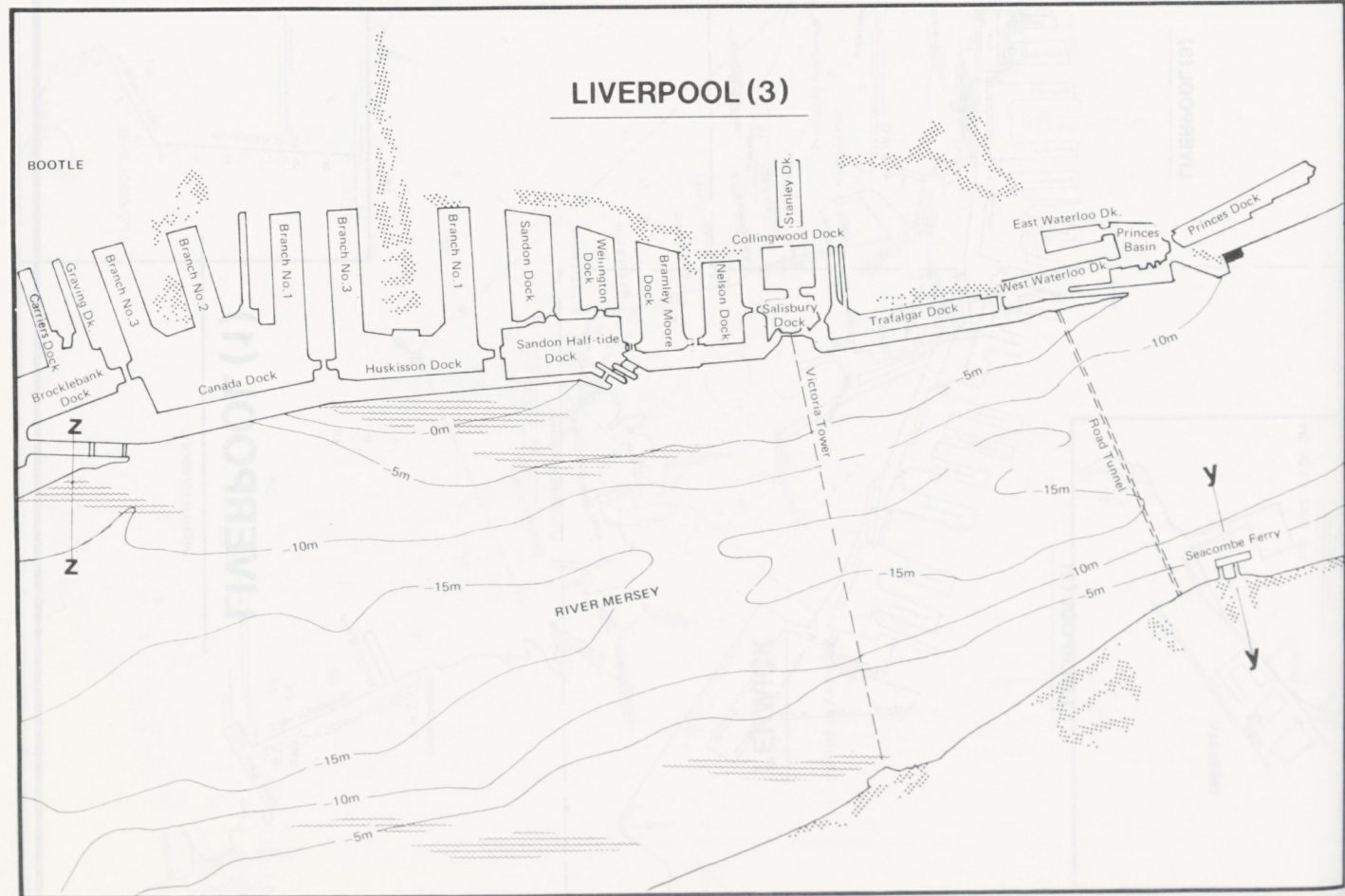
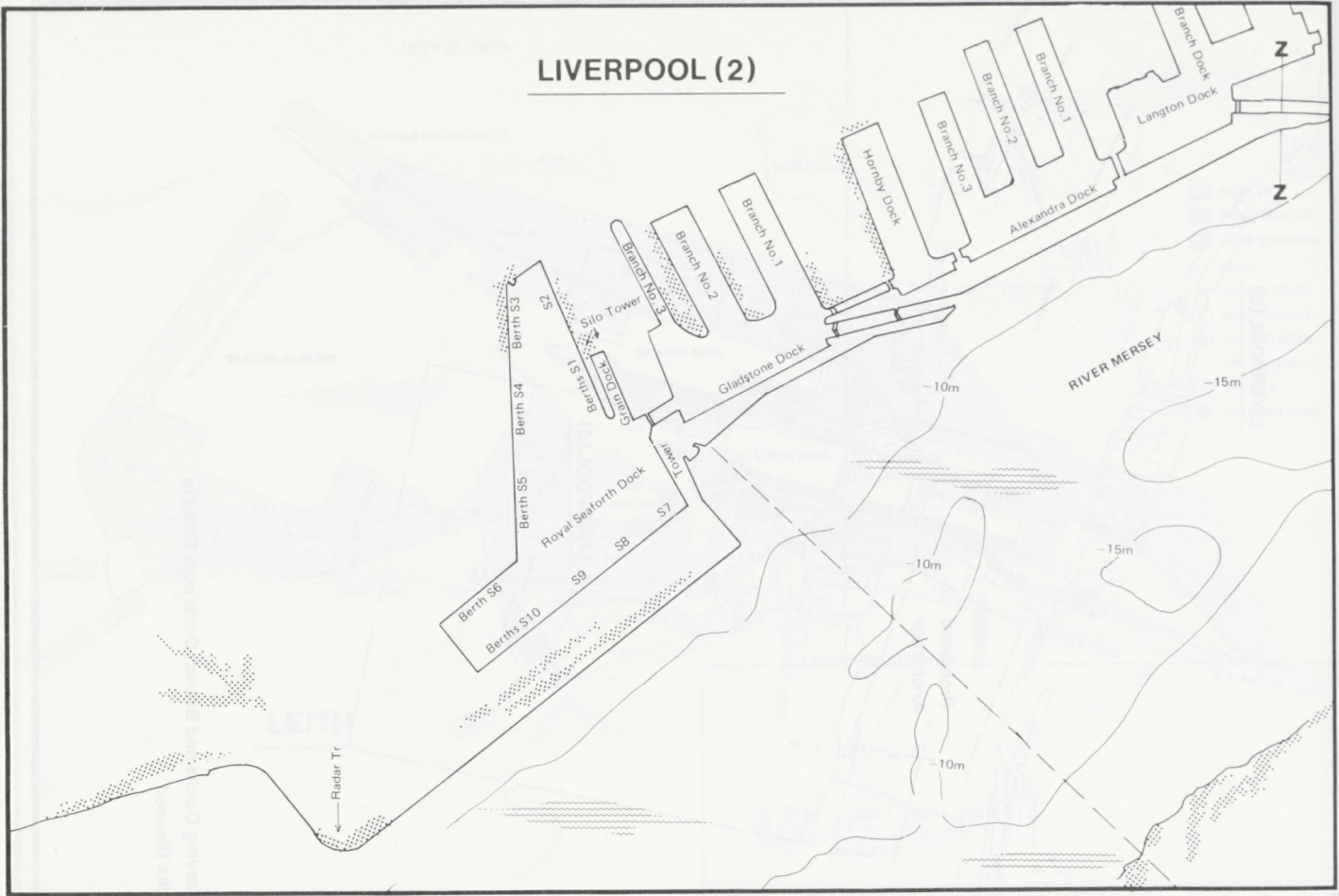


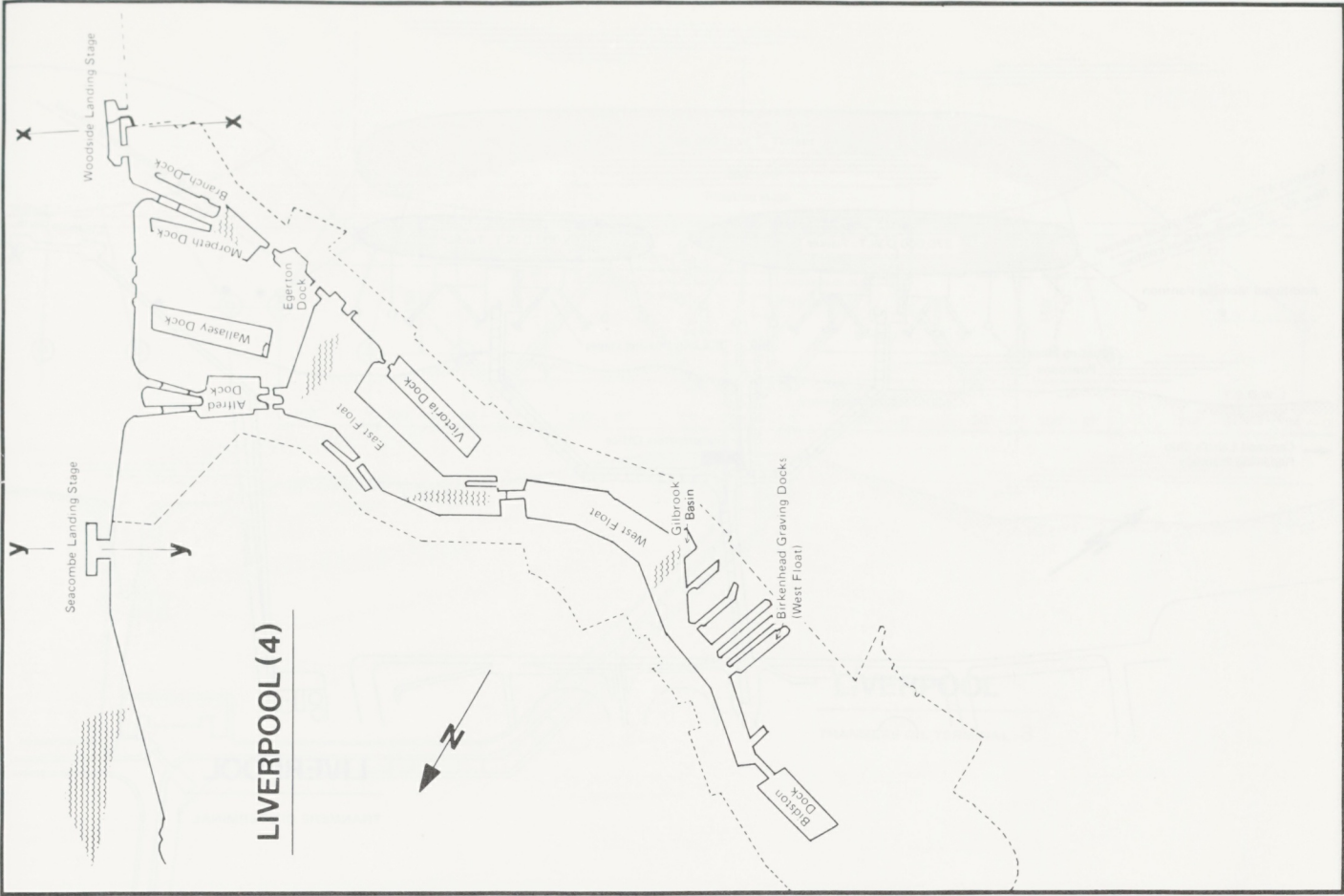


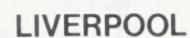


Langton Graving Docks and Branch Dock now Filled in
South Docks Disused

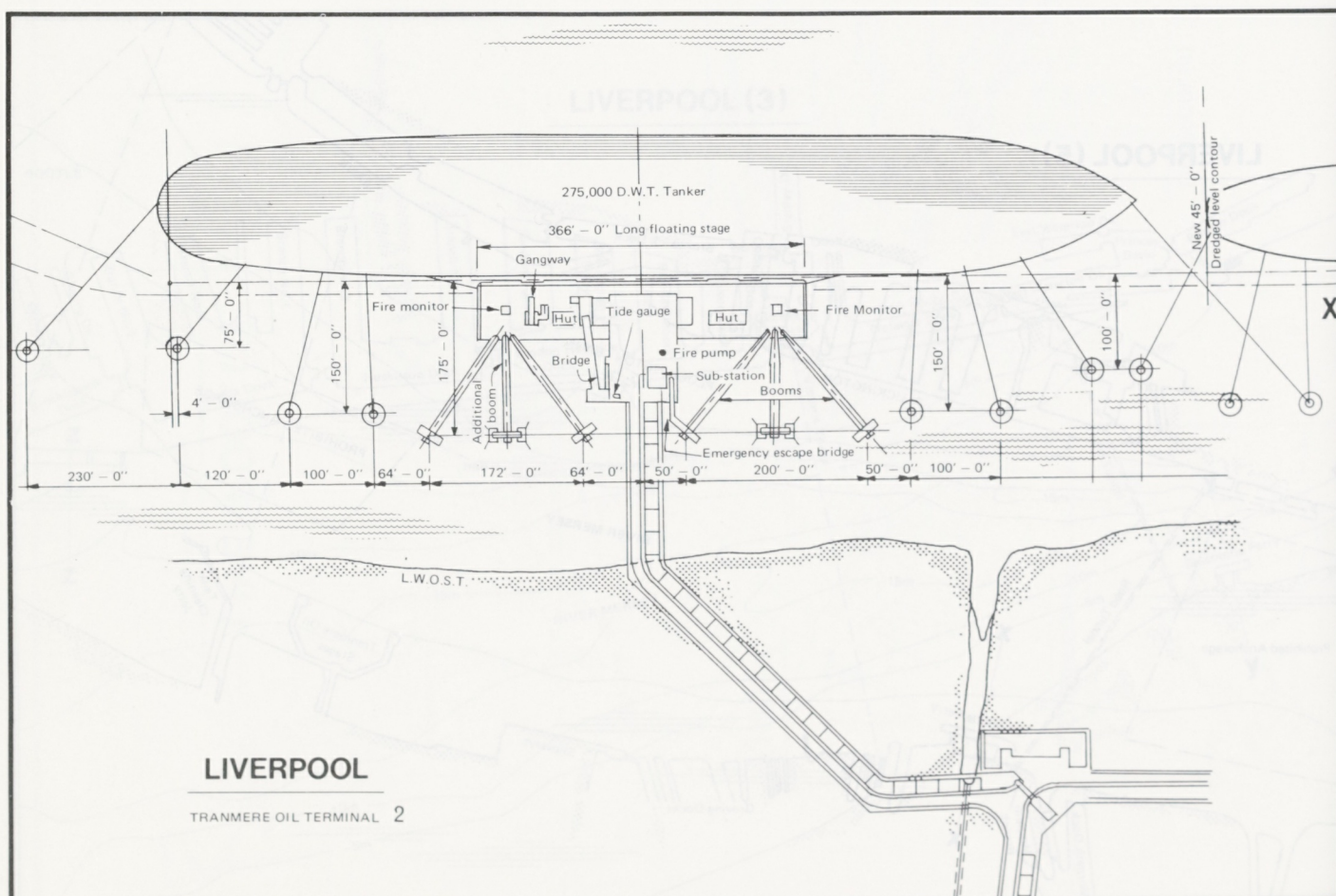
LIVERPOOL (1)

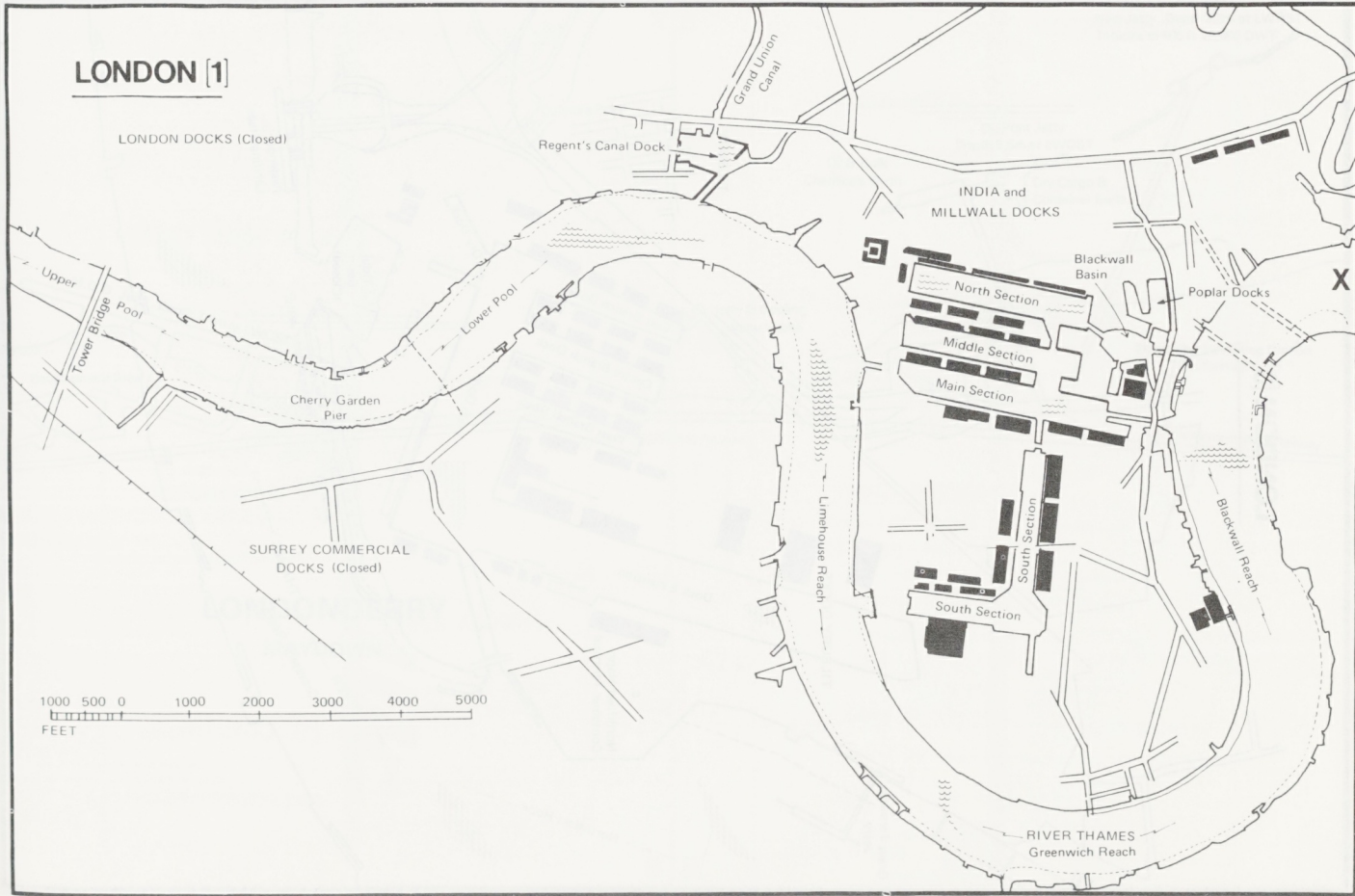
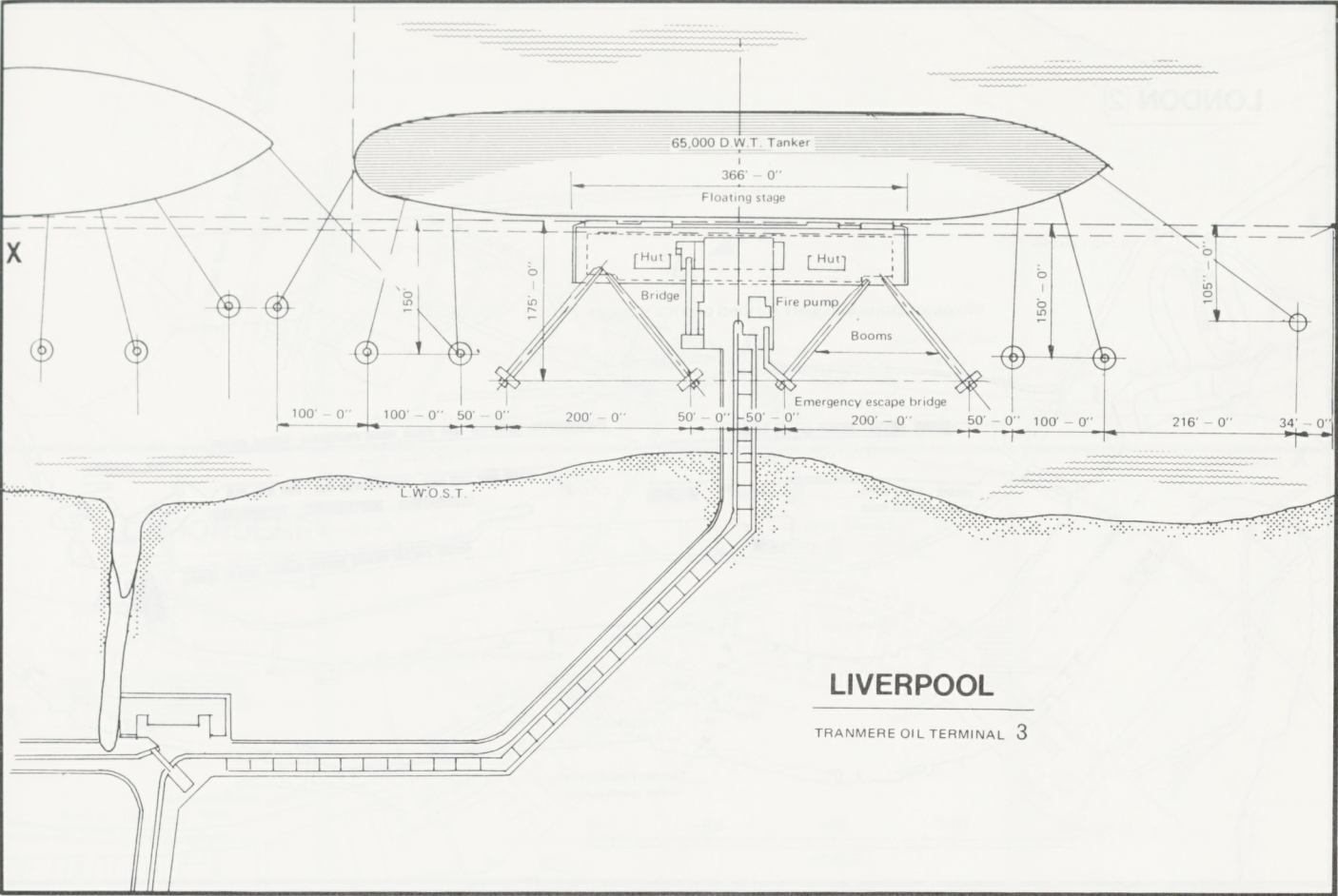




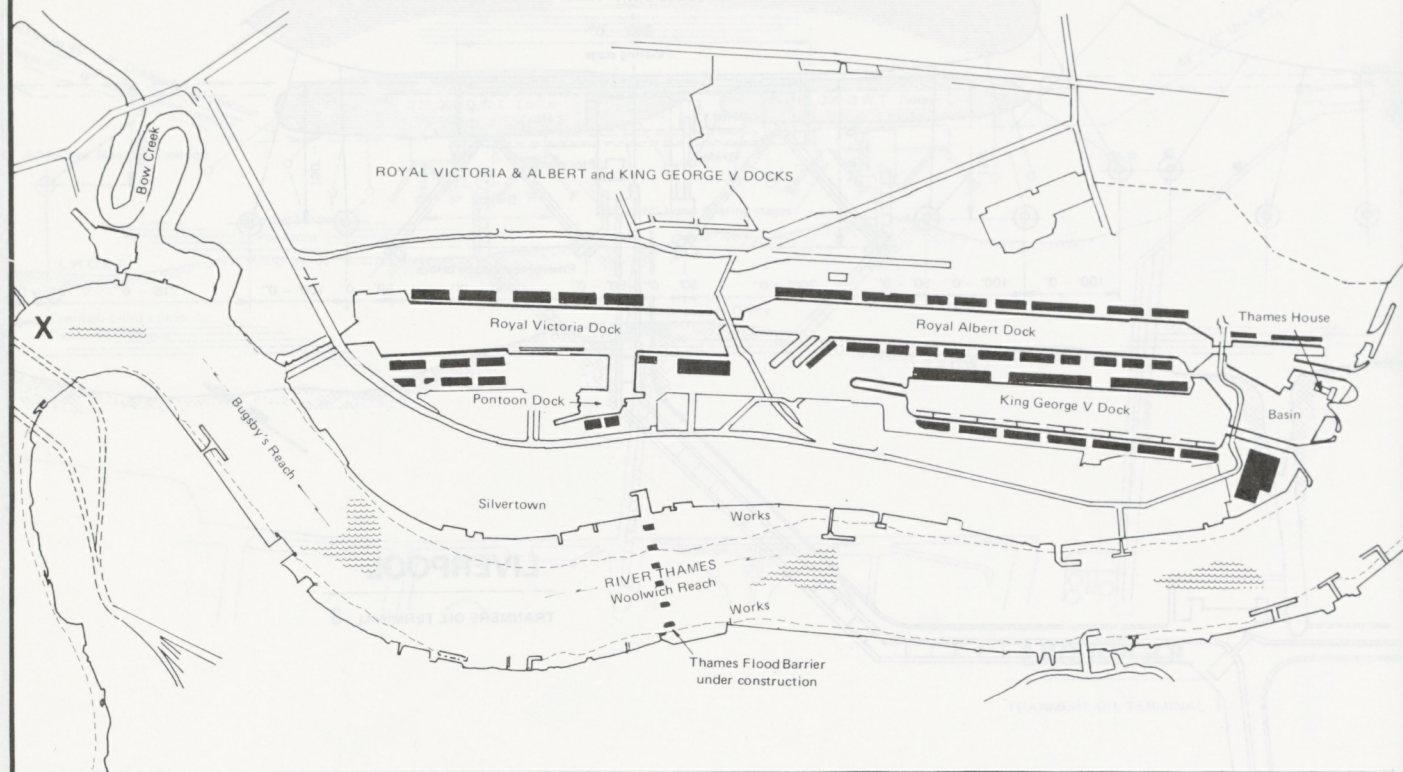


TRANMERE OIL TERMINAL 1

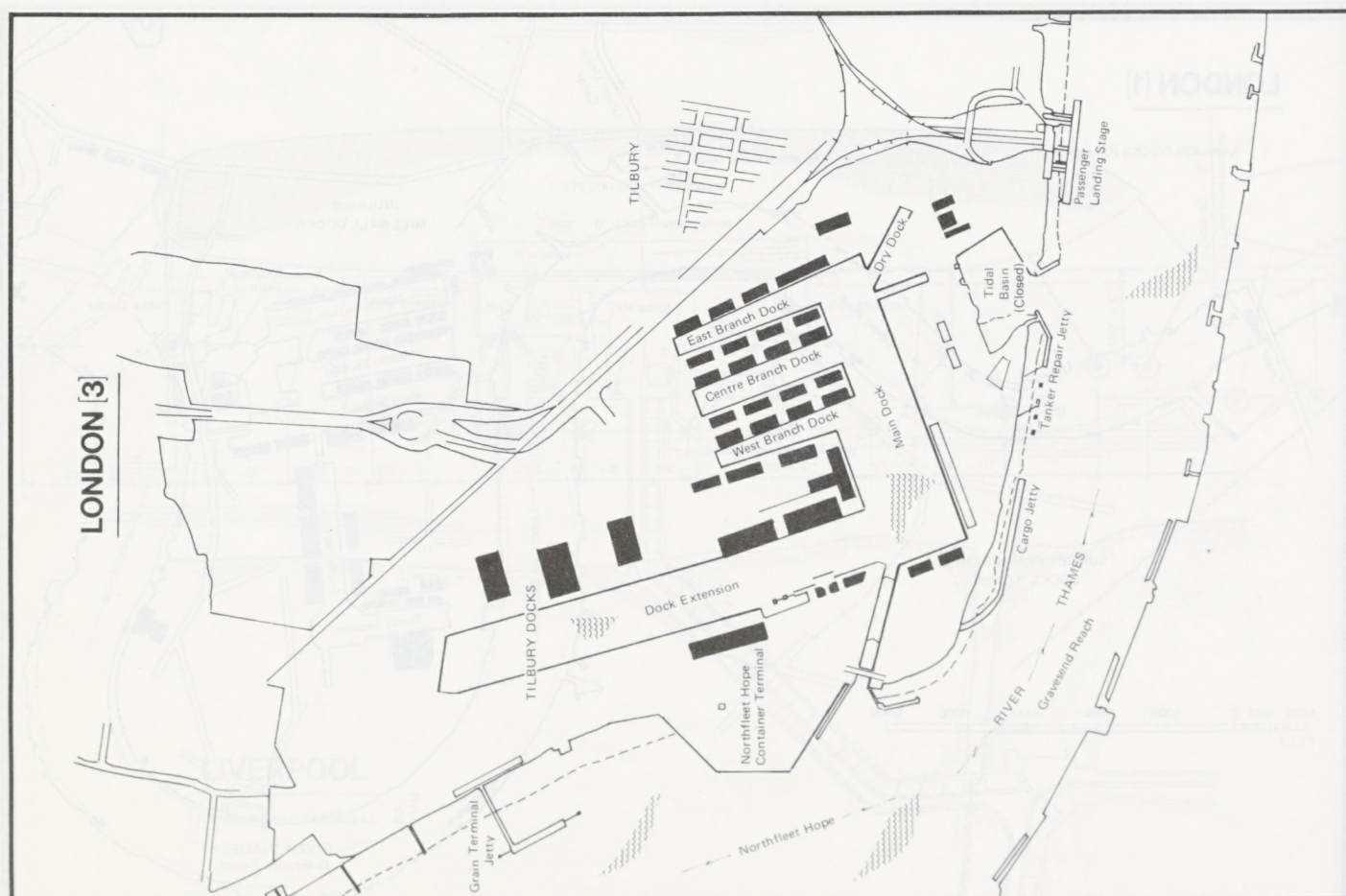


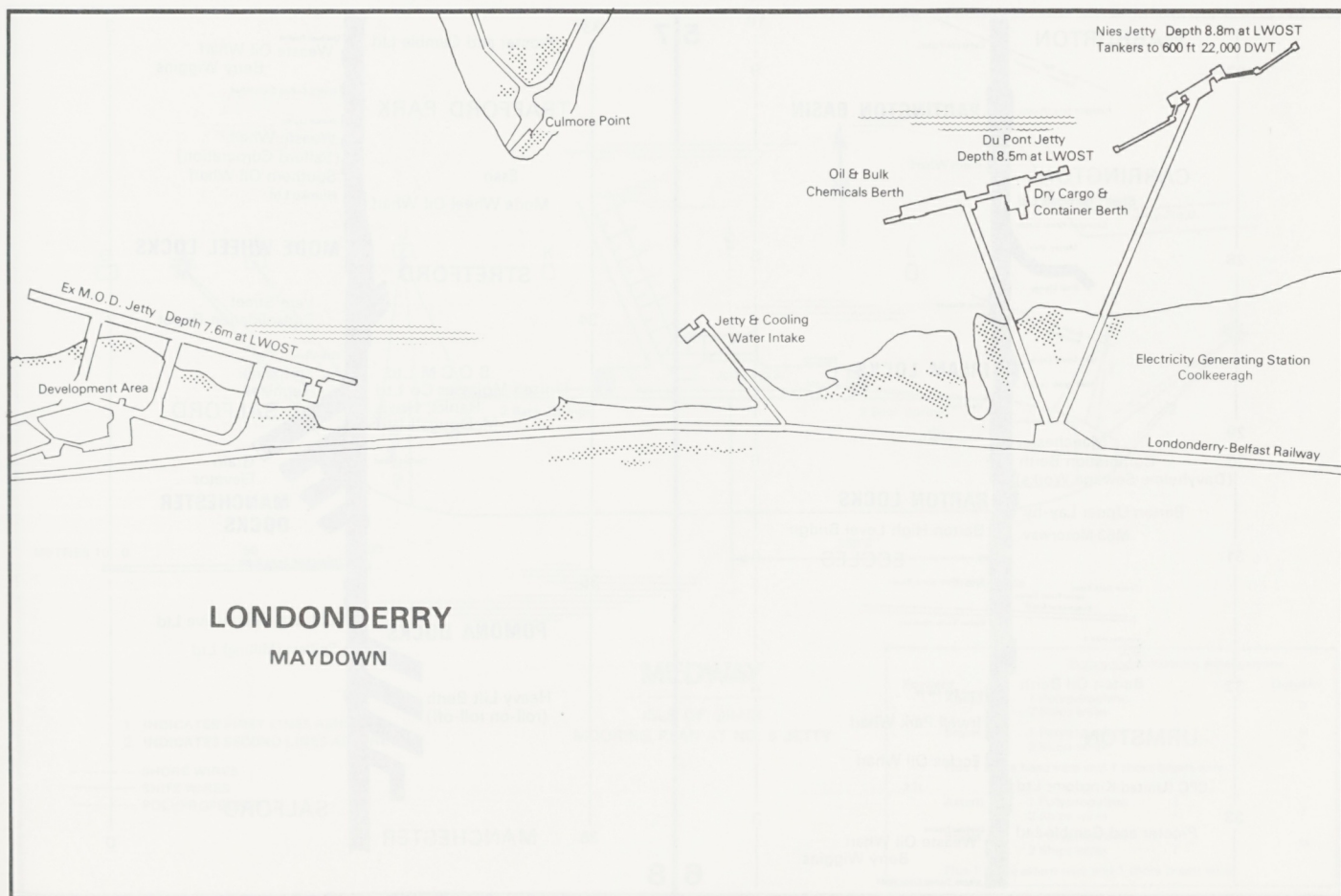
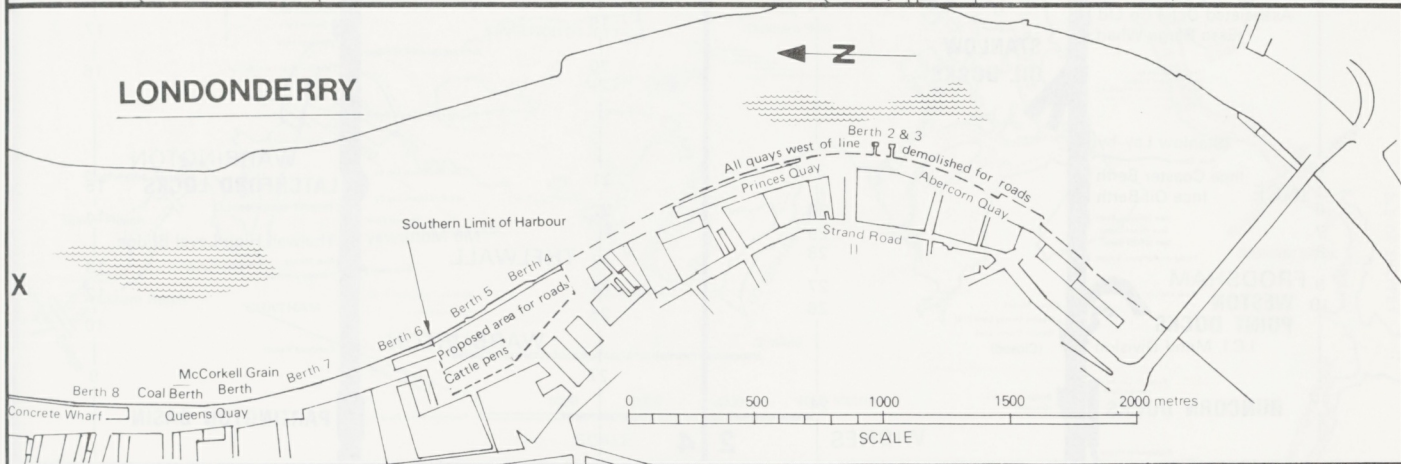
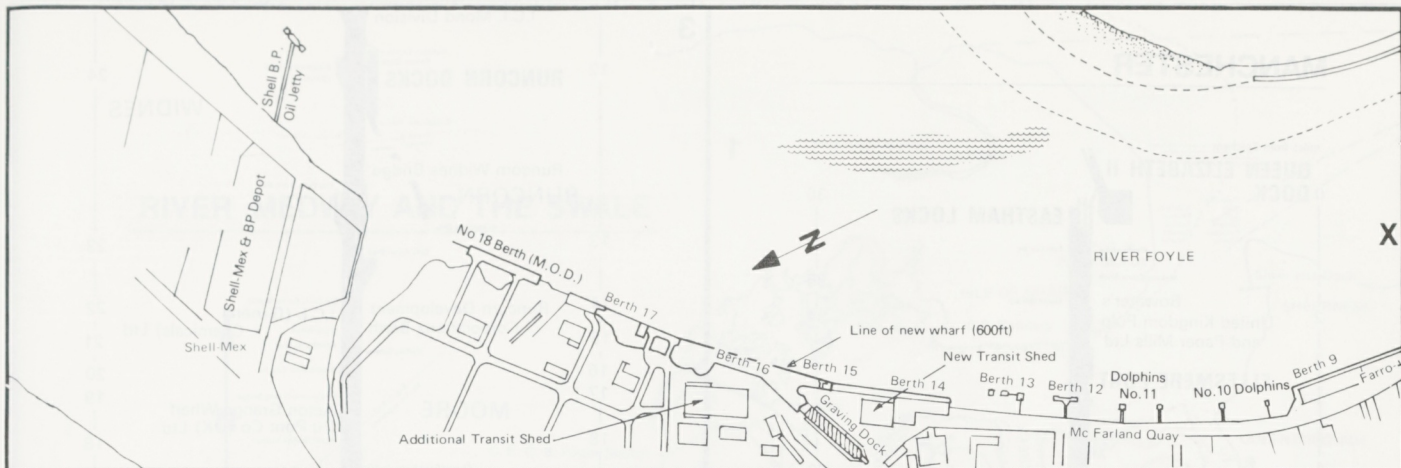


LONDON [2]

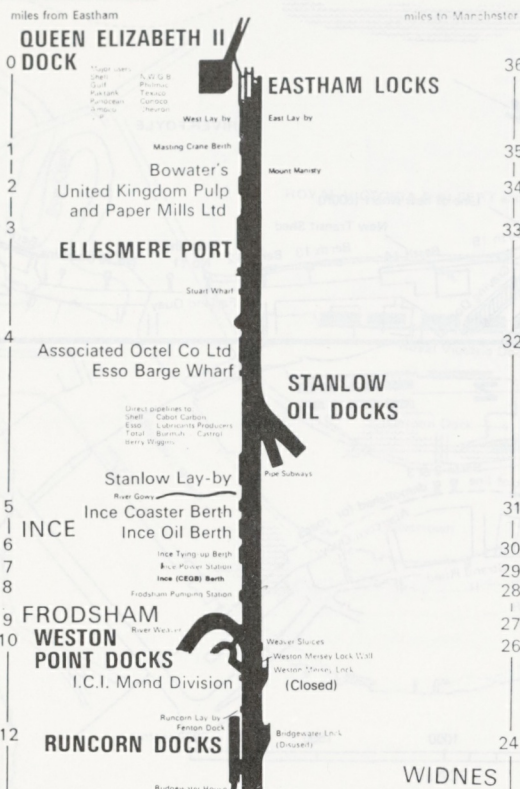


LONDON [3]

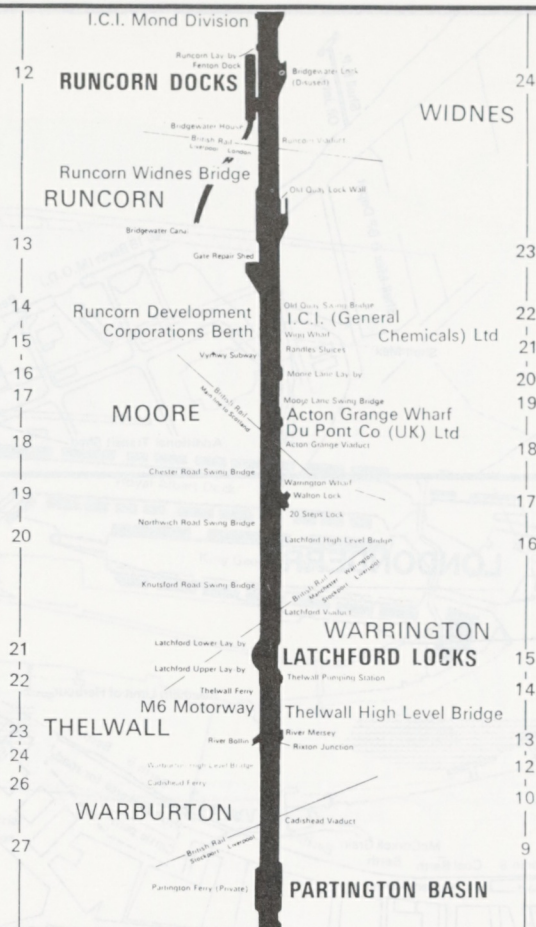




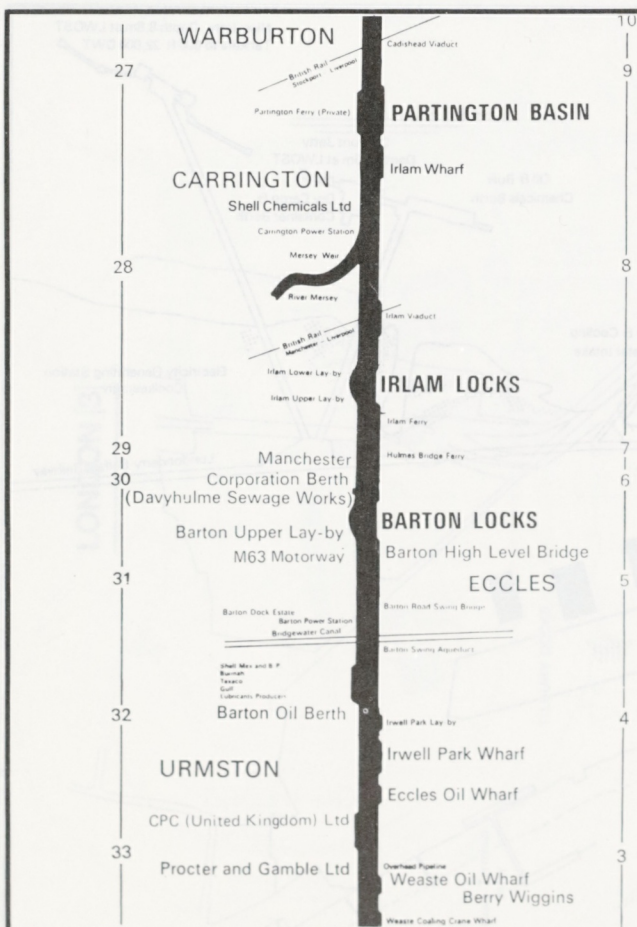
MANCHESTER



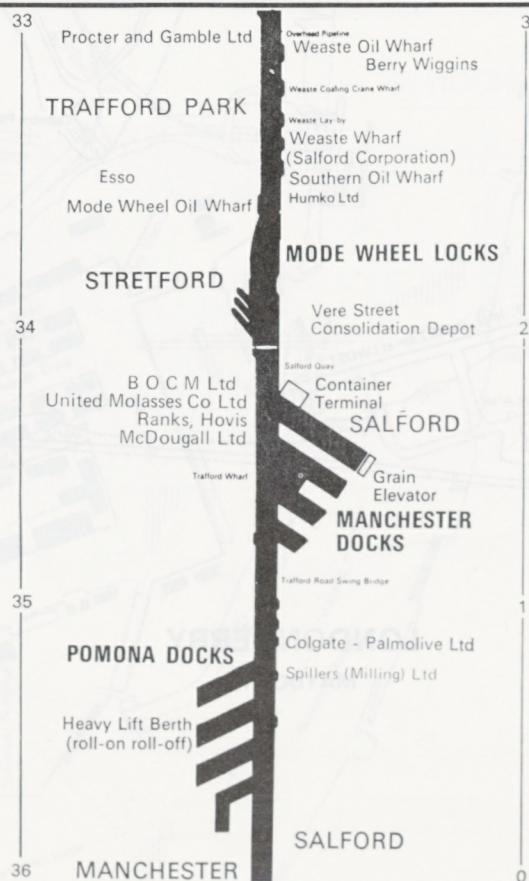
3



2 4

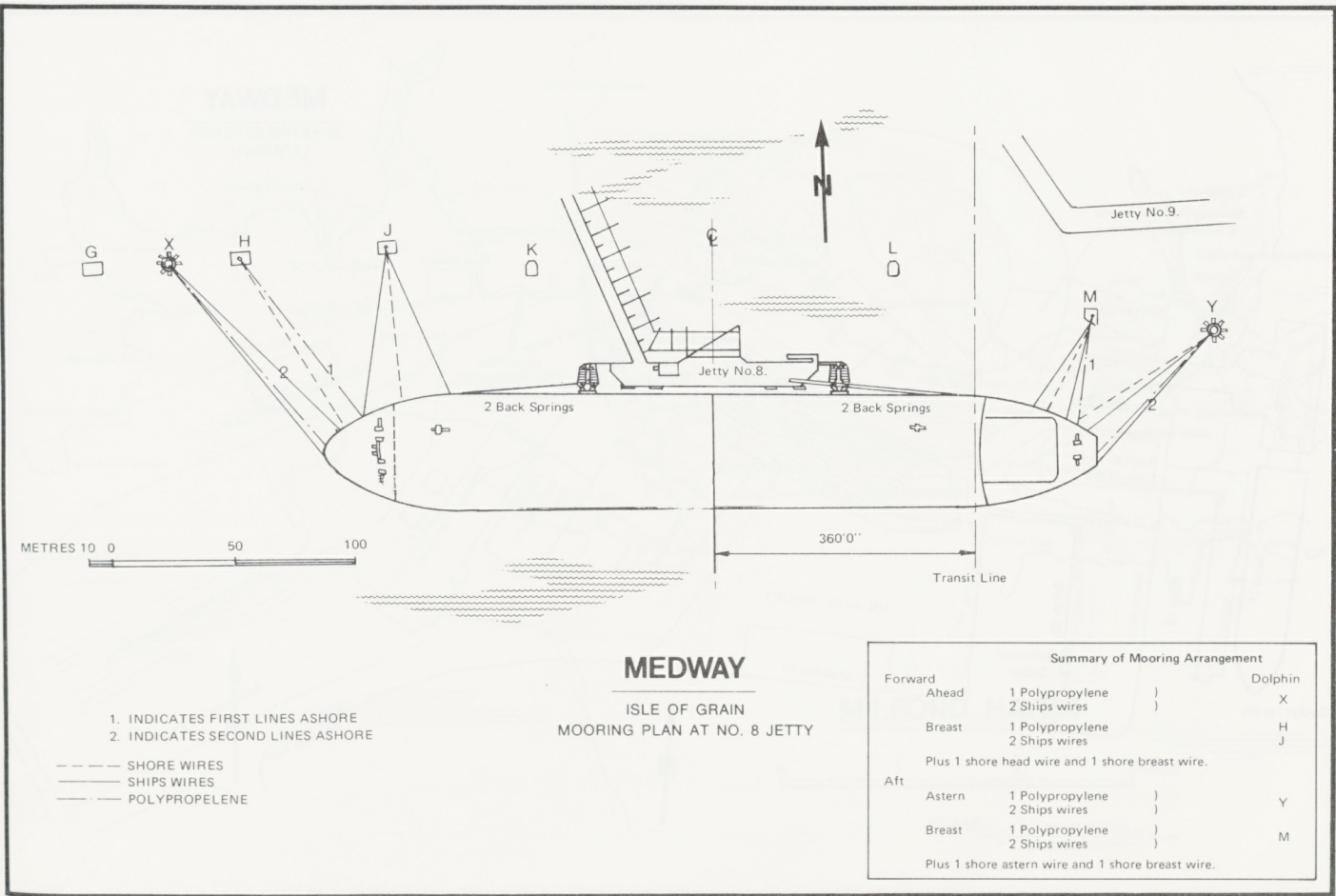
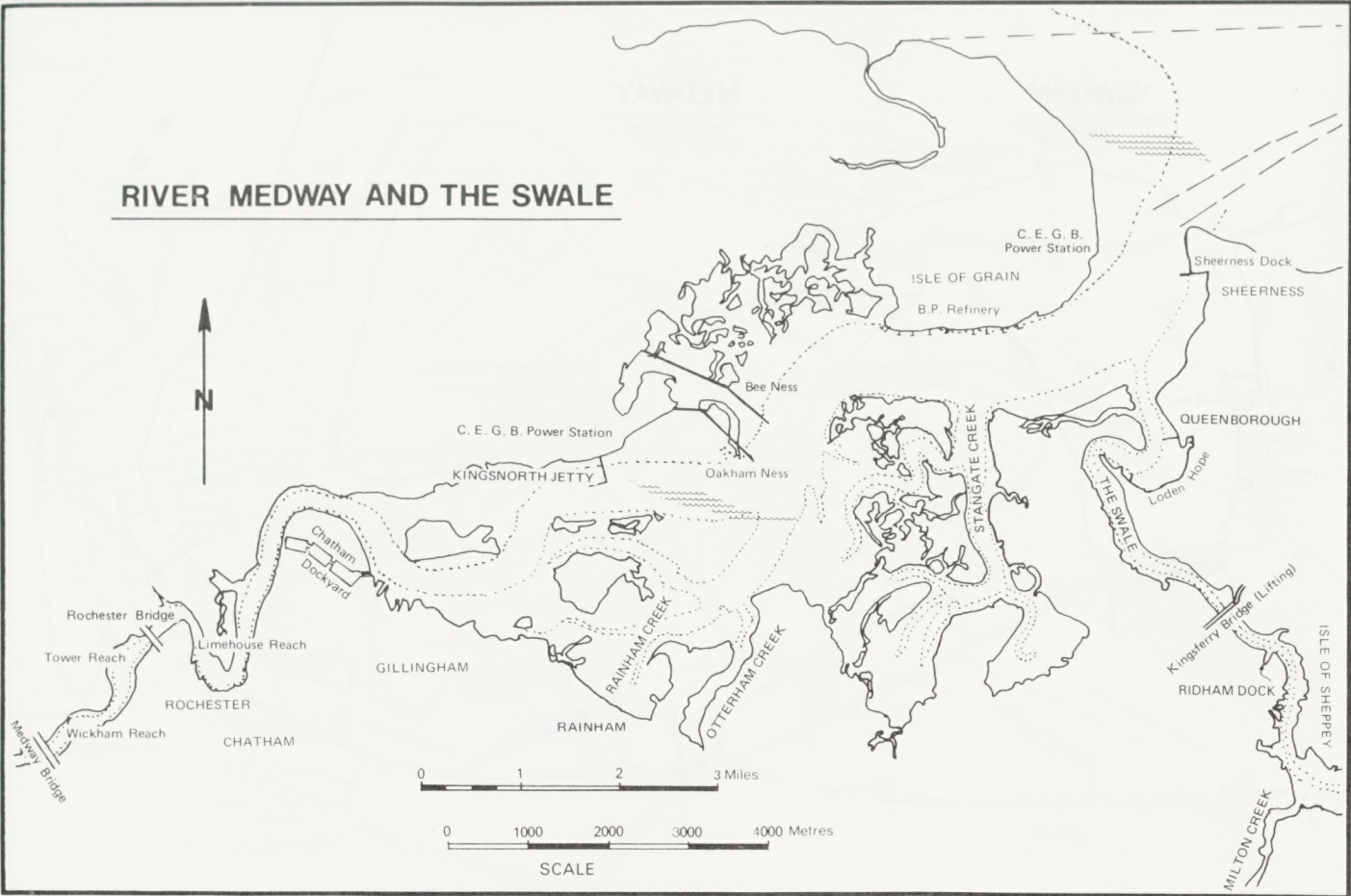


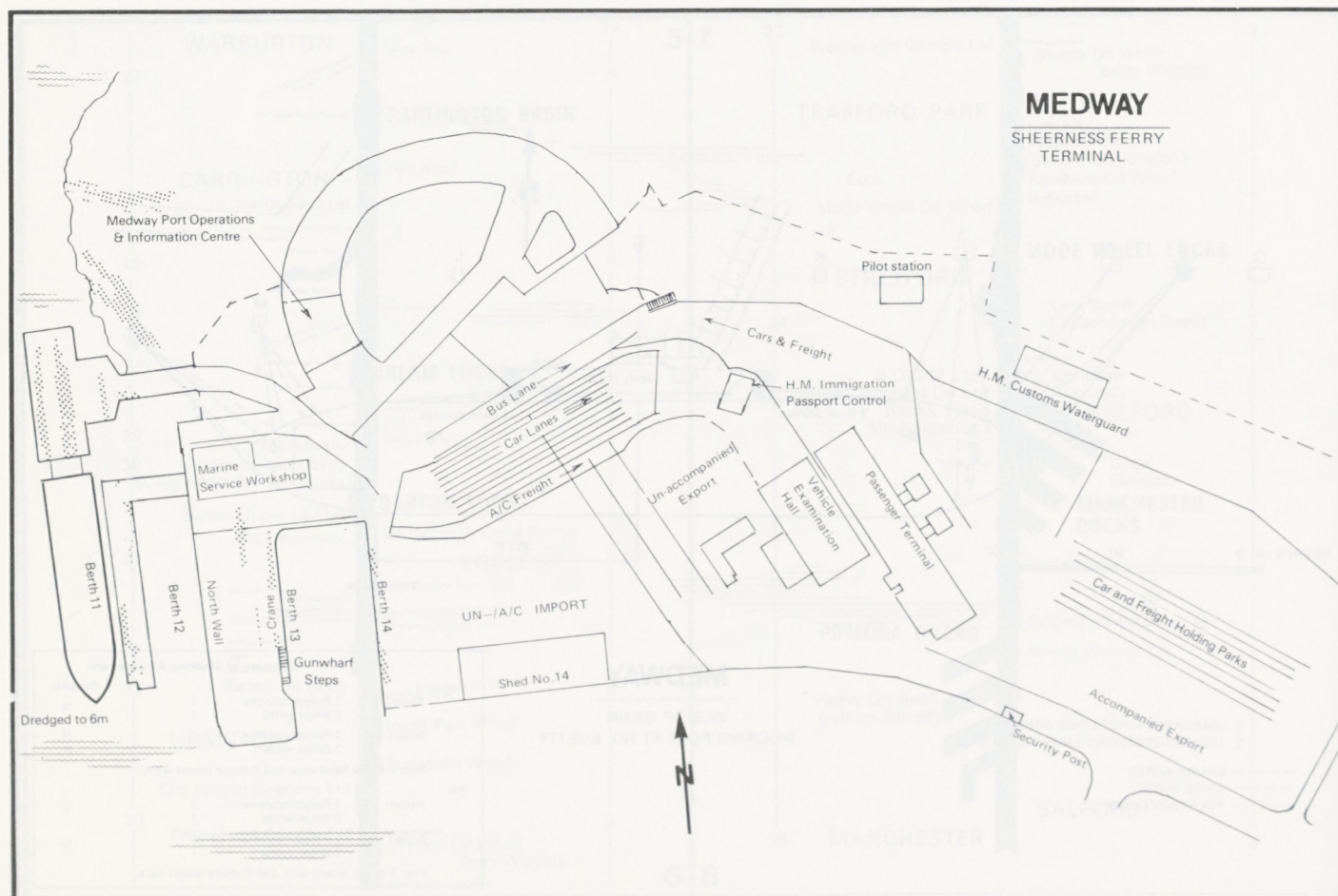
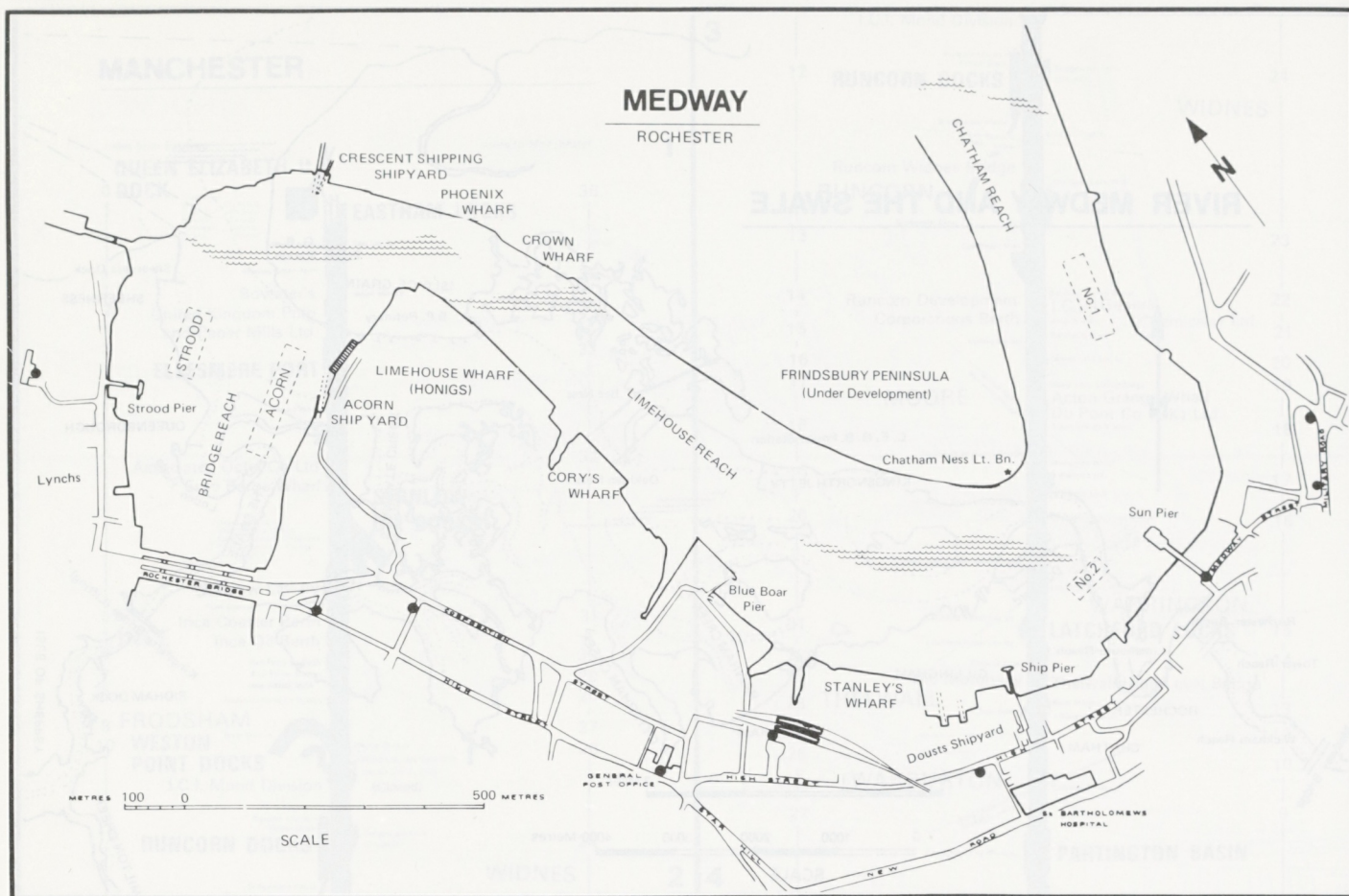
5 7

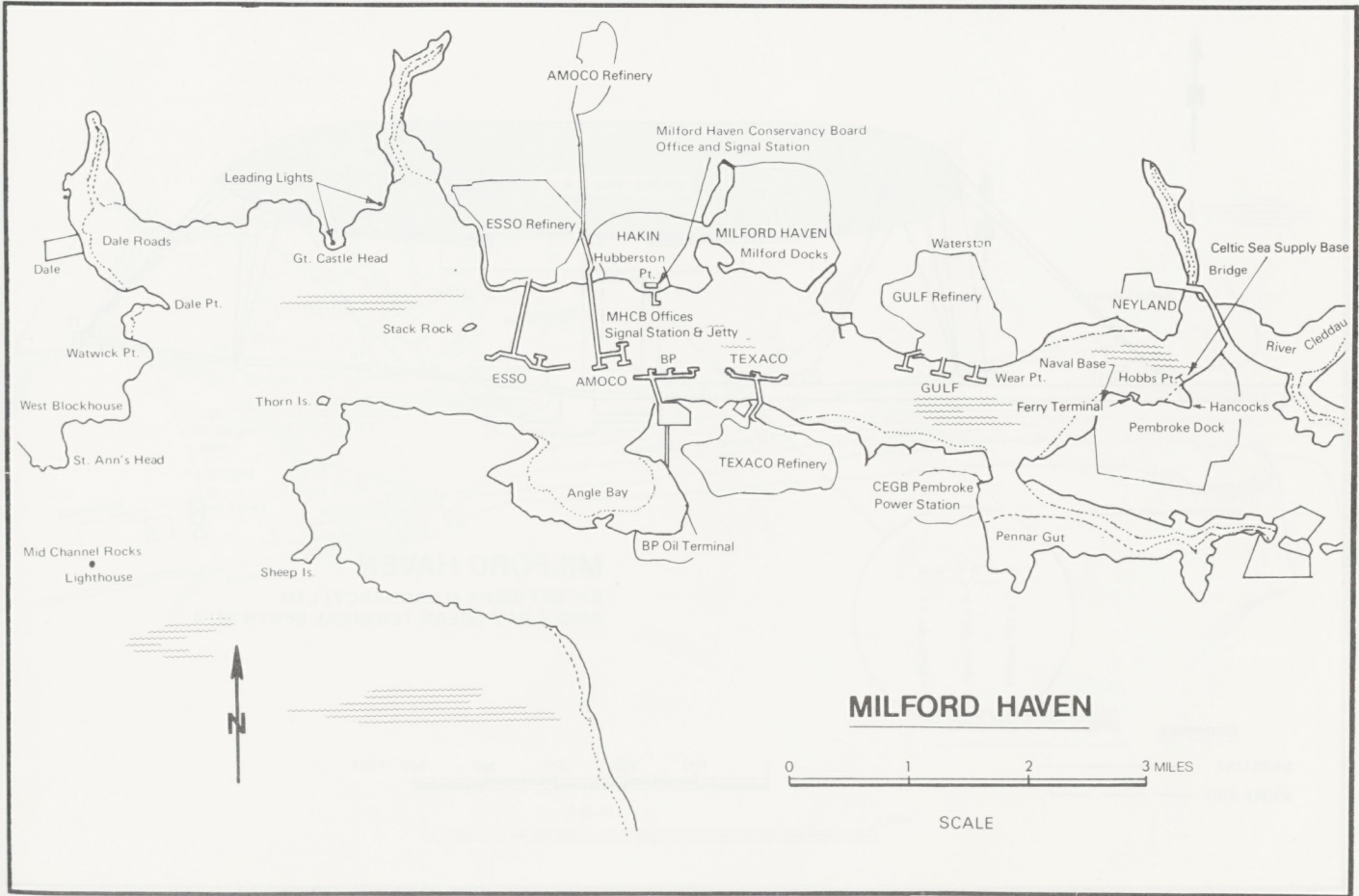
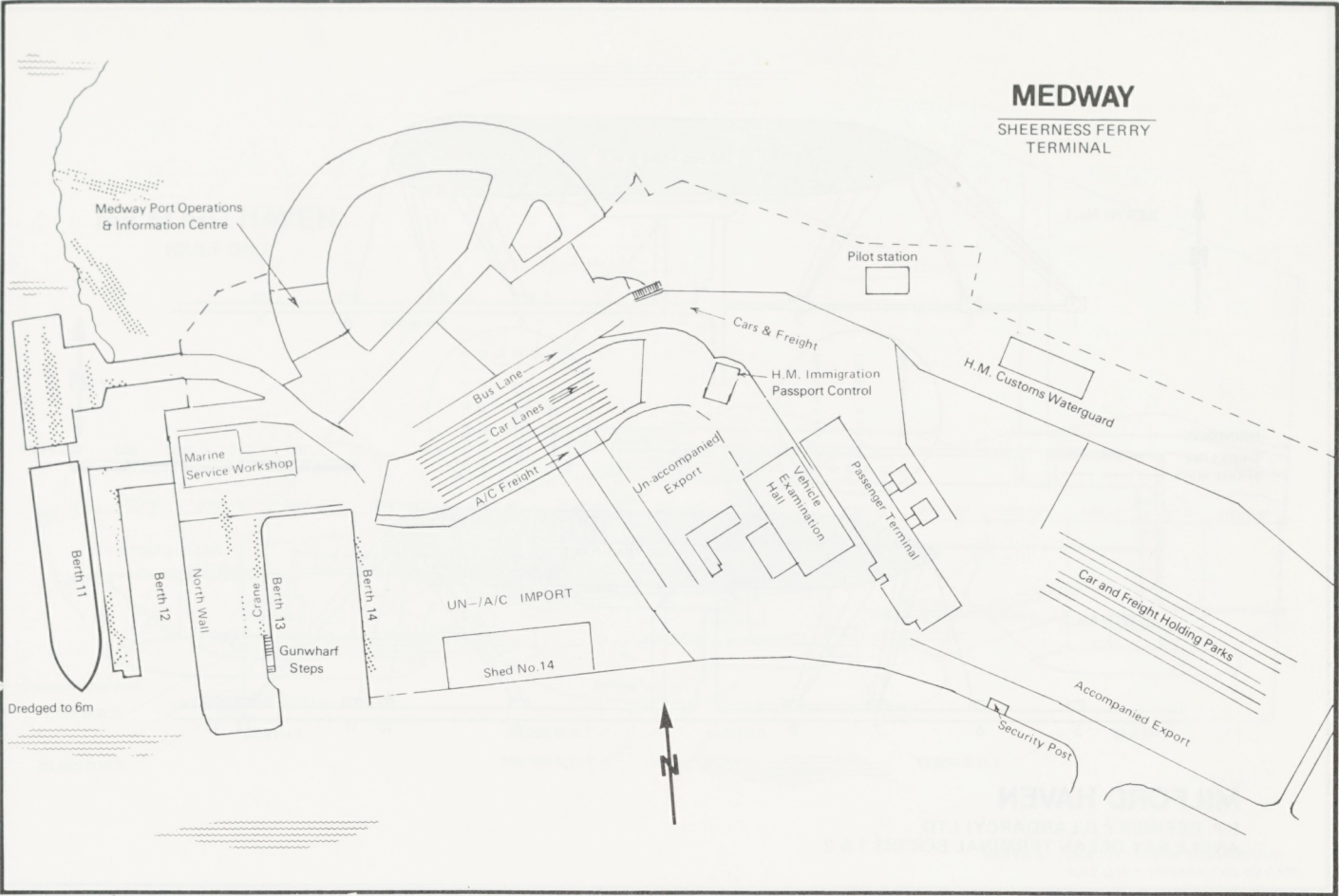


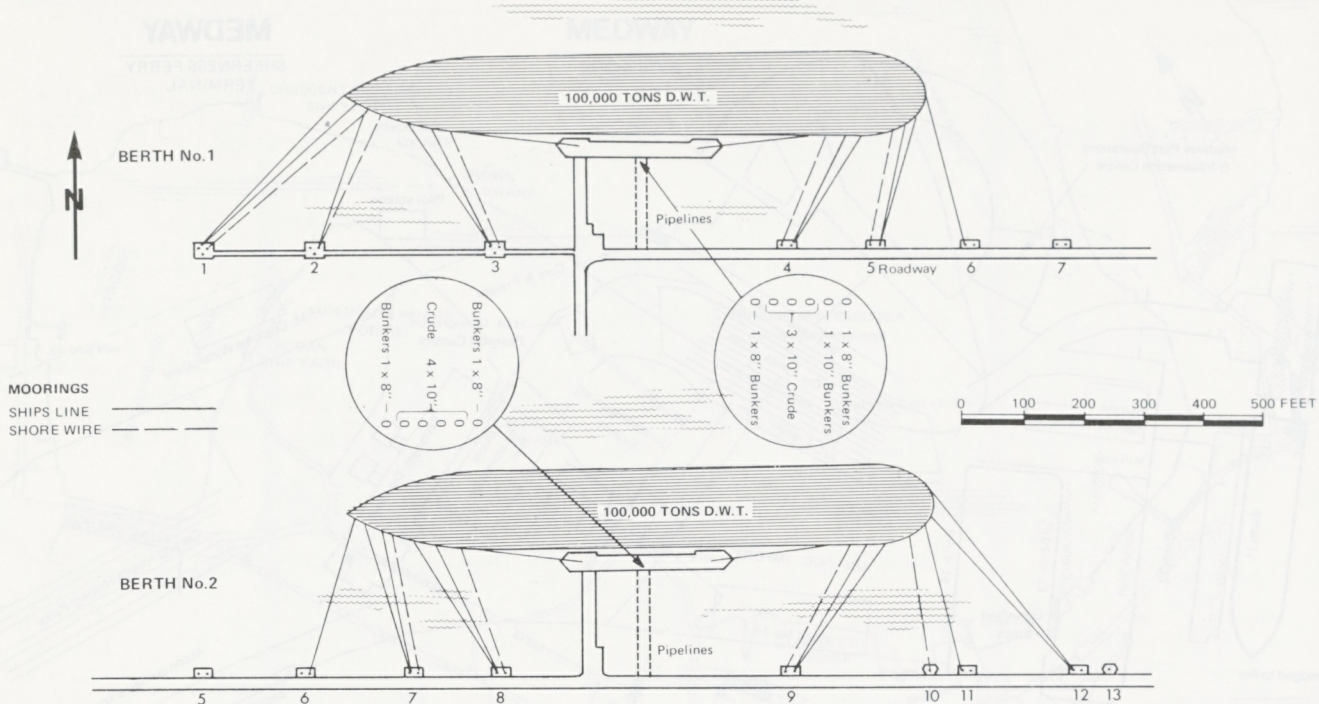
6 8

RIVER MEDWAY AND THE SWALE



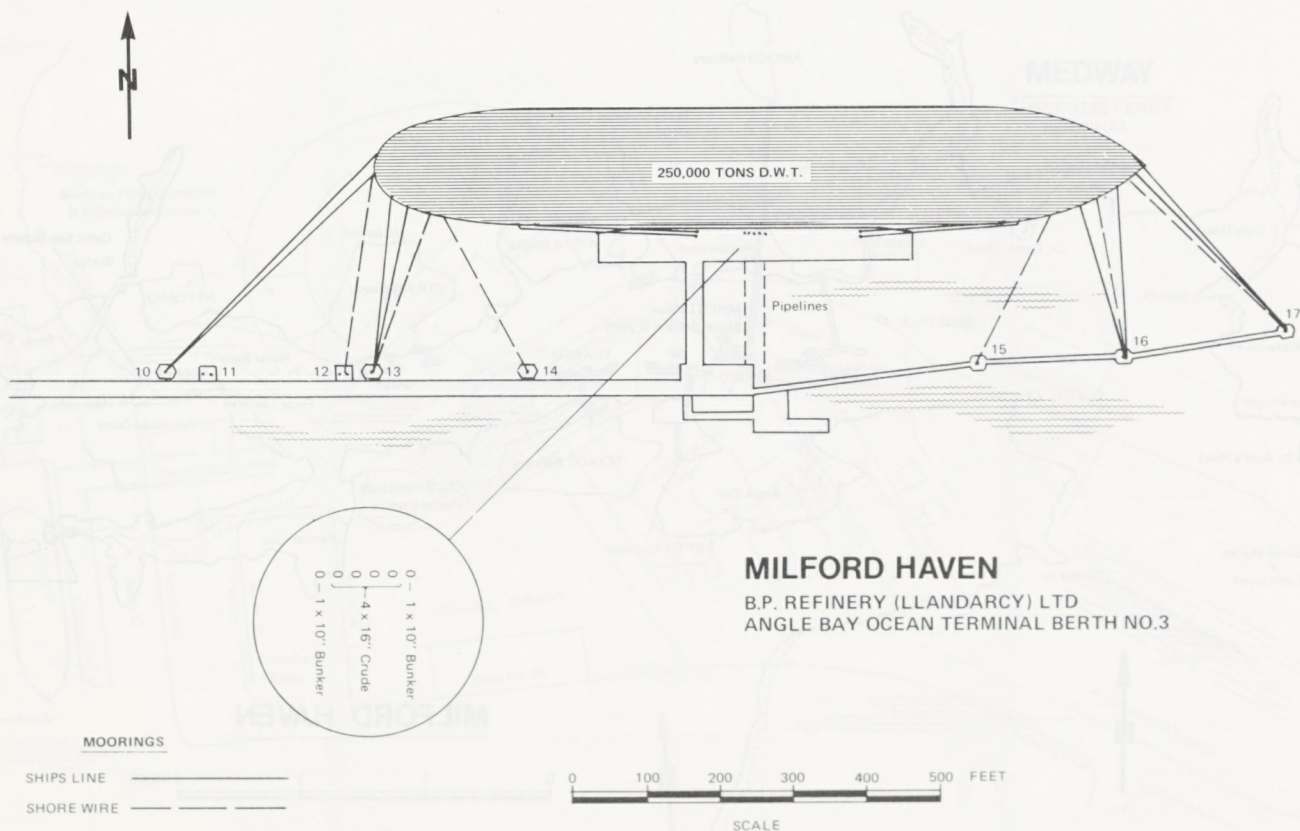






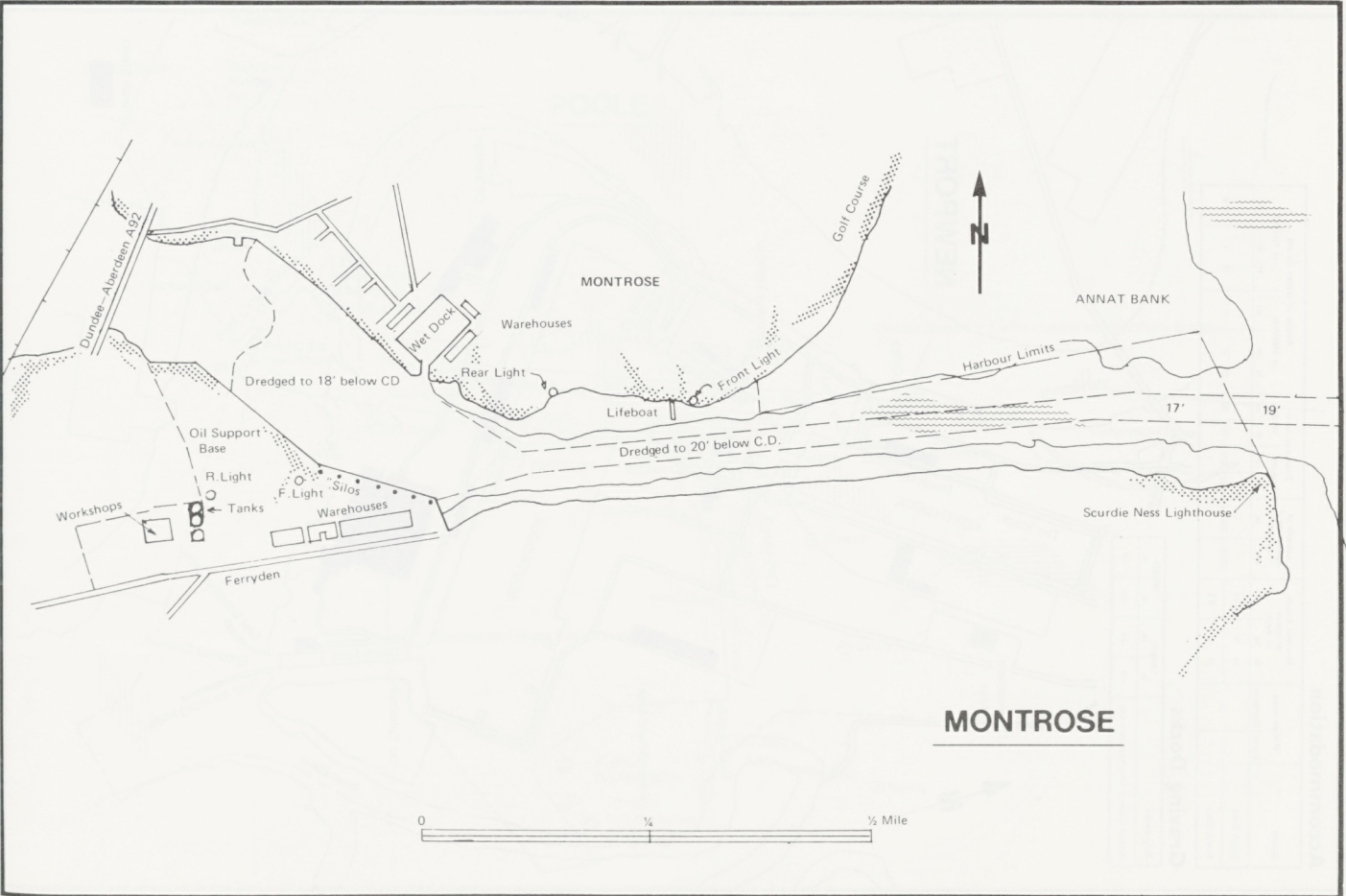
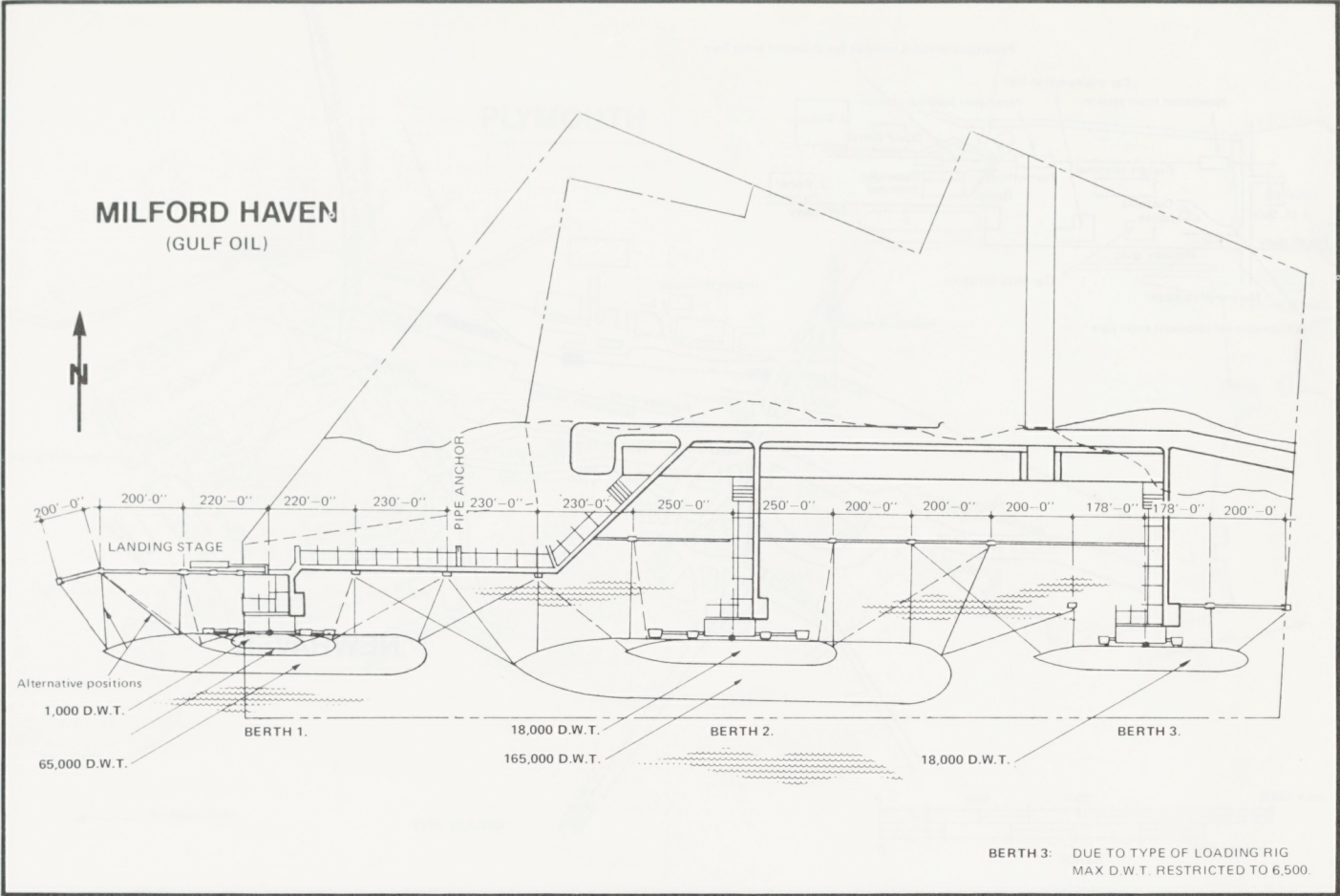
MILFORD HAVEN

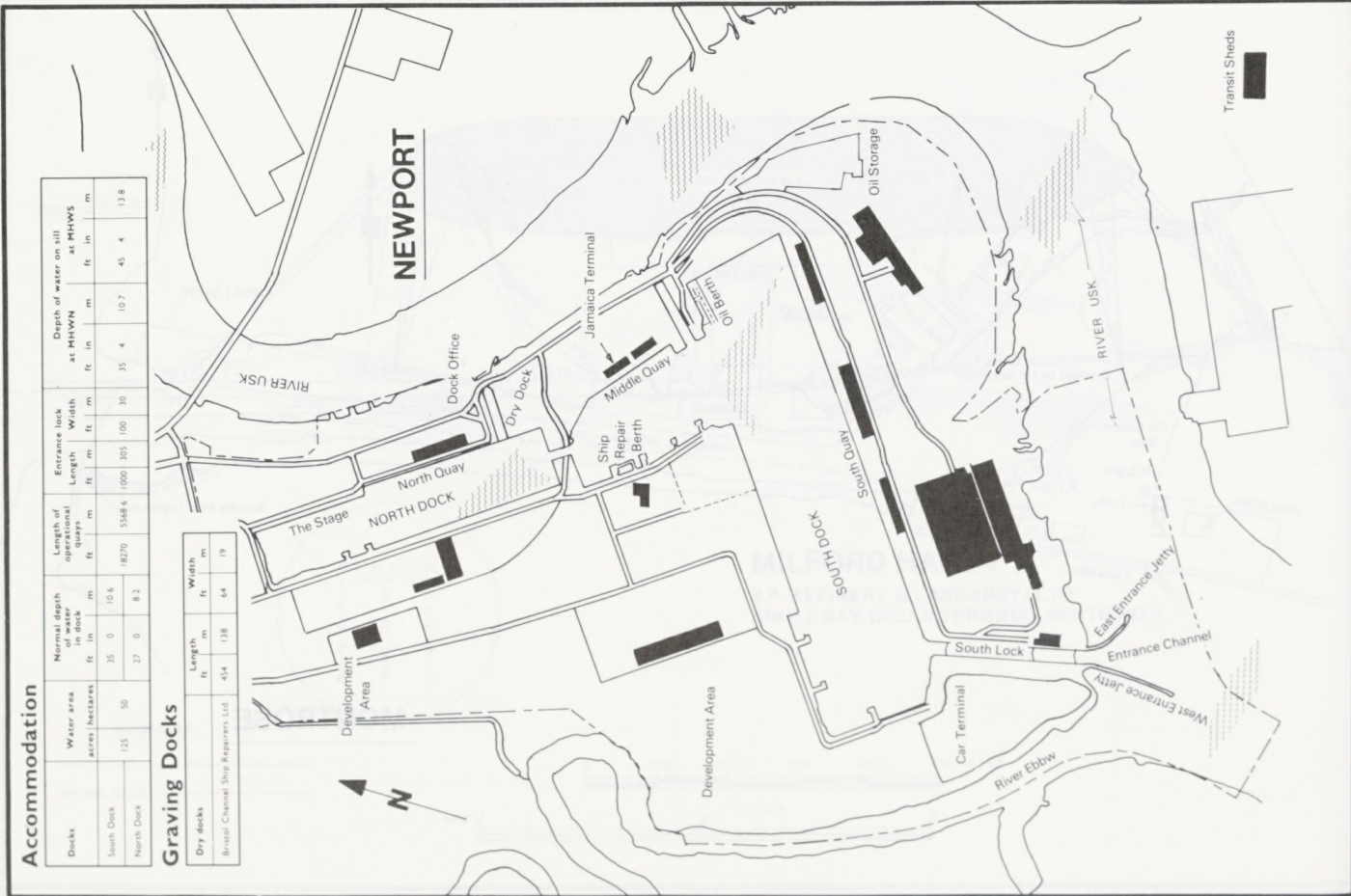
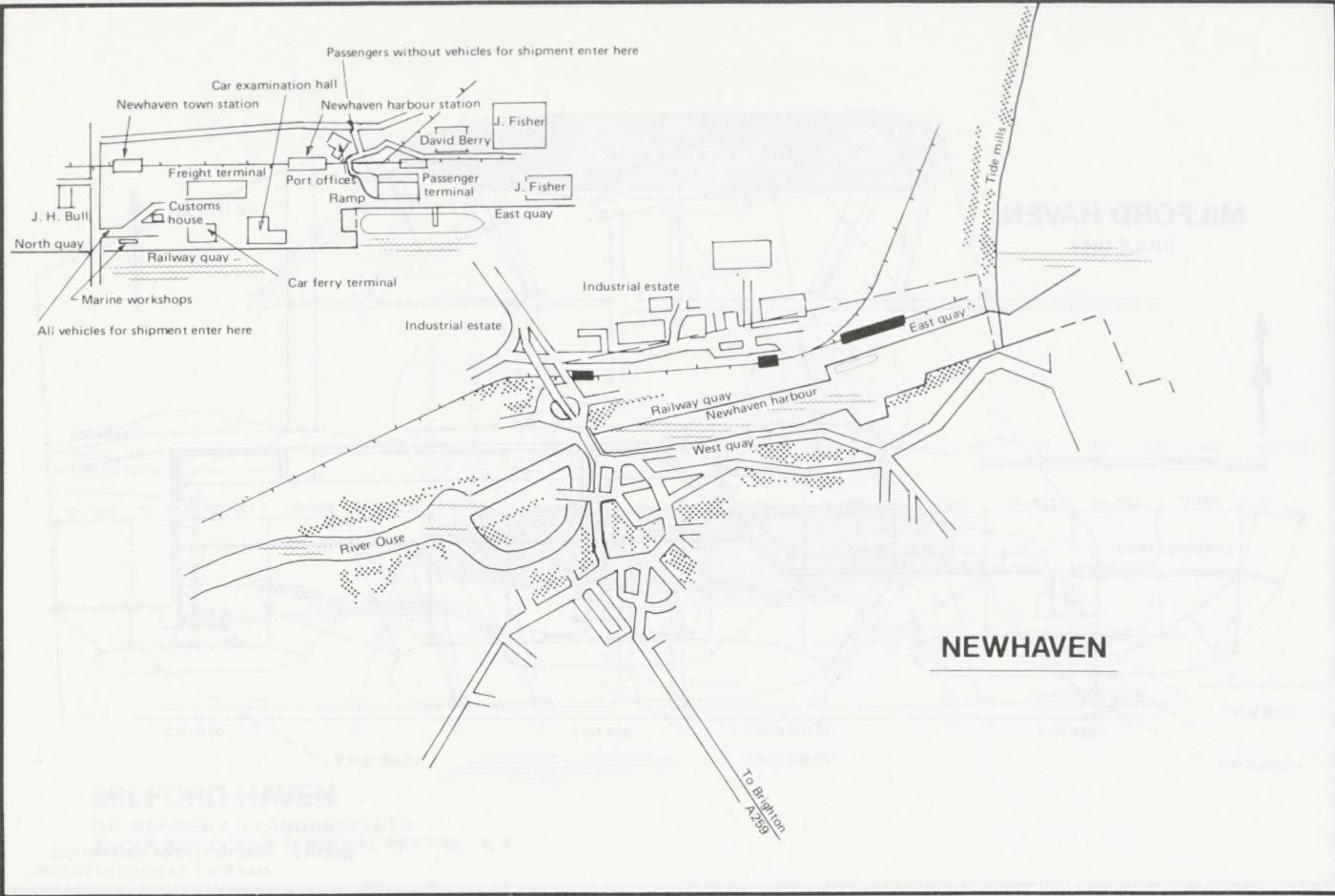
B.P. REFINERY (LLANDARCY) LTD
ANGLE BAY OCEAN TERMINAL BERTHS 1 & 2

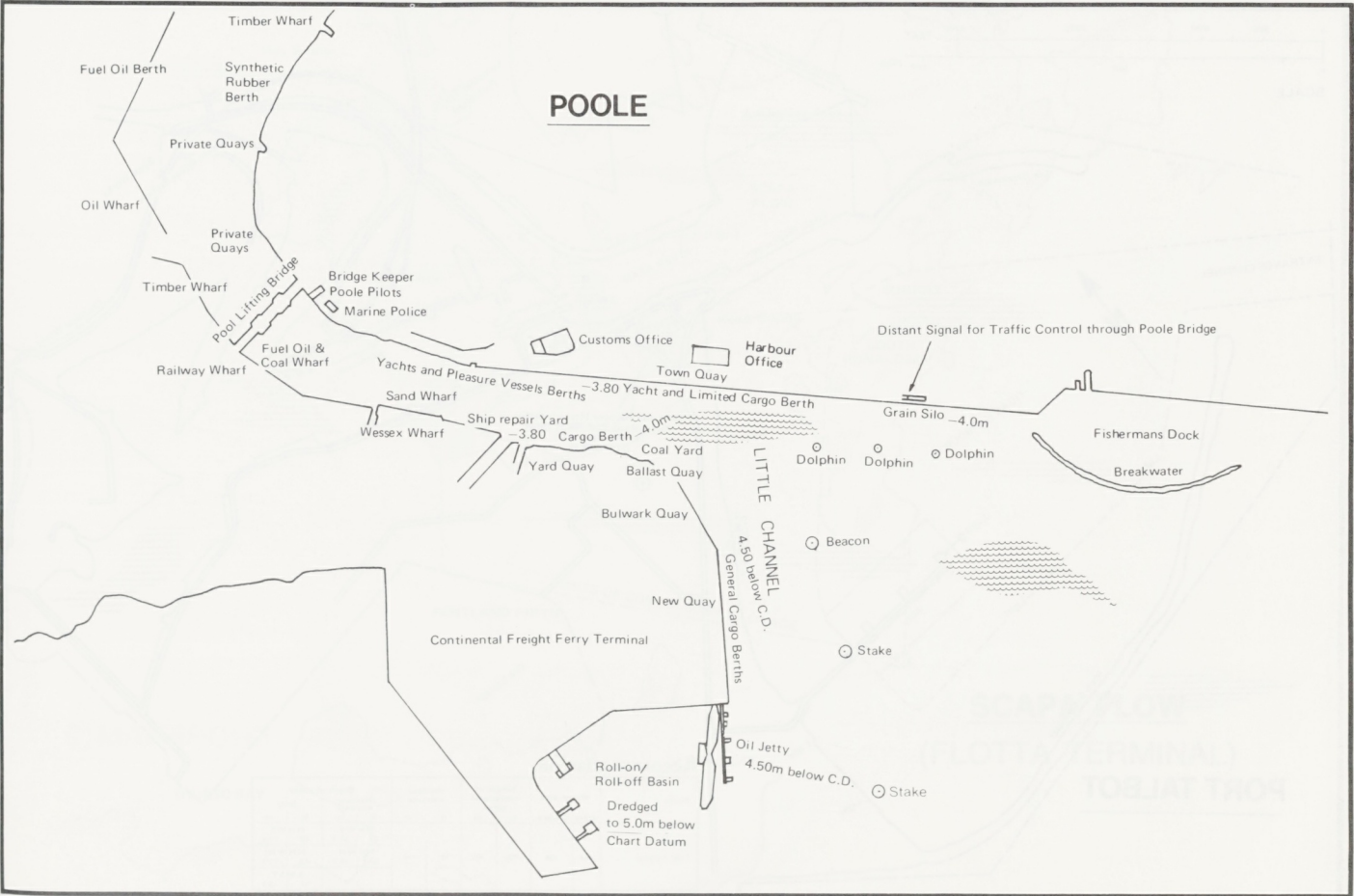
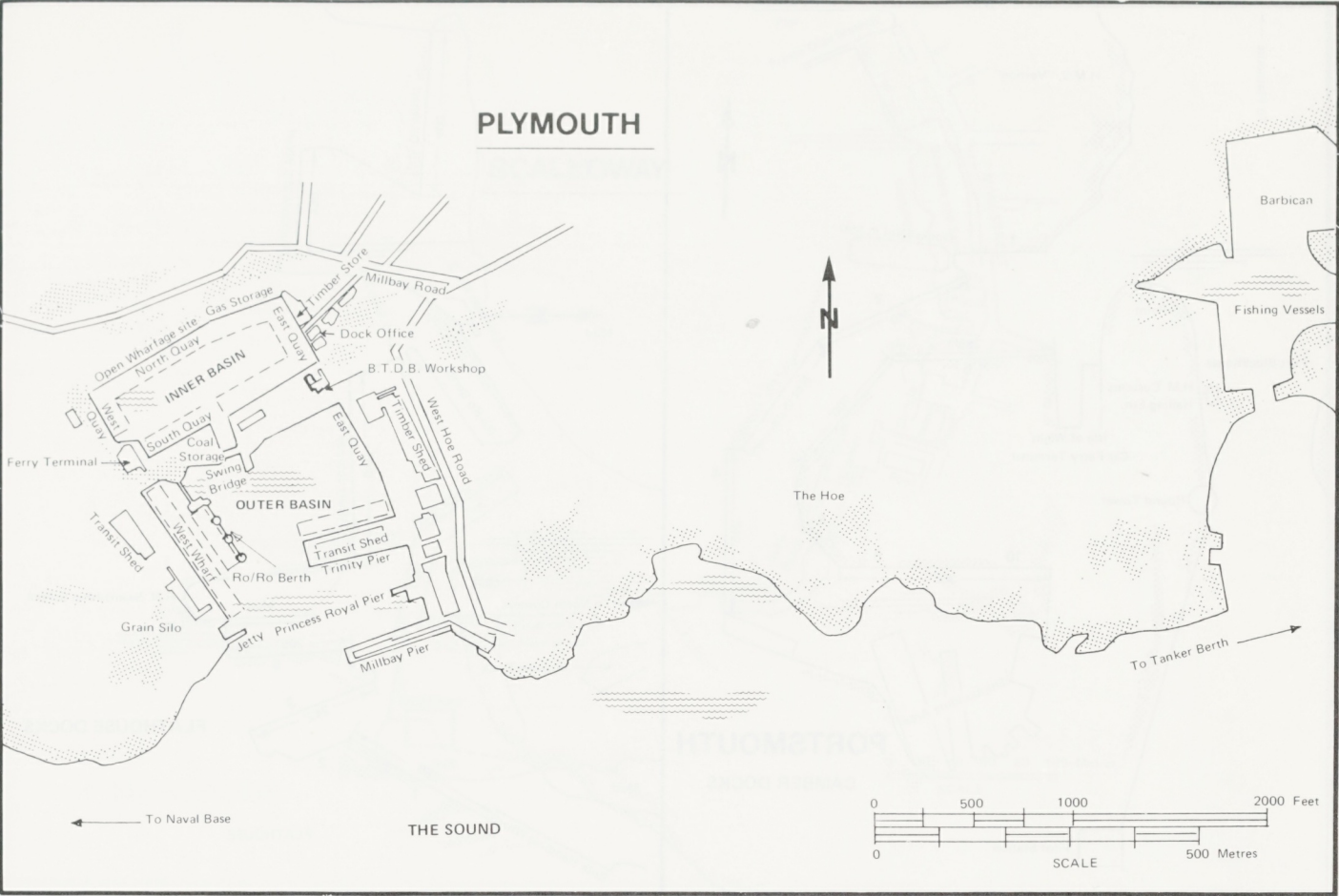


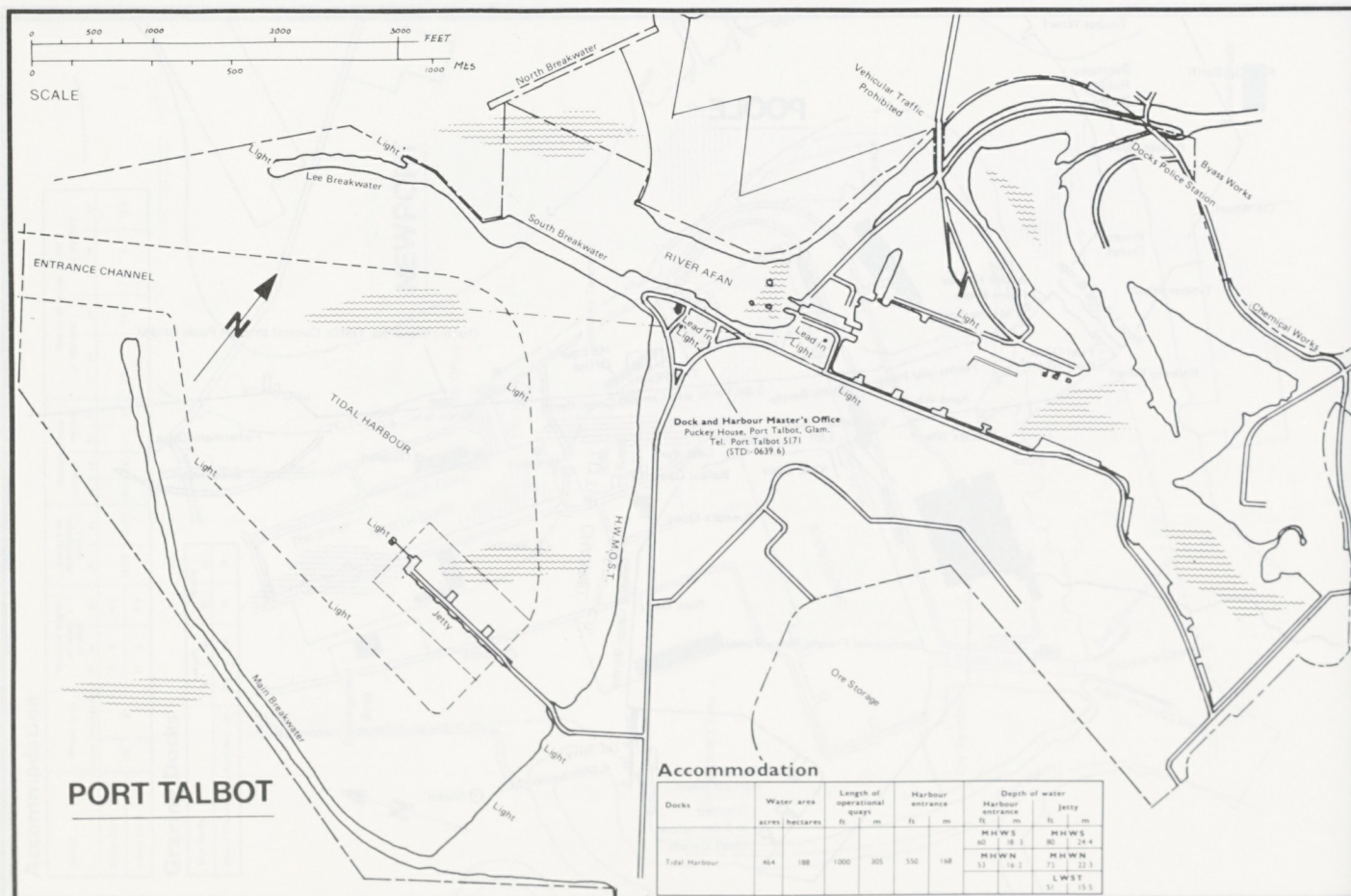
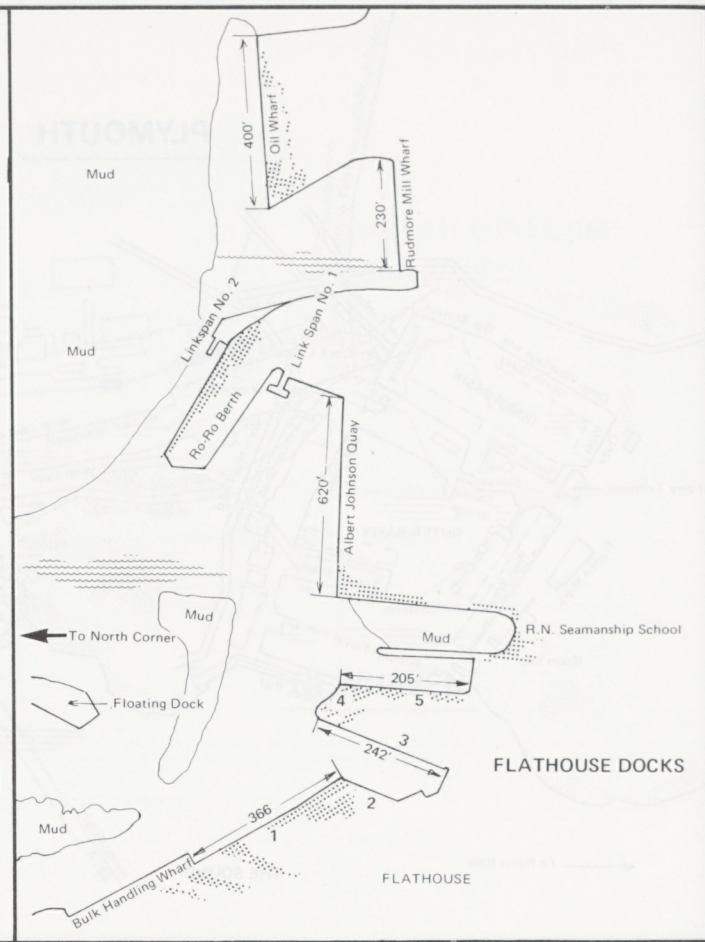
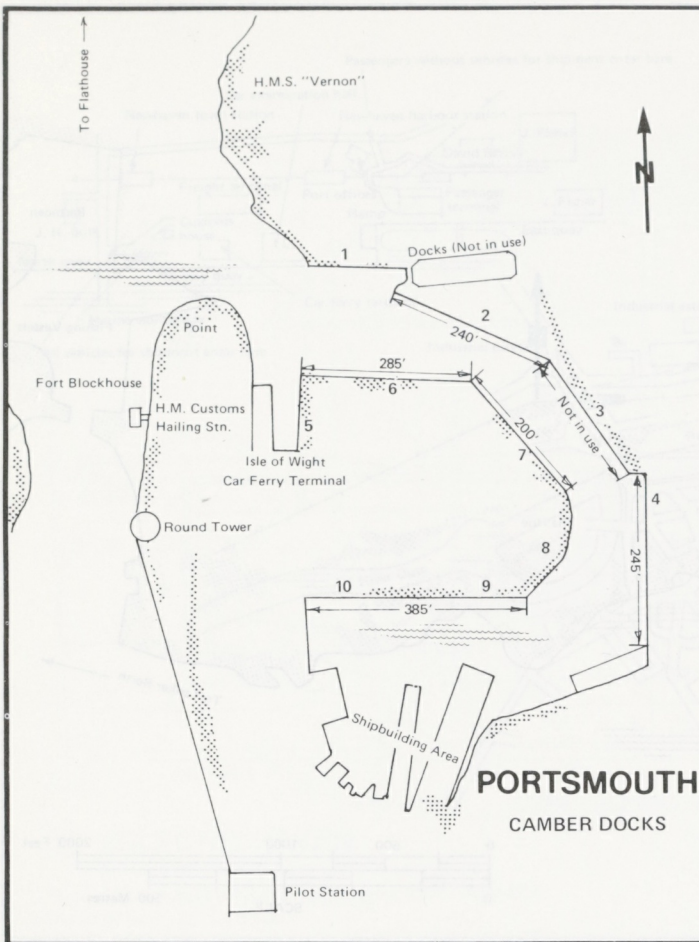
MILFORD HAVEN

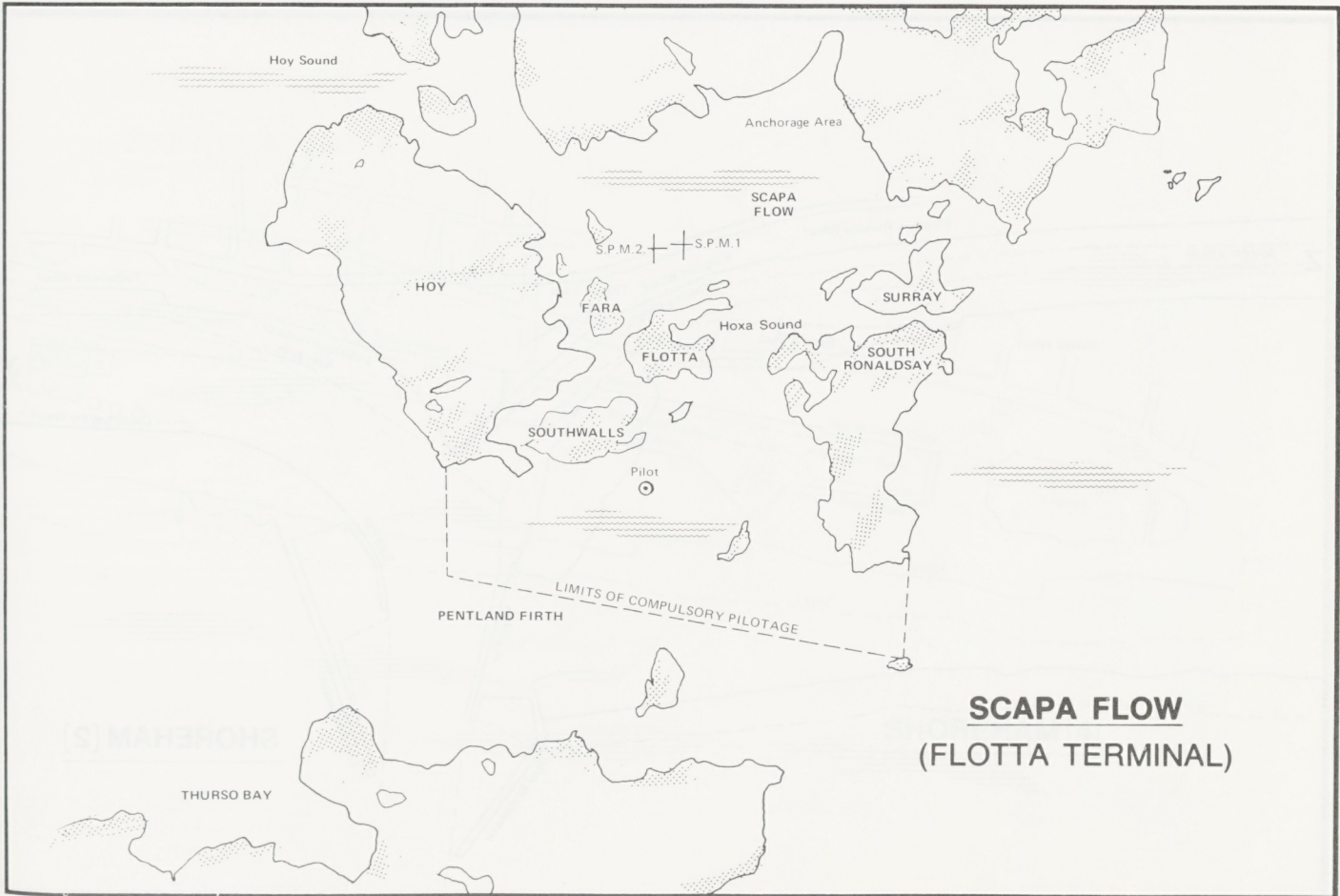
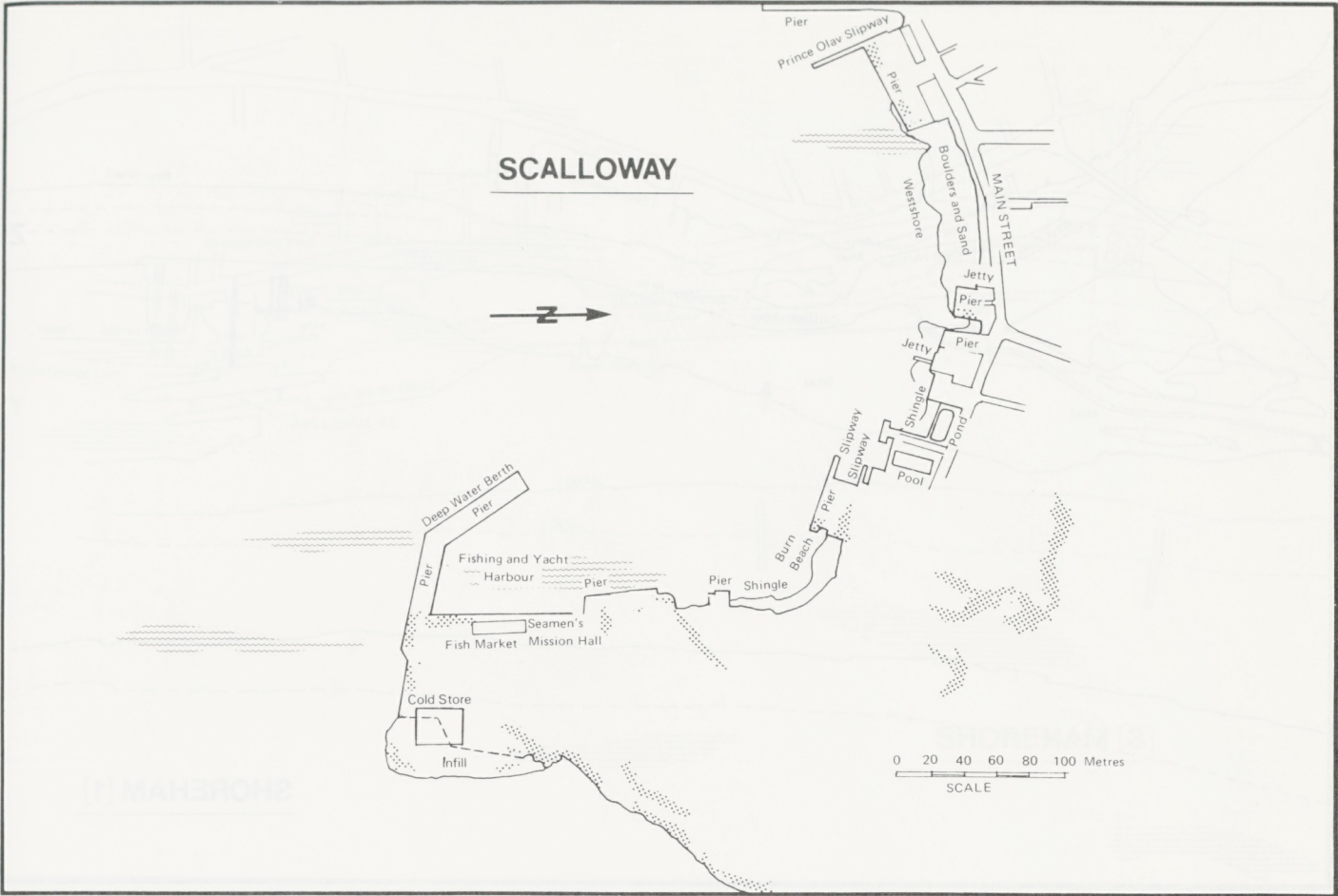
B.P. REFINERY (LLANDARCY) LTD
ANGLE BAY OCEAN TERMINAL BERTH NO.3

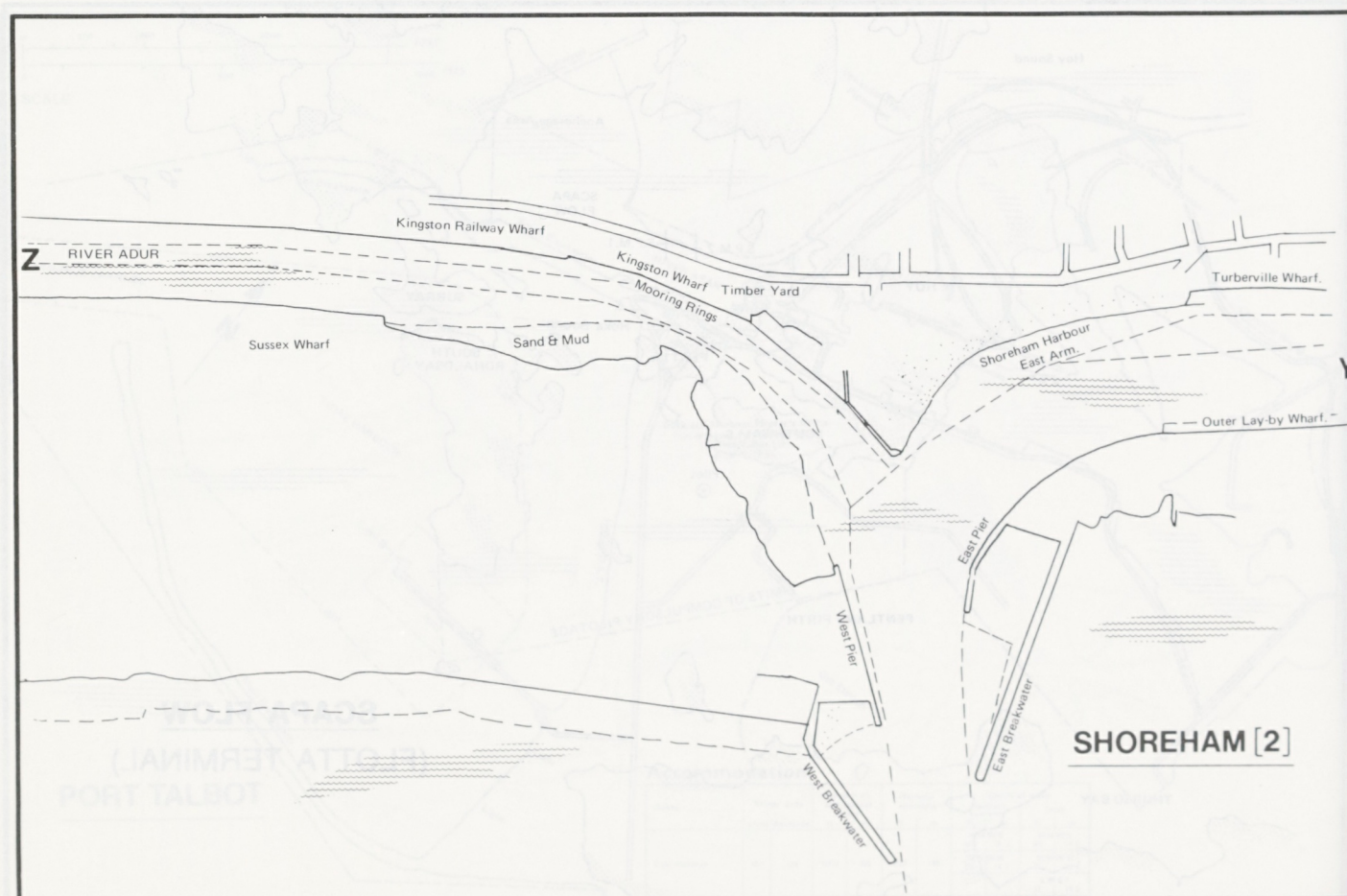
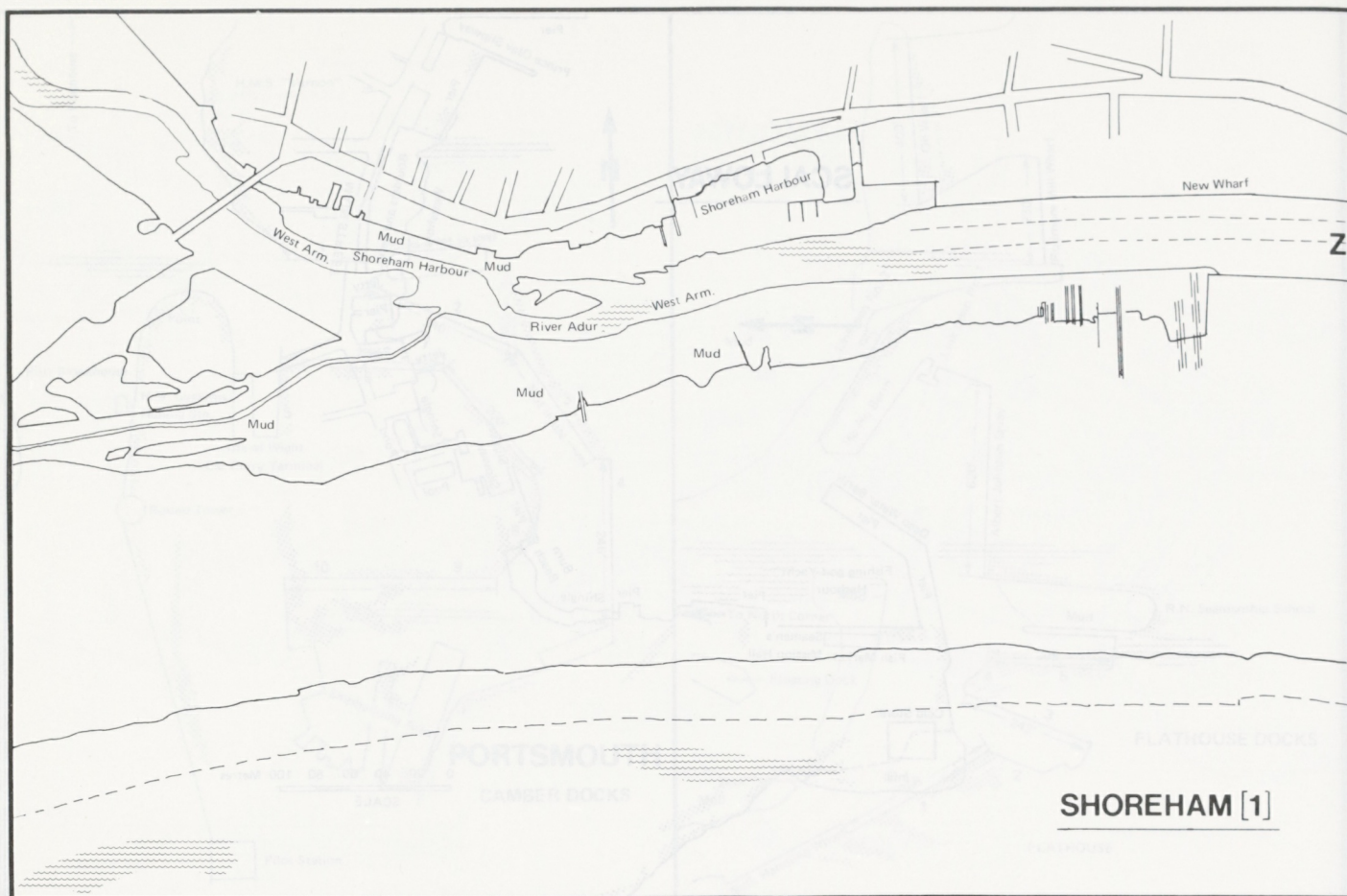


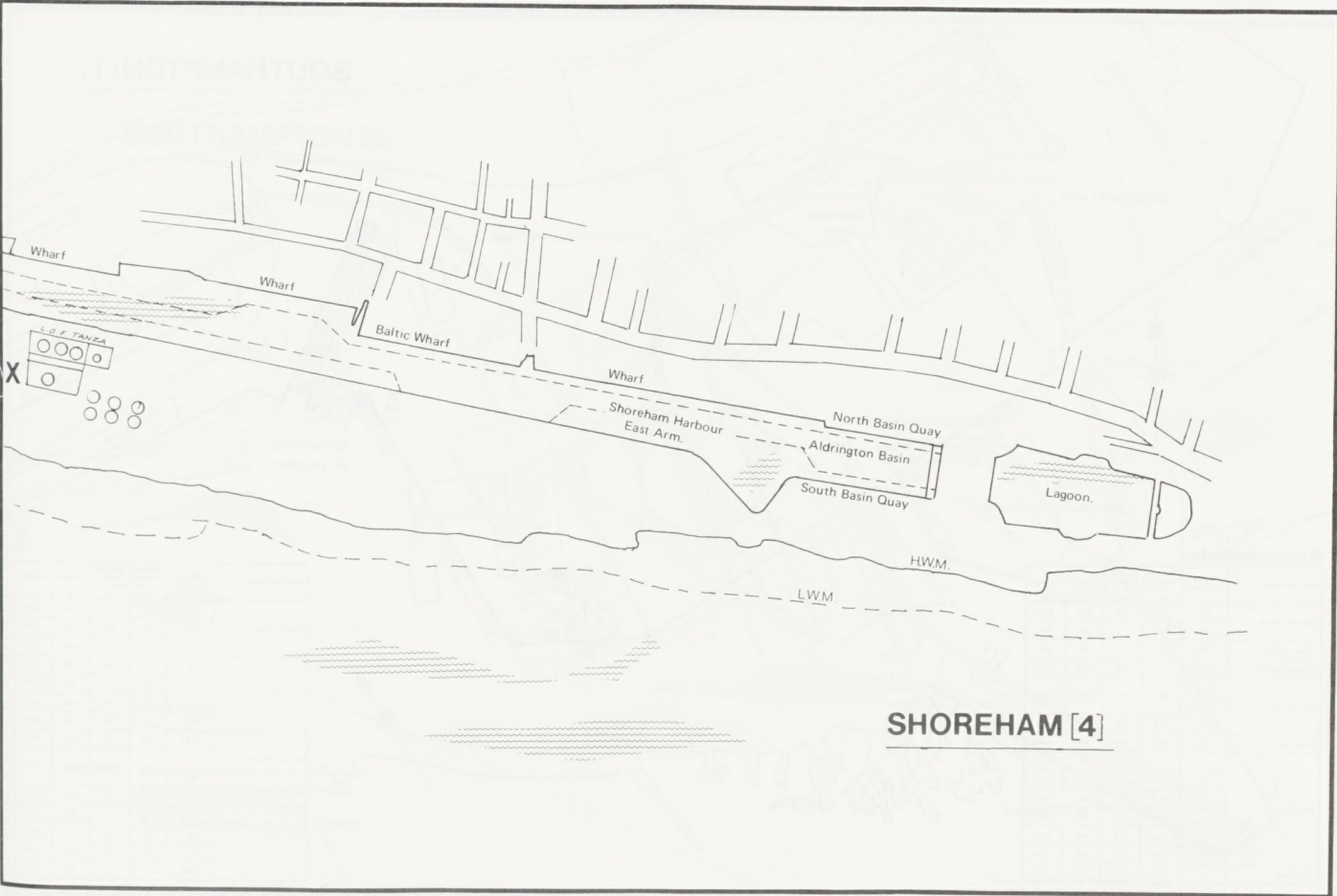
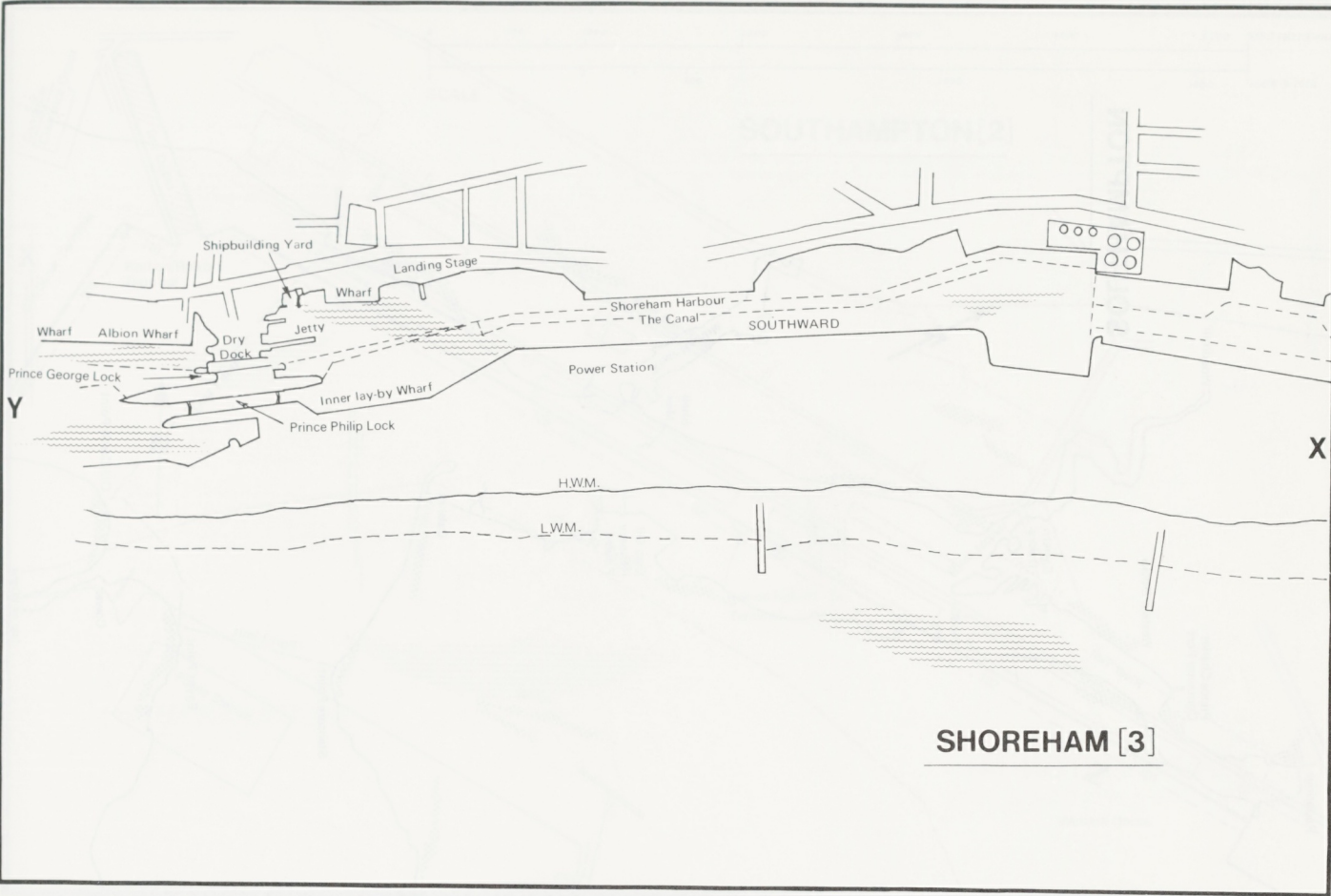


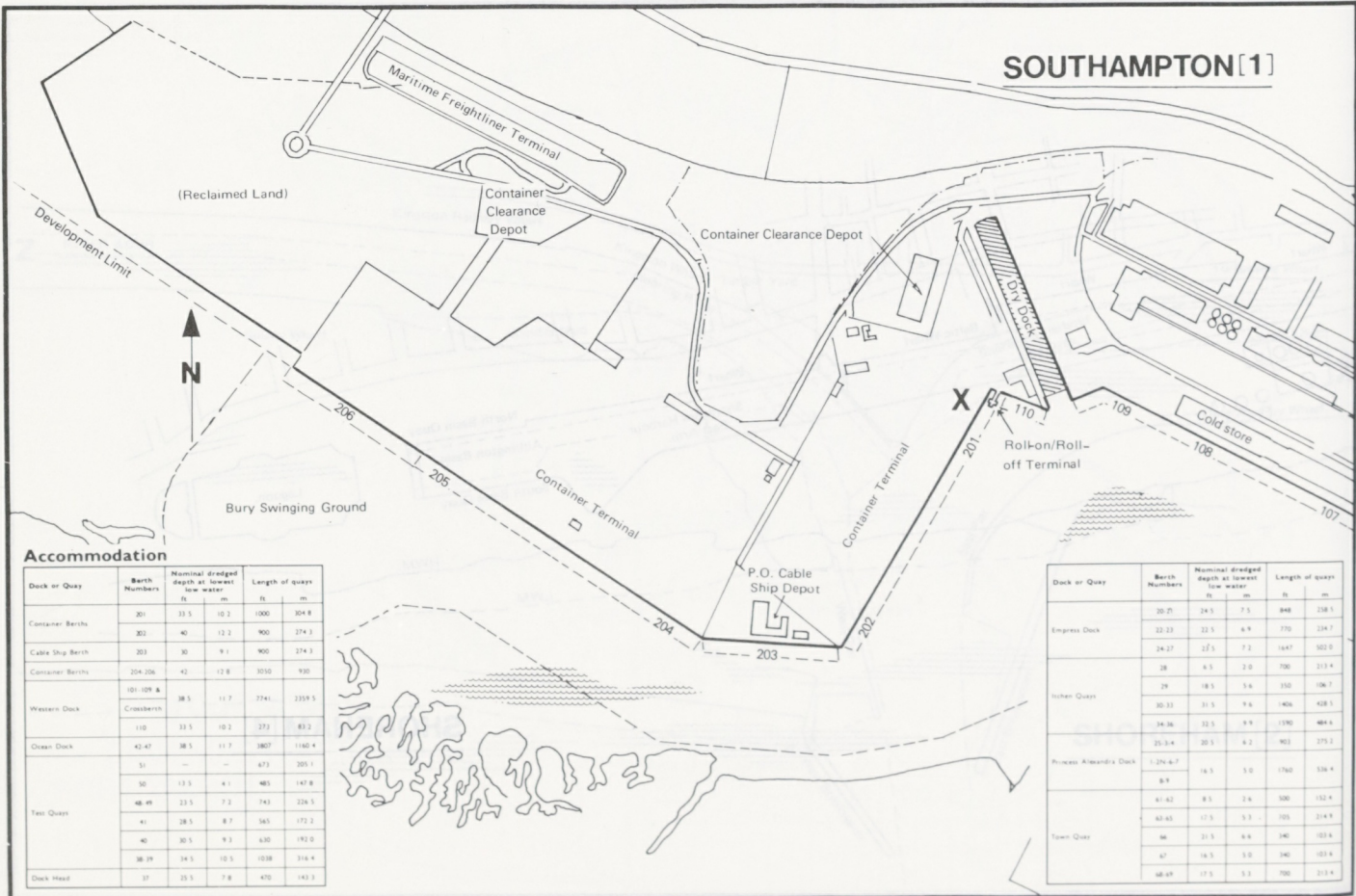
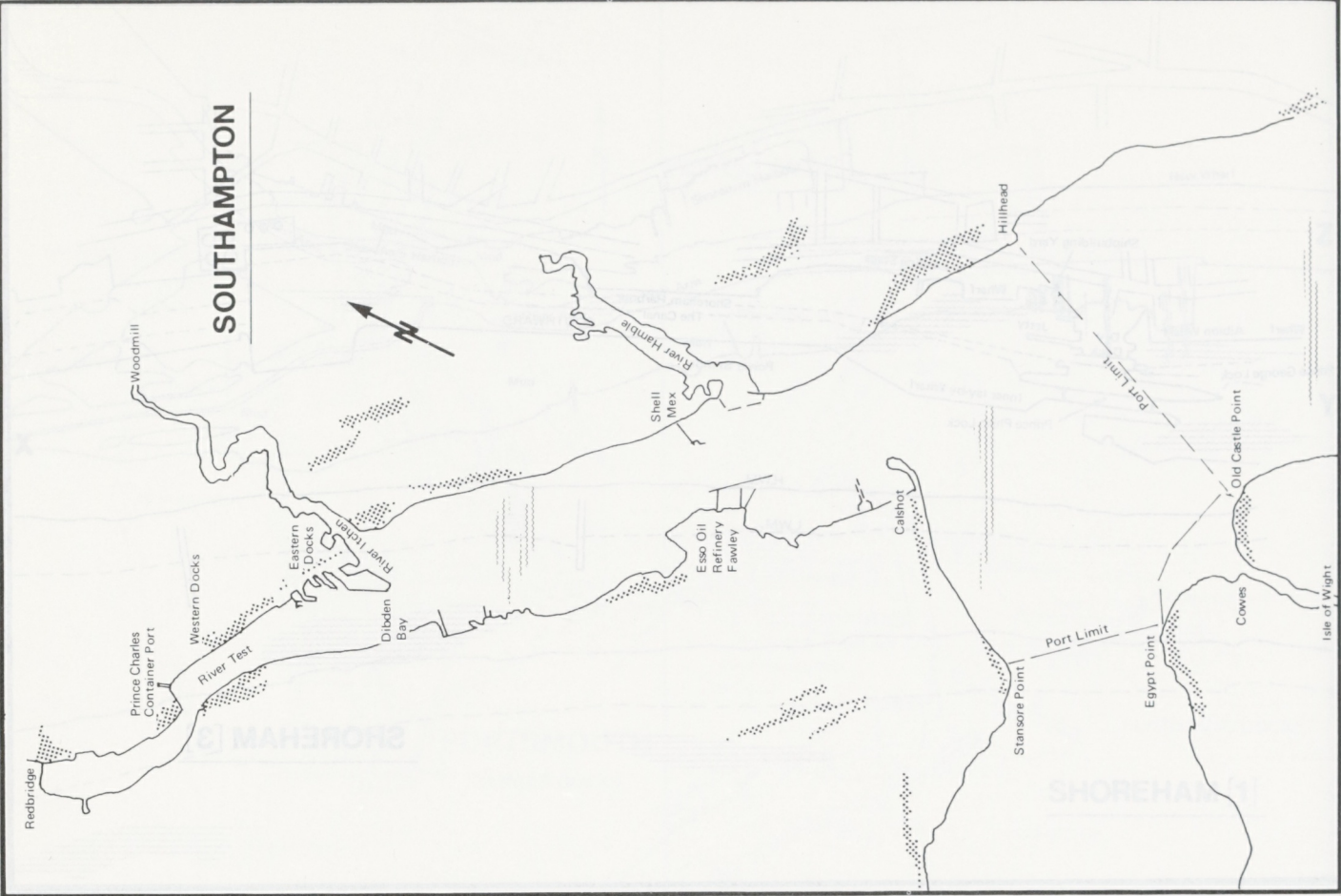


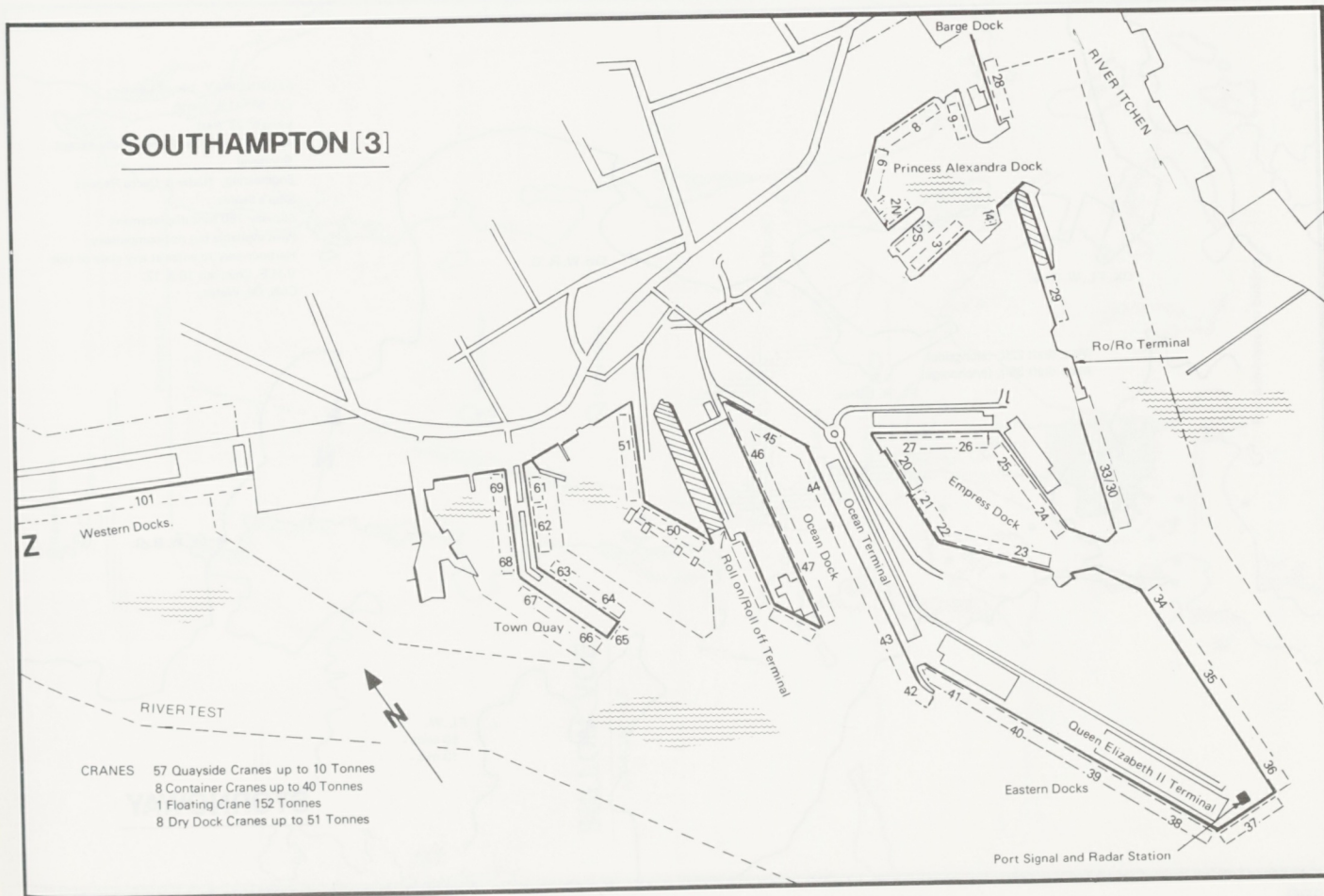
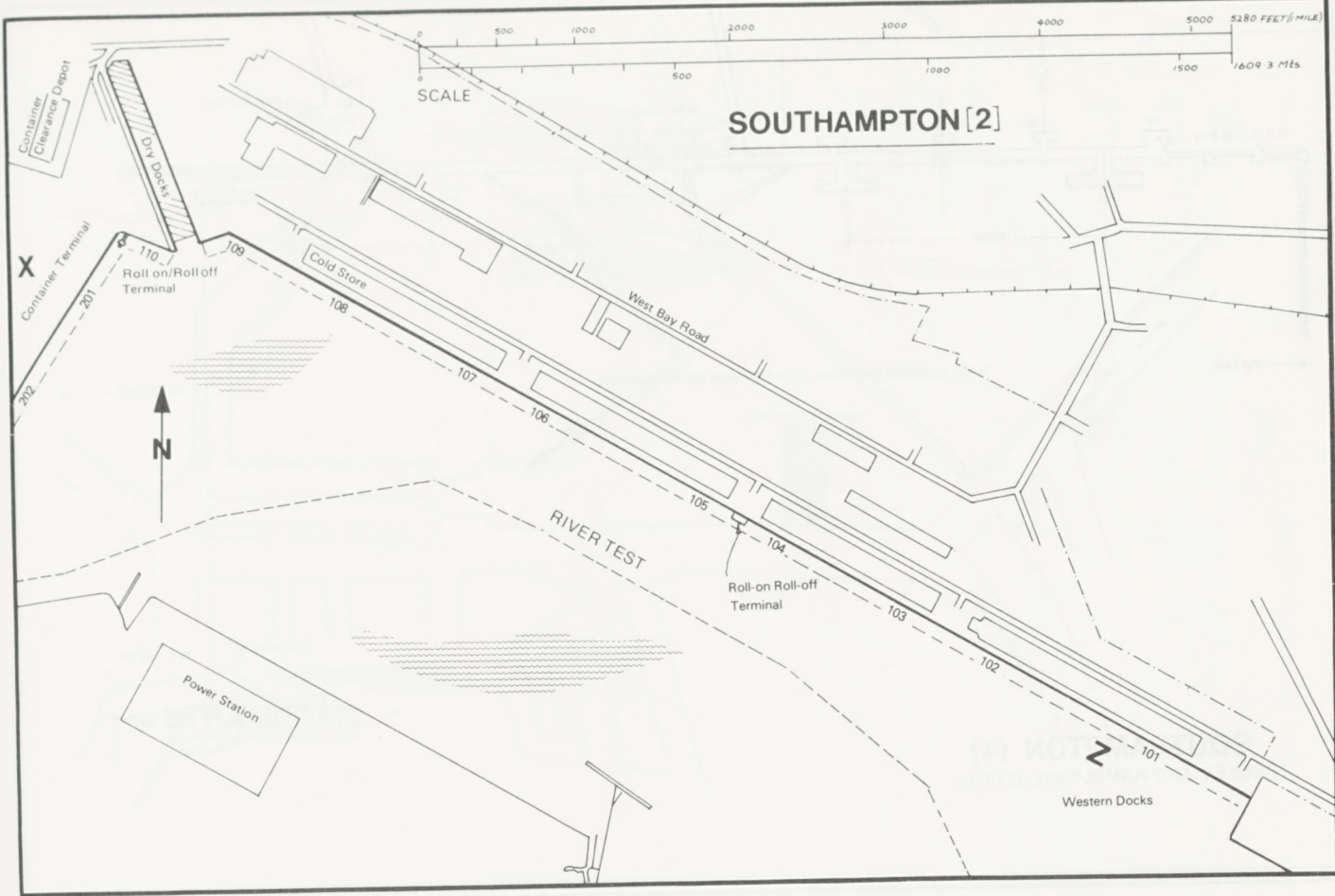




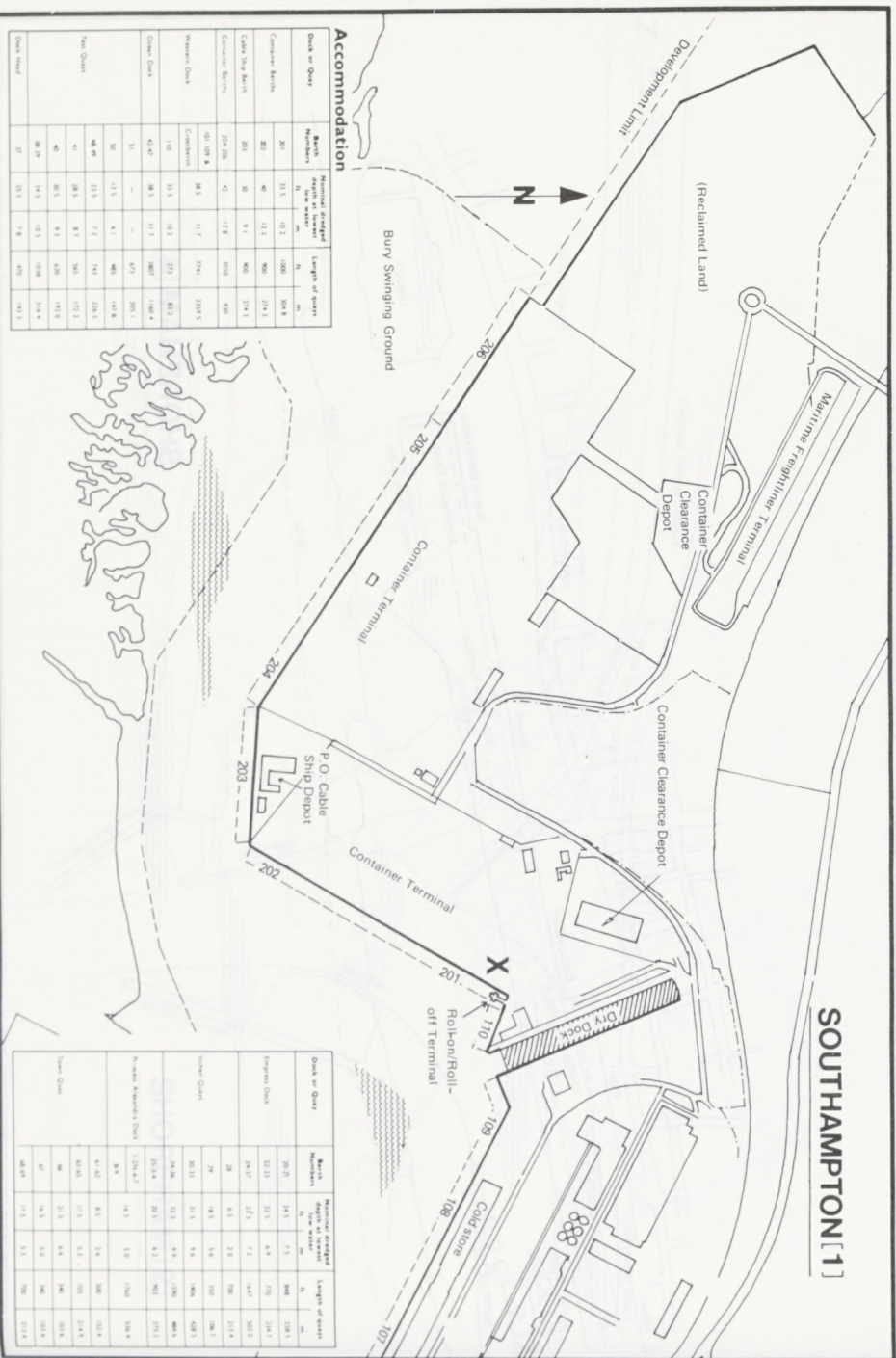
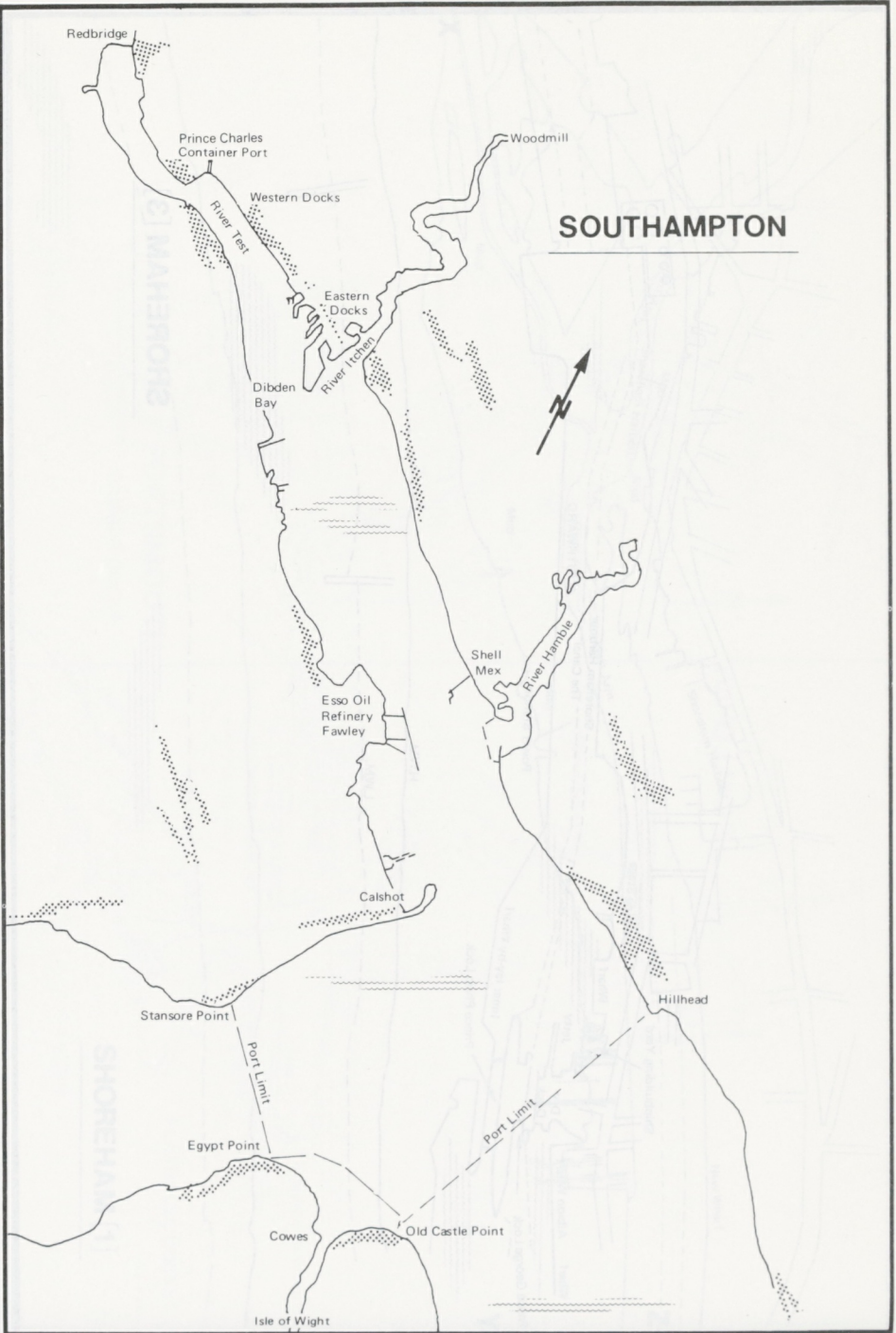


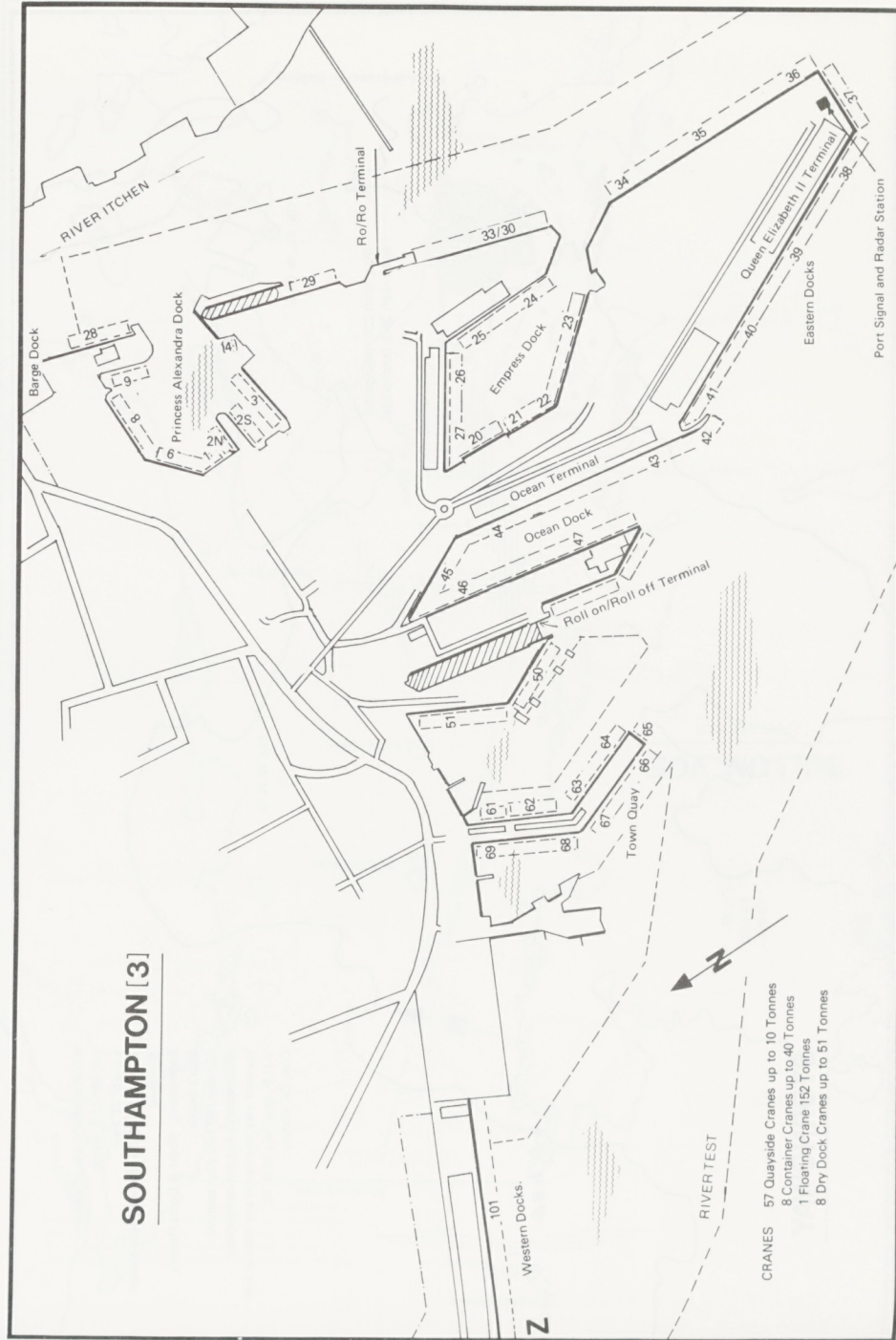
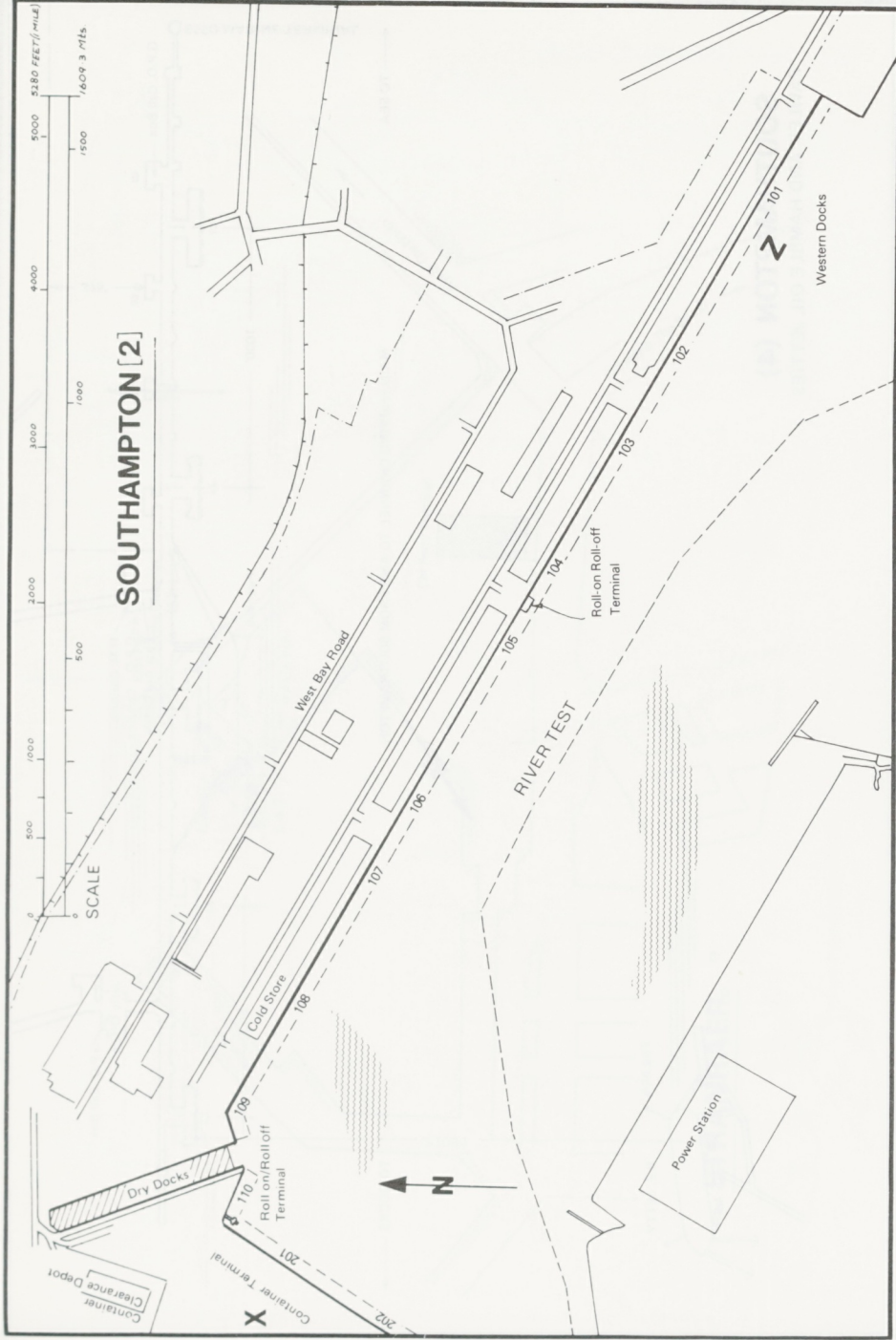


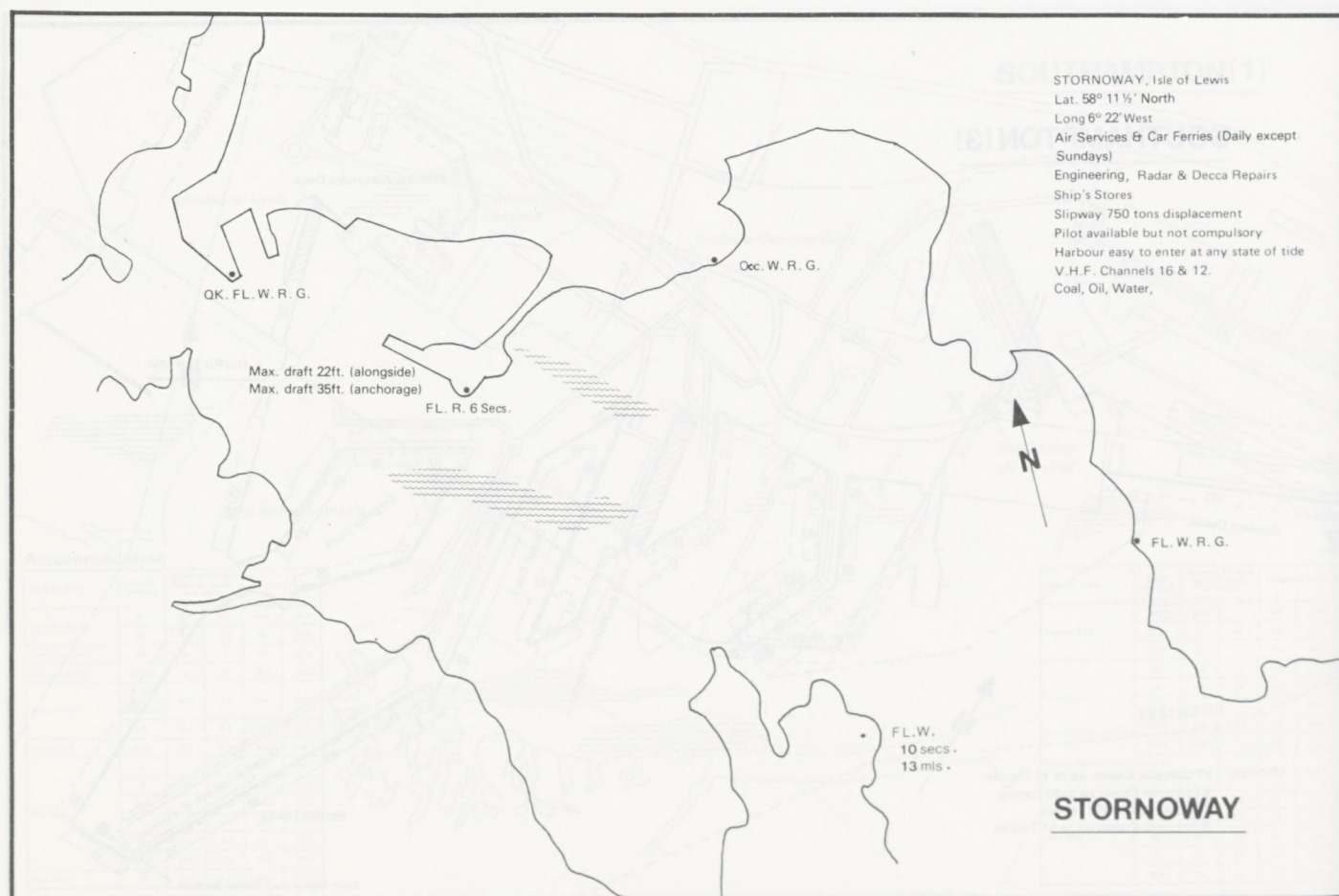
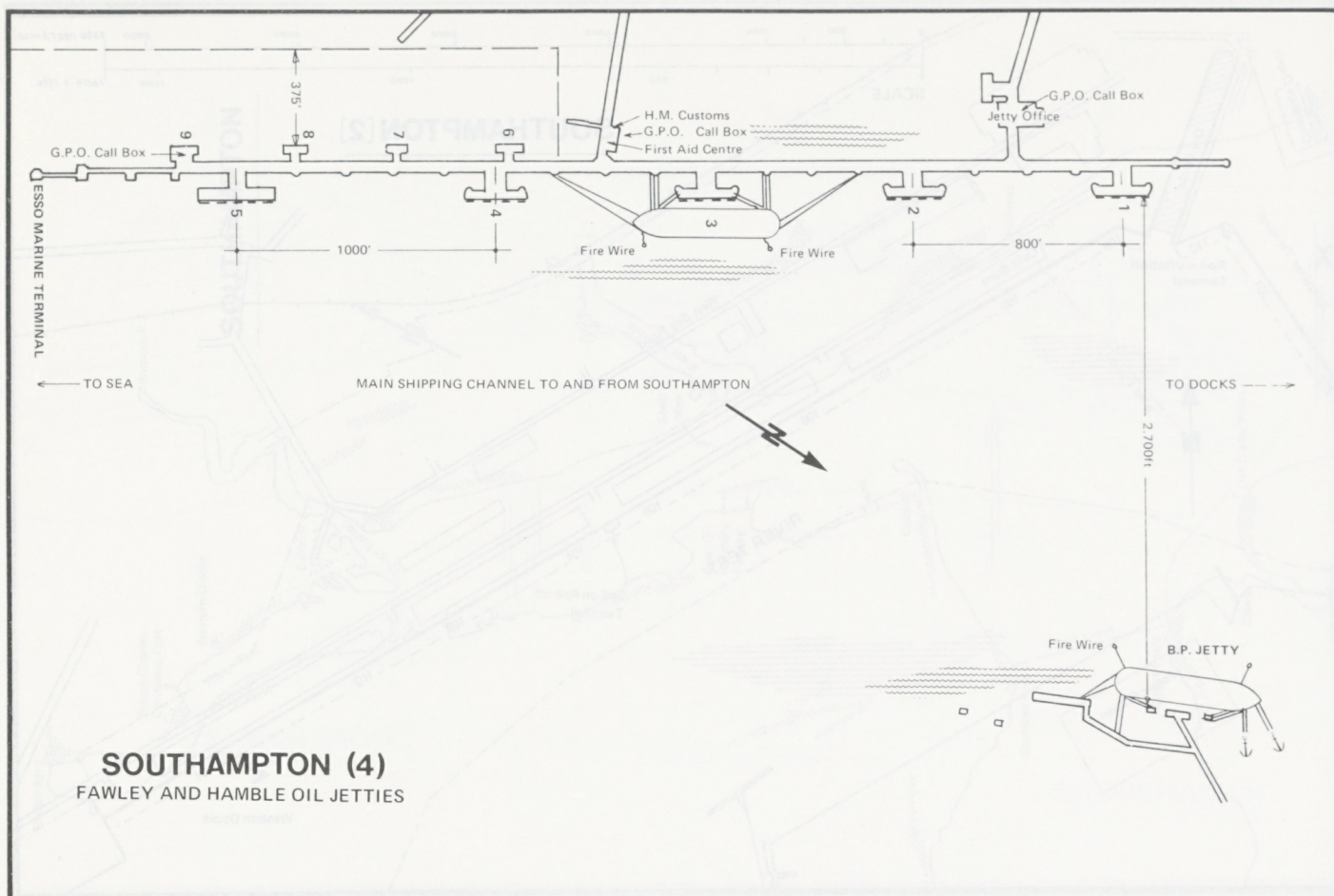


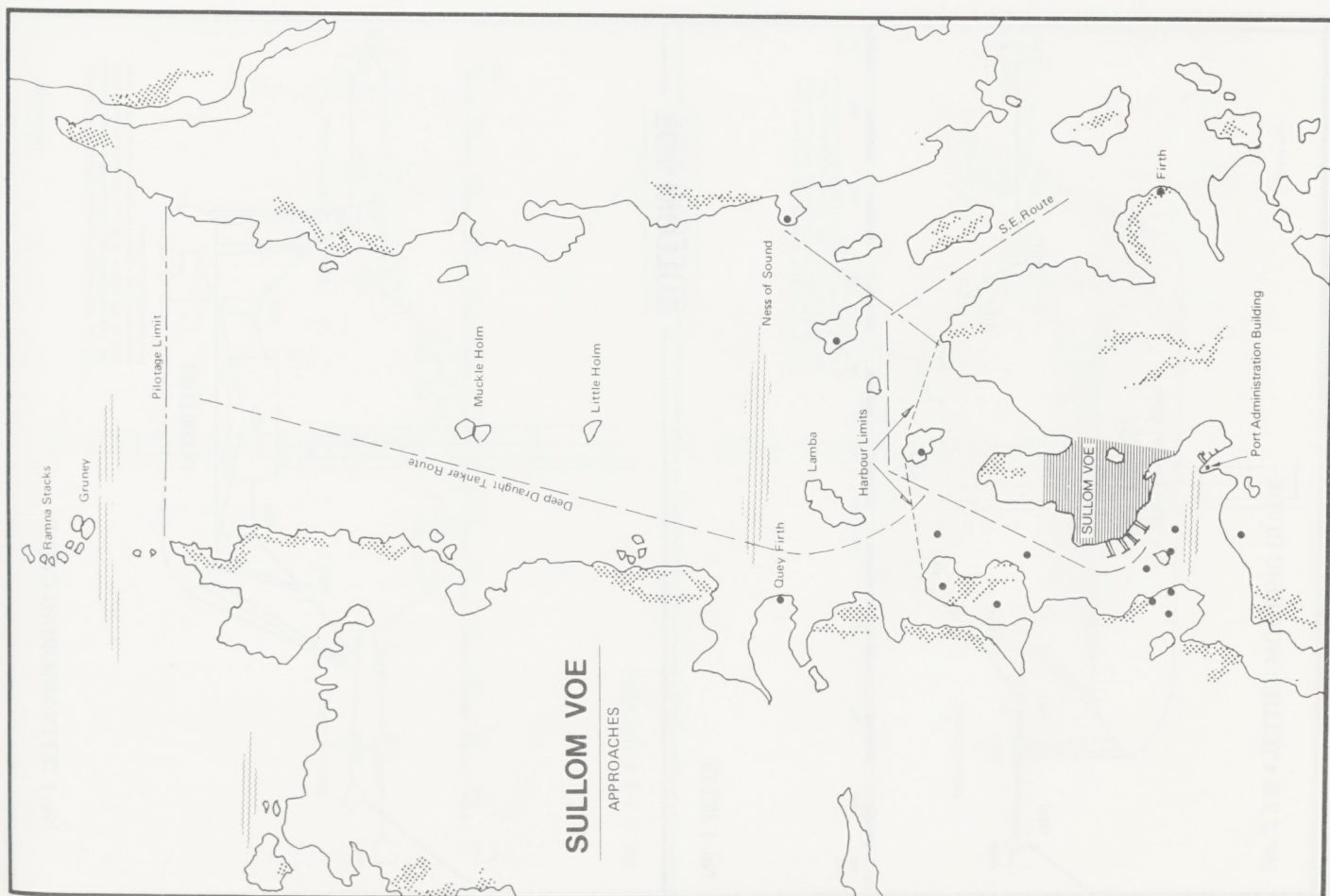
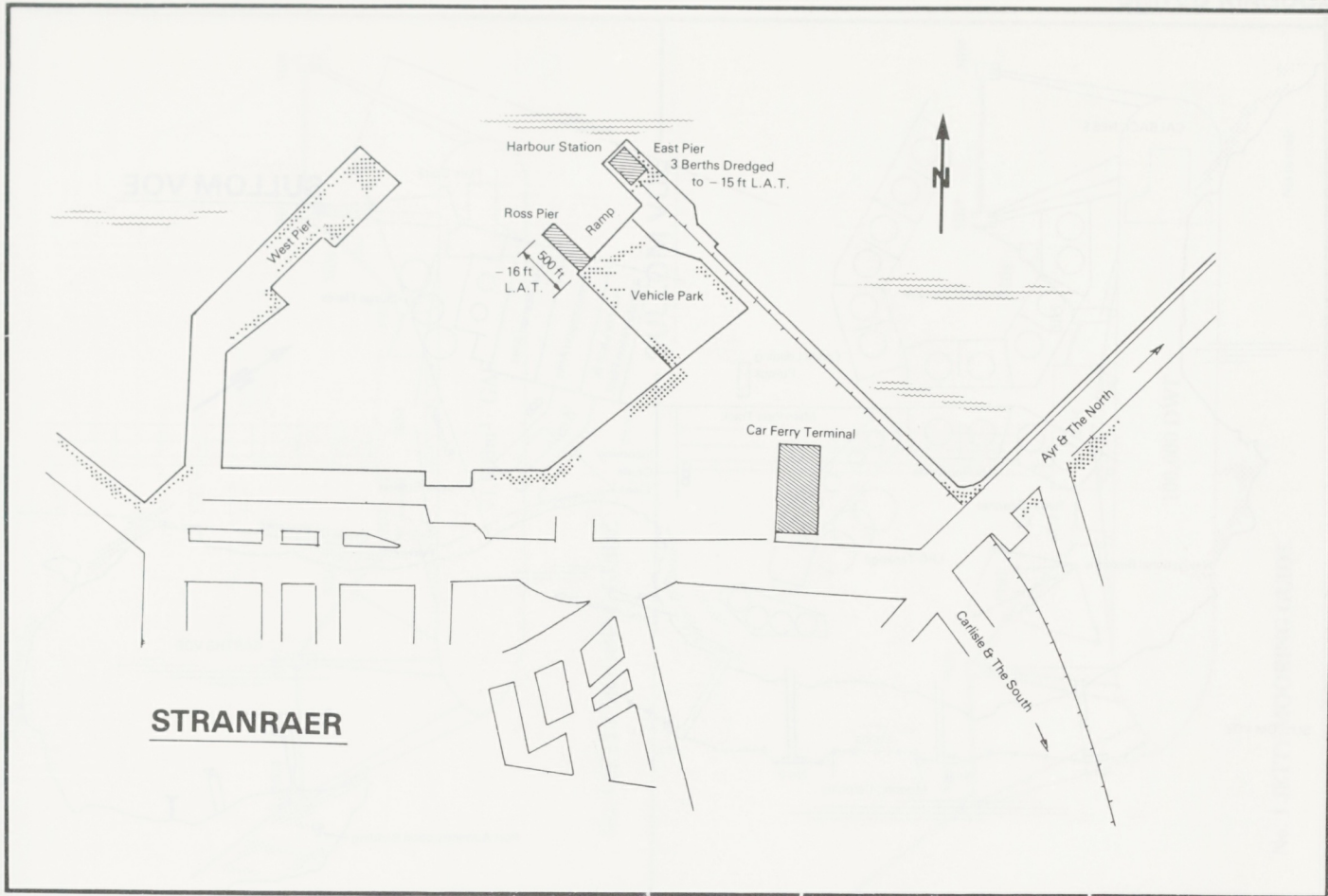


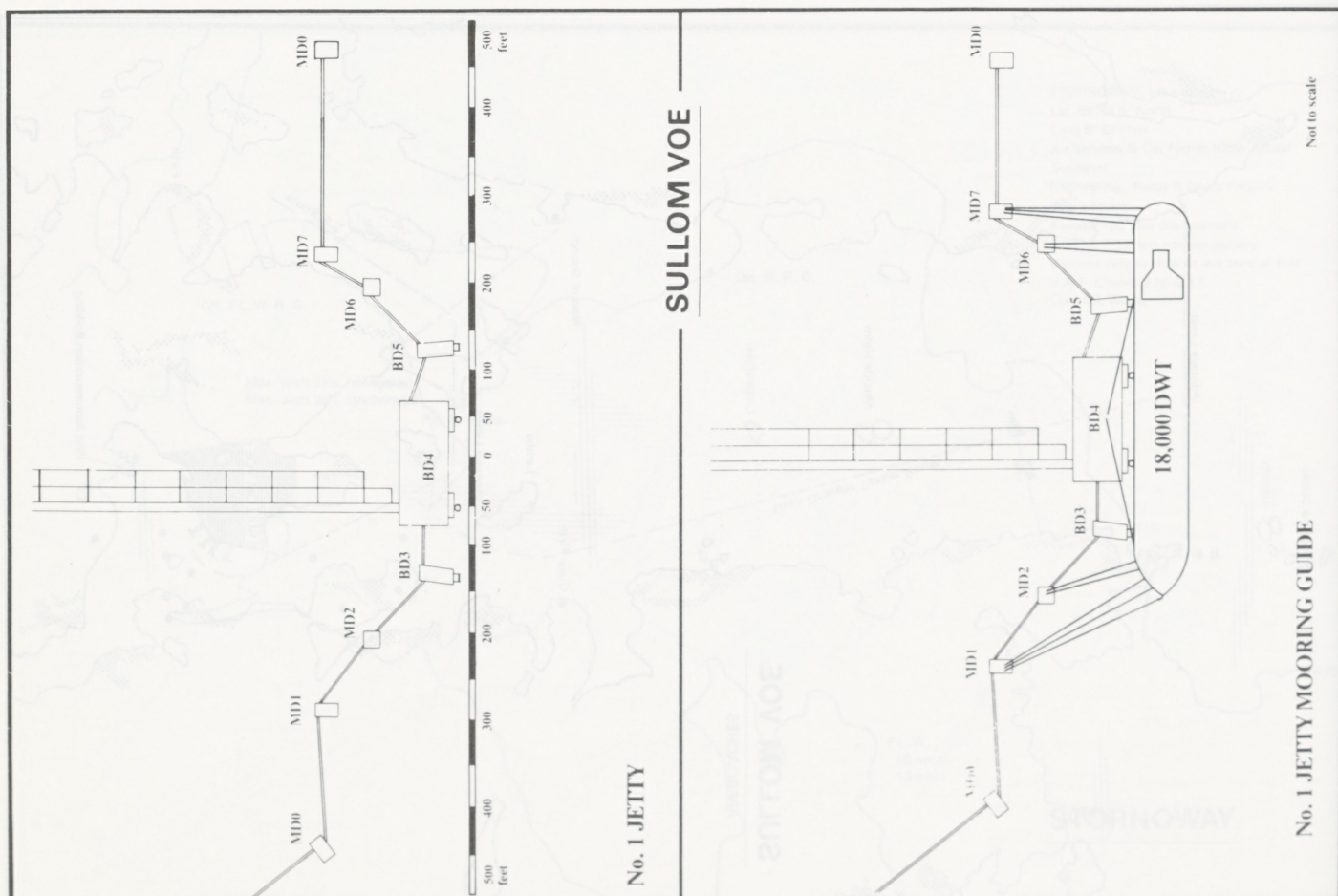
- CRANES
- 57 Quayside Cranes up to 10 Tonnes
 - 8 Container Cranes up to 40 Tonnes
 - 1 Floating Crane 152 Tonnes
 - 8 Dry Dock Cranes up to 51 Tonnes



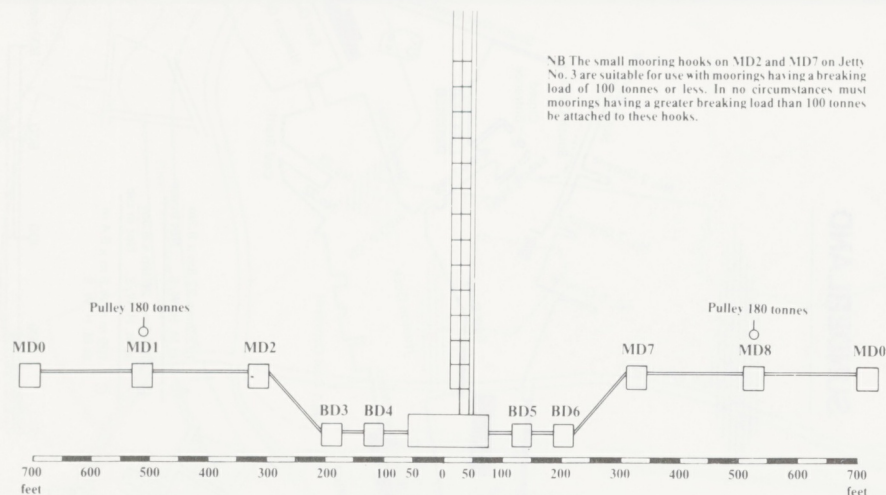








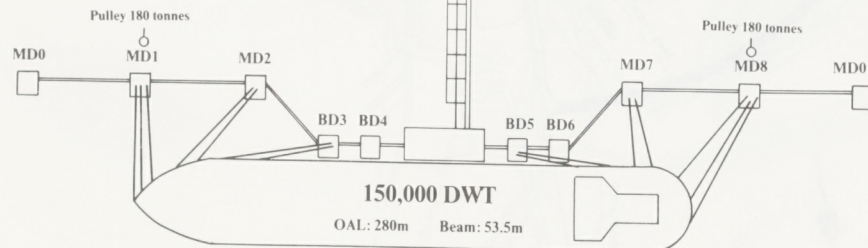
NB The small mooring hooks on MD2 and MD7 on Jetty No. 3 are suitable for use with moorings having a breaking load of 100 tonnes or less. In no circumstances must moorings having a greater breaking load than 100 tonnes be attached to these hooks.



No. 2, 3 & 4 JETTIES

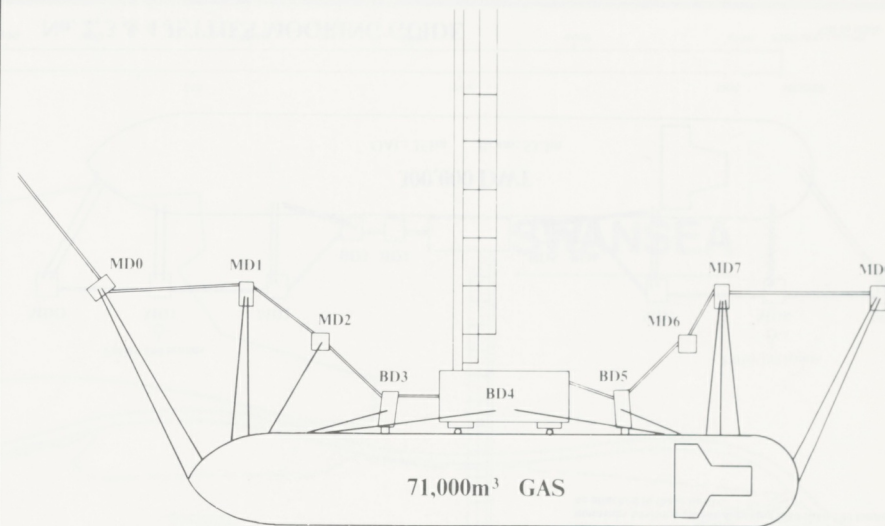
SULLOM VOE

NB The small mooring hooks on MD2 and MD7 on Jetty No. 3 are suitable for use with moorings having a breaking load of 100 tonnes or less. In no circumstances must moorings having a greater breaking load than 100 tonnes be attached to these hooks.



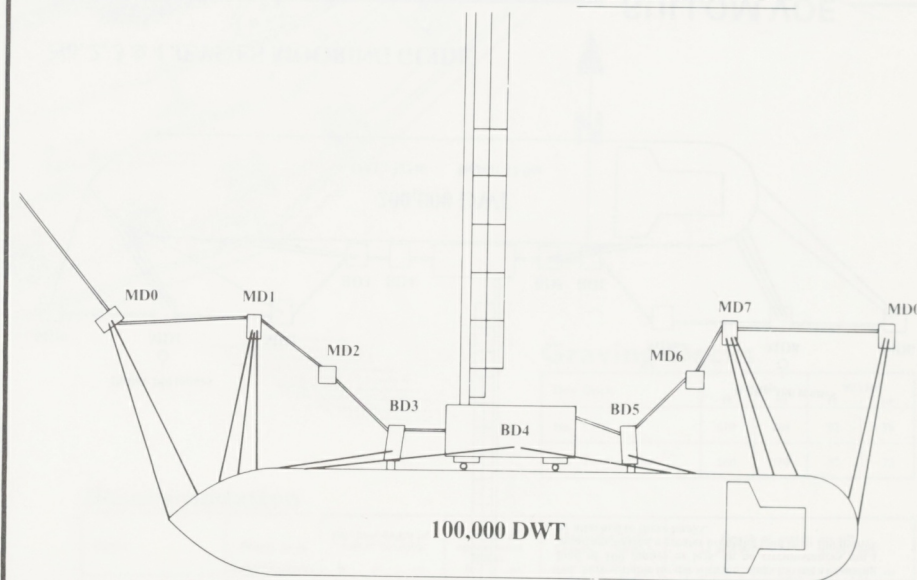
No. 2, 3 & 4 JETTIES MOORING GUIDE

Not to scale



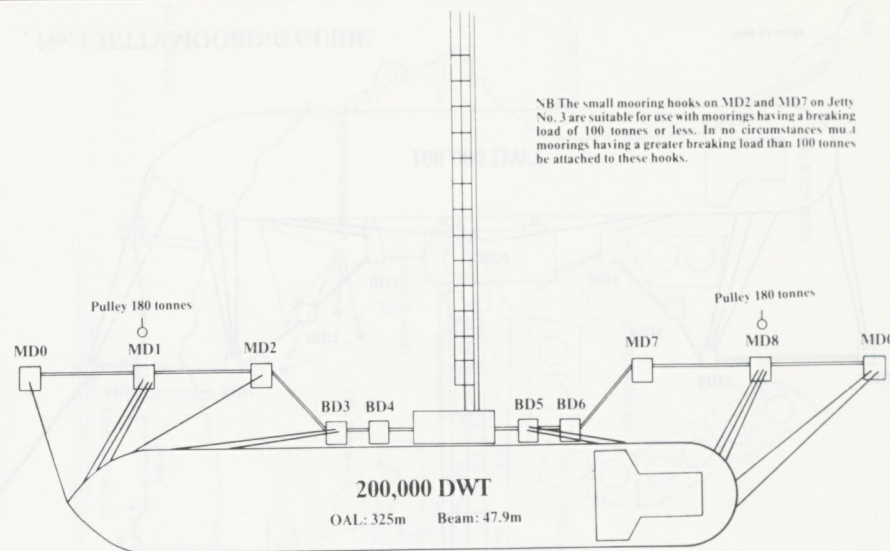
No. 1 JETTY MOORING GUIDE

SULLOM VOE



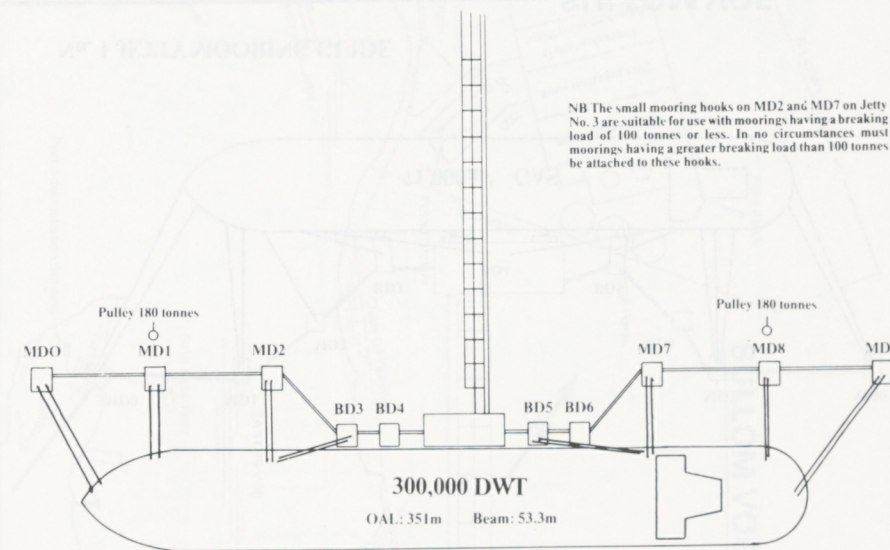
No. 1 JETTY MOORING GUIDE

Not to scale



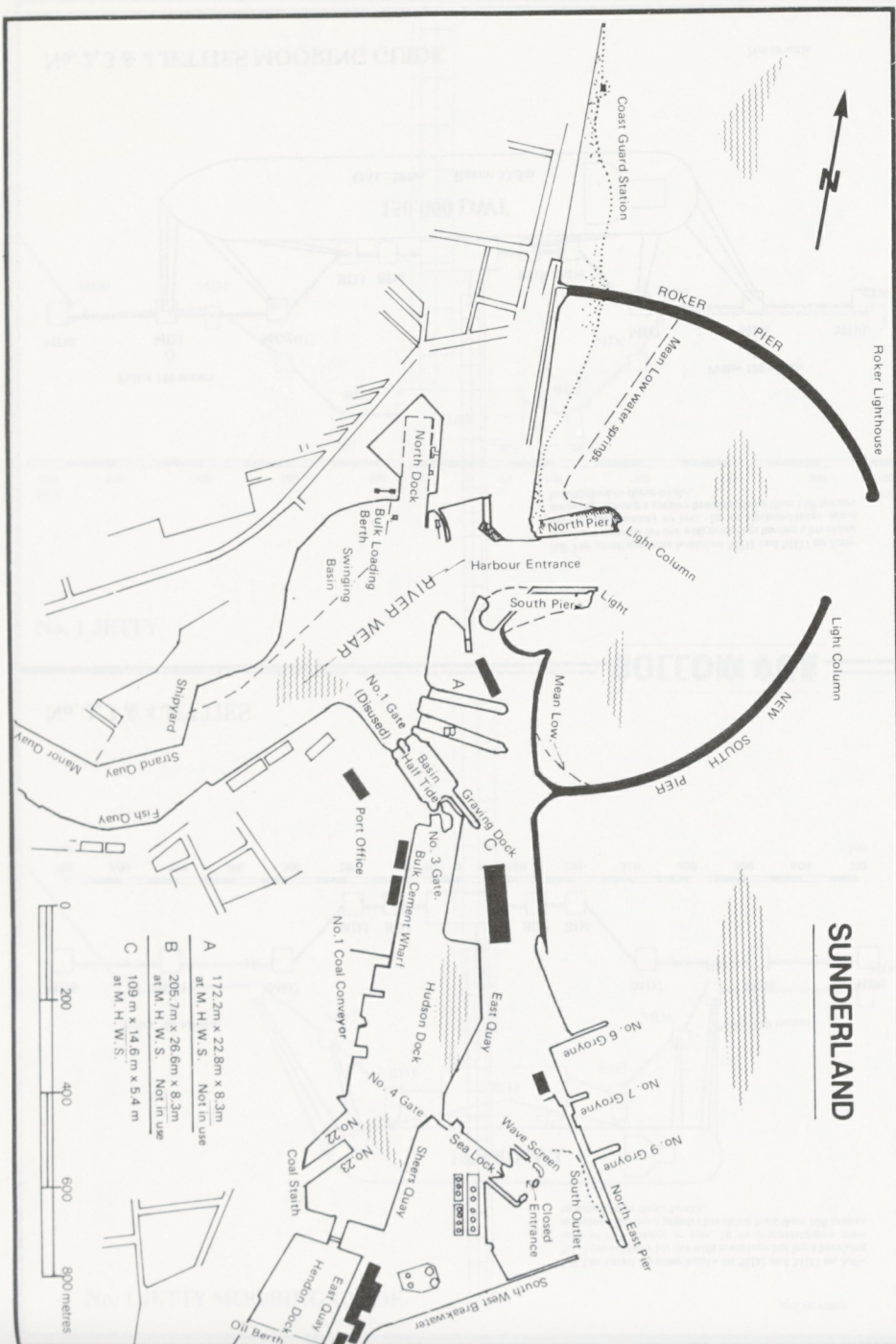
No. 2, 3 & 4 JETTIES MOORING GUIDE

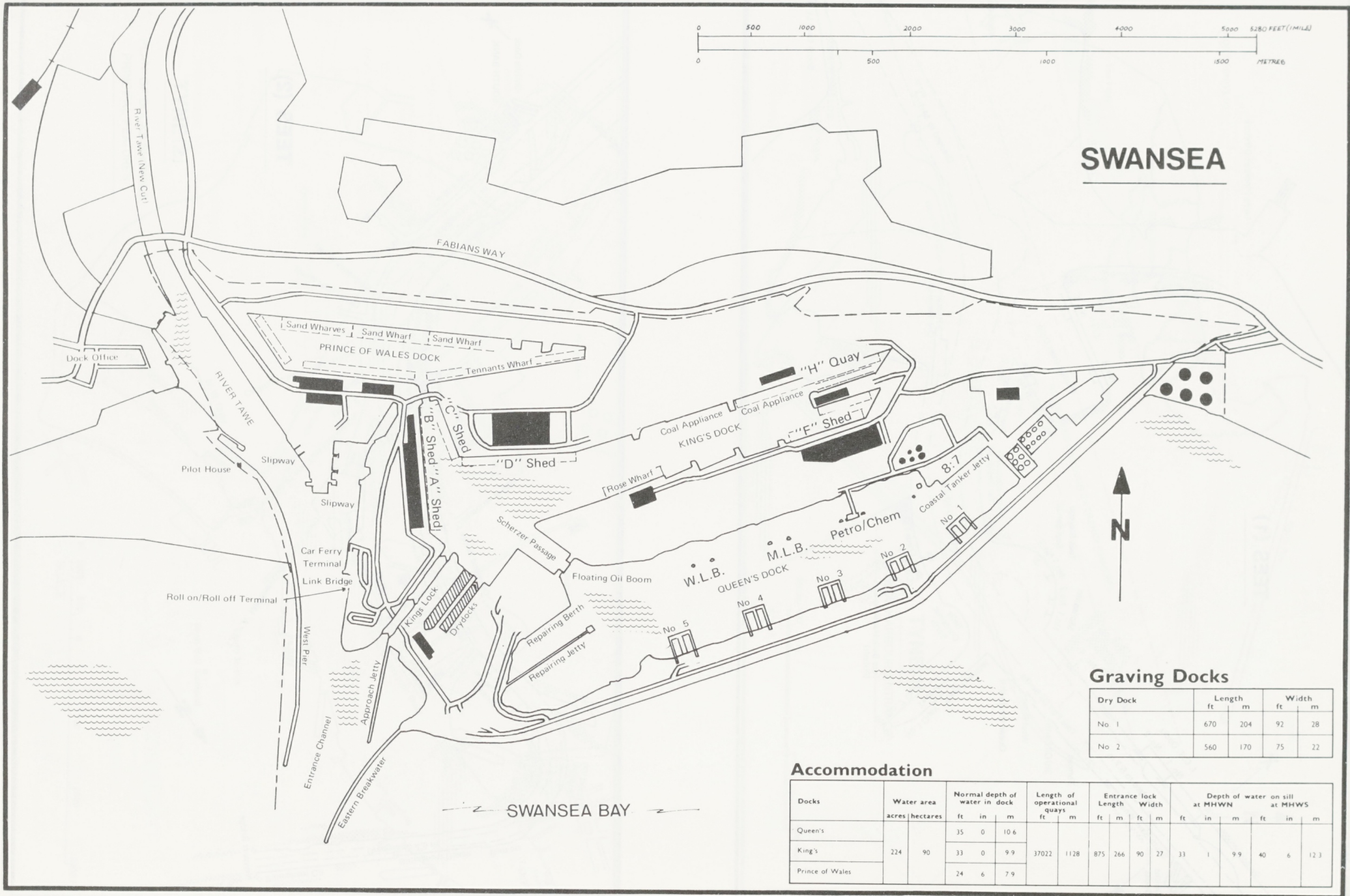
SULLOM VOE



No. 2, 3 & 4 JETTIES MOORING GUIDE

Not to scale





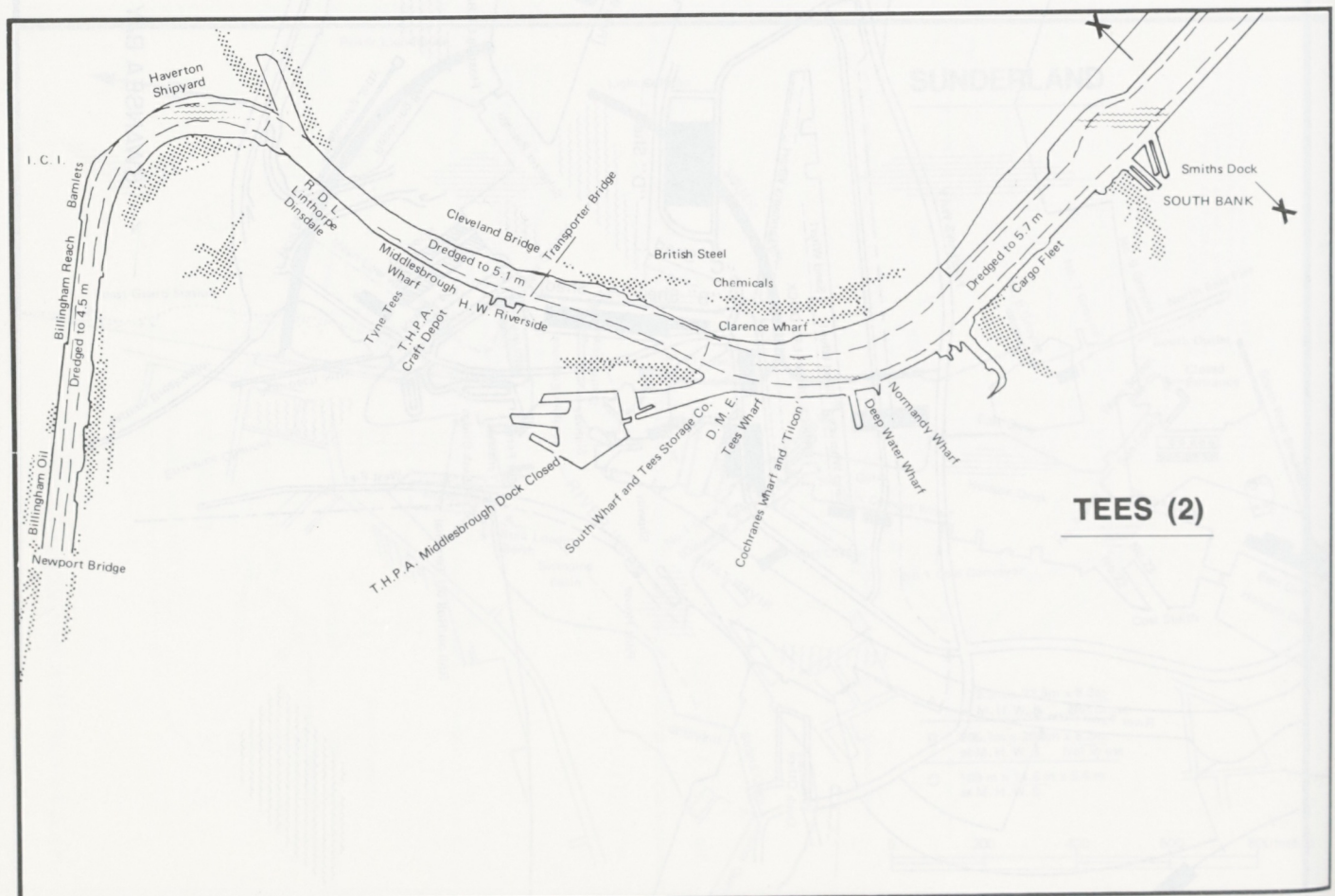
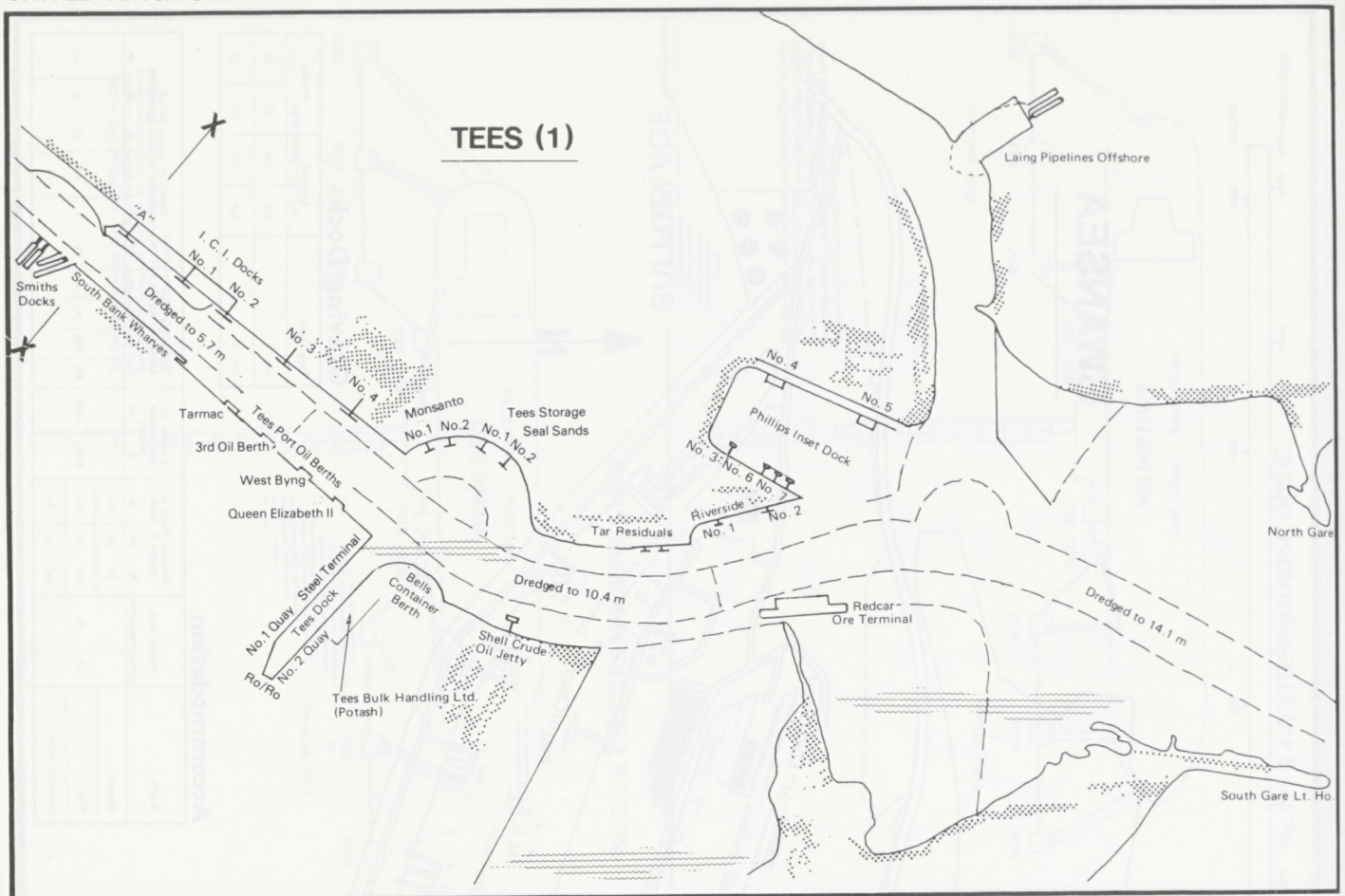
SWANSEA

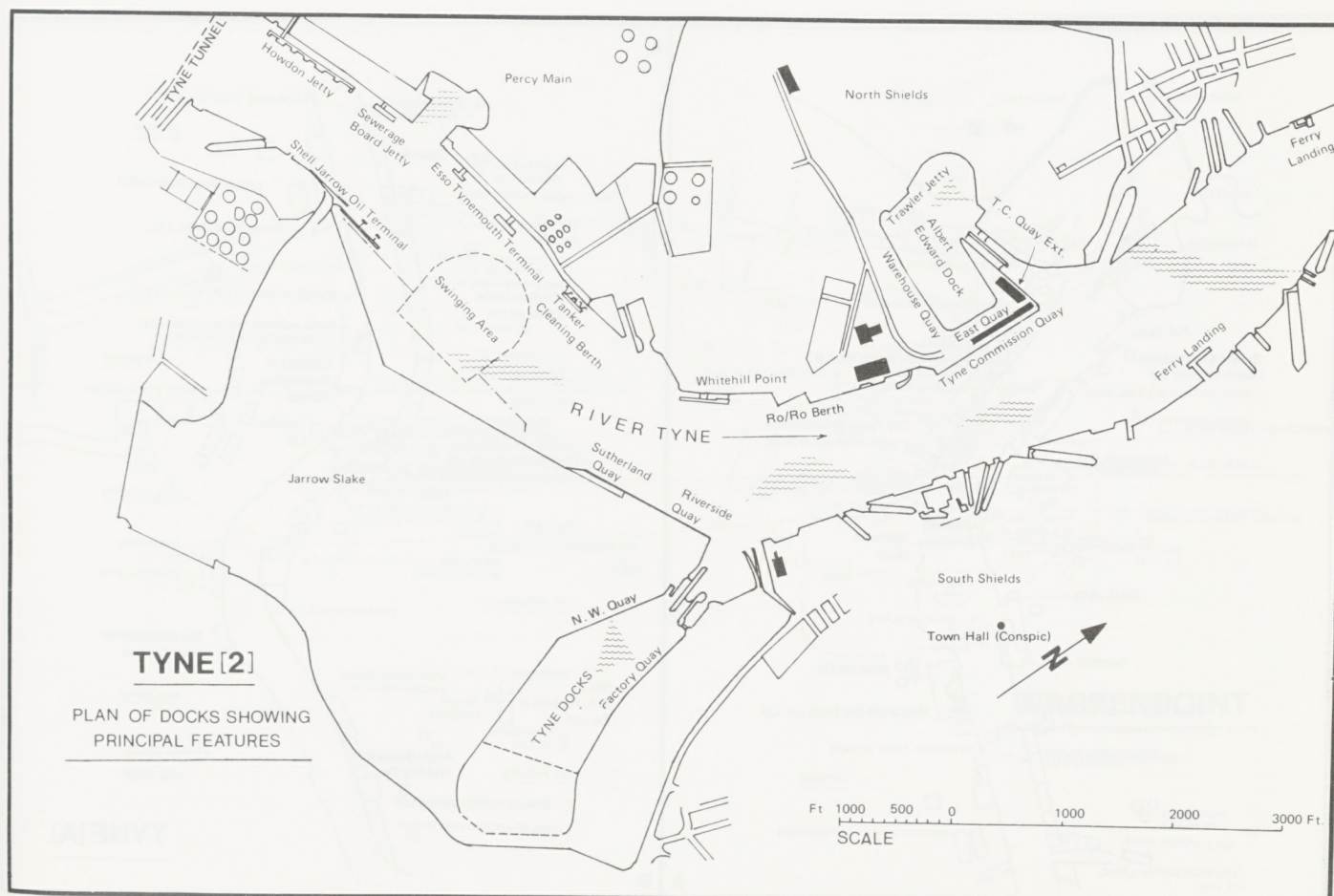
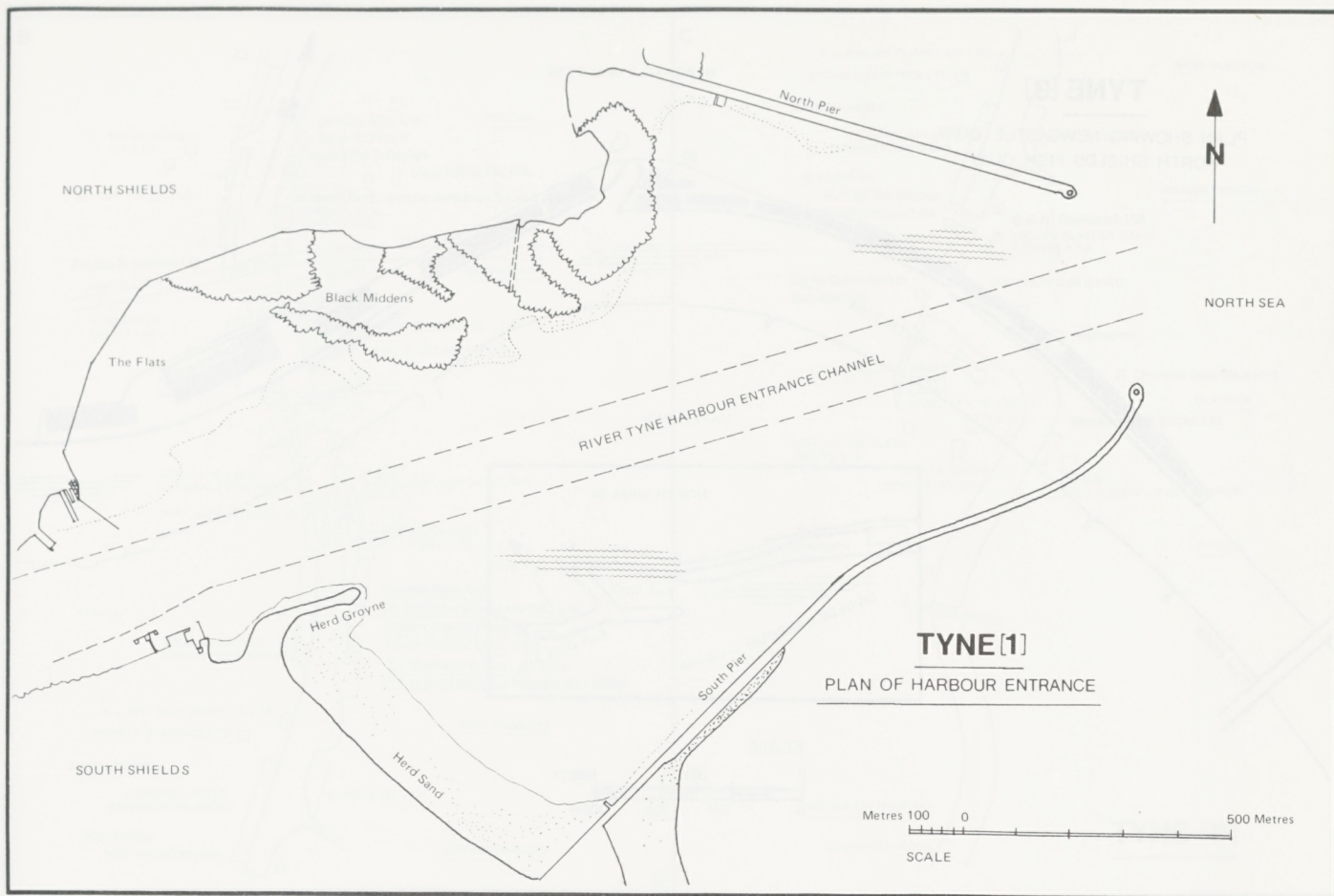
Graving Docks

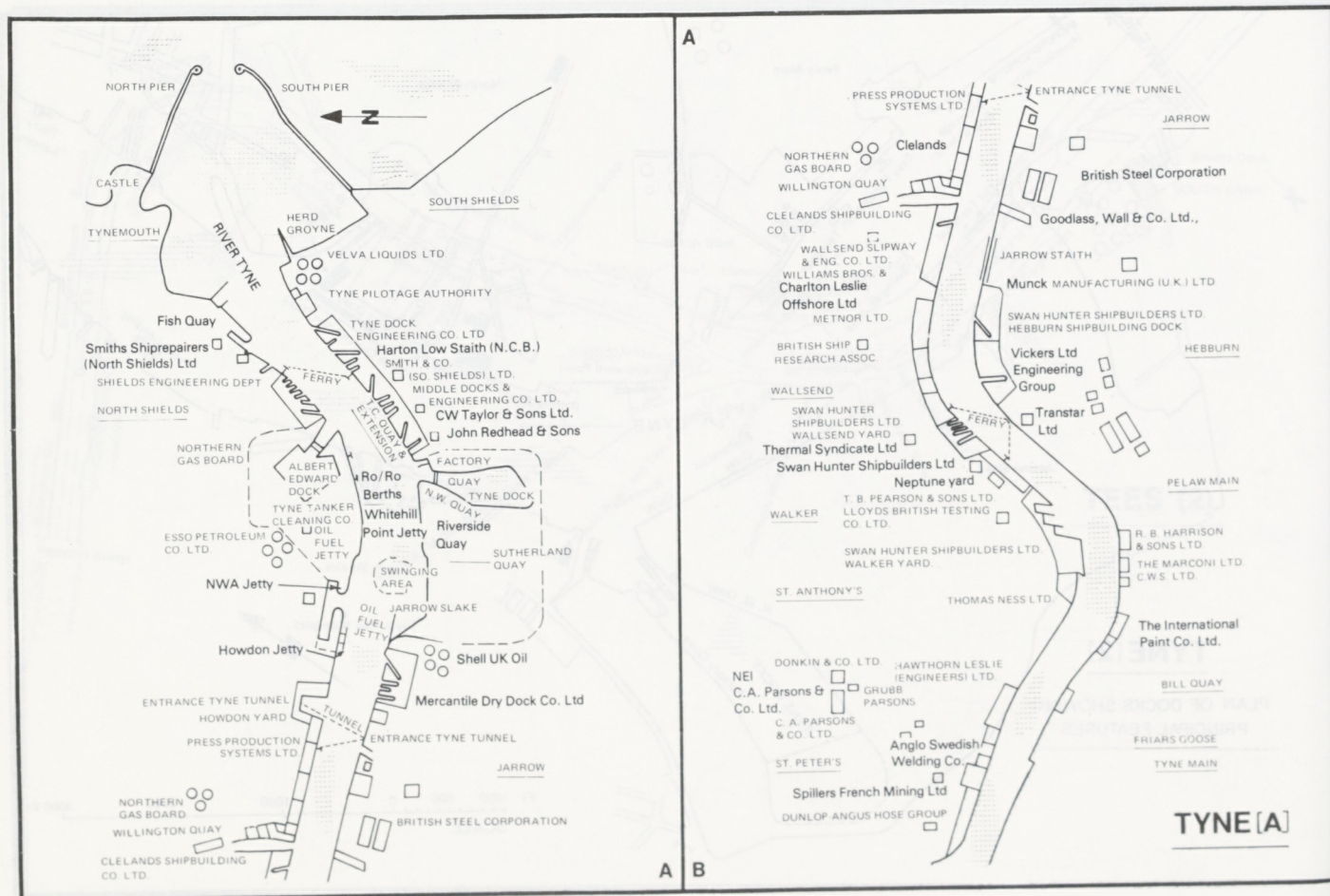
Dry Dock	Length		Width	
	ft	m	ft	m
No 1	670	204	92	28
No 2	560	170	75	22

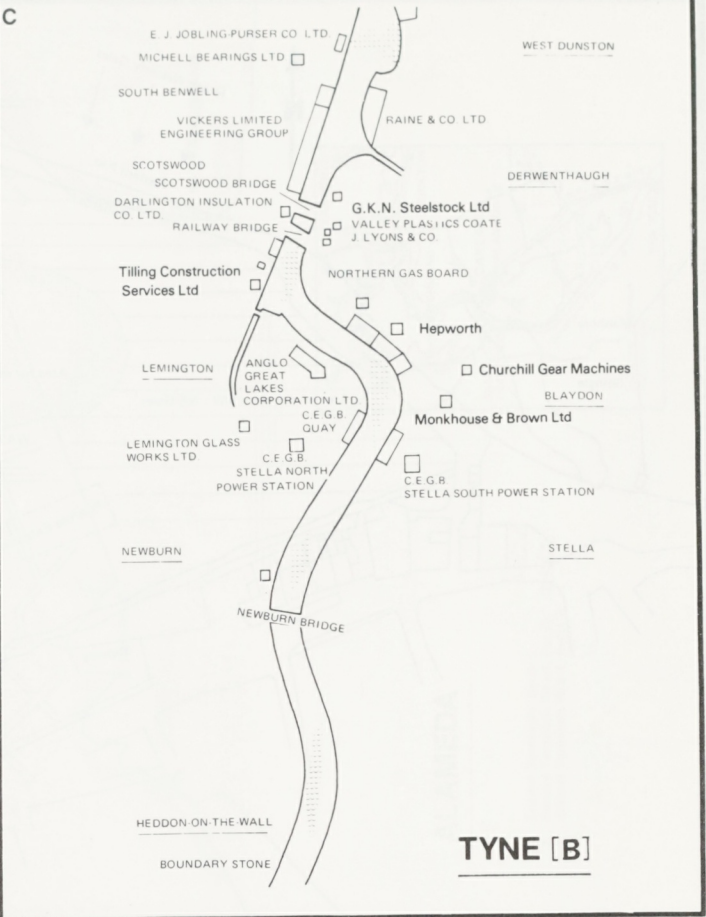
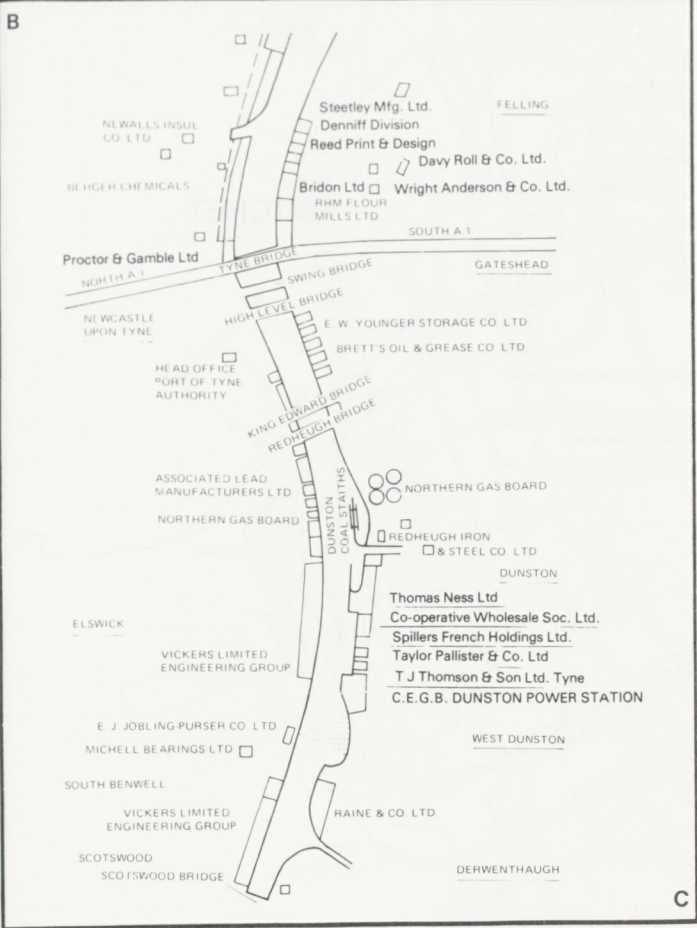
Accommodation

Docks	Water area		Normal depth of water in dock			Length of operational quays		Entrance lock				Depth of water on sill					
	acres	hectares	ft	in	m	ft	m	Length	Width	Length	Width	at MHWN			at MHWS		
Queen's	224	90	35	0	10.6	37022	1128	875	266	90	27	33	1	9.9	40	6	12.3
King's			33	0	9.9												
Prince of Wales			24	6	7.9												

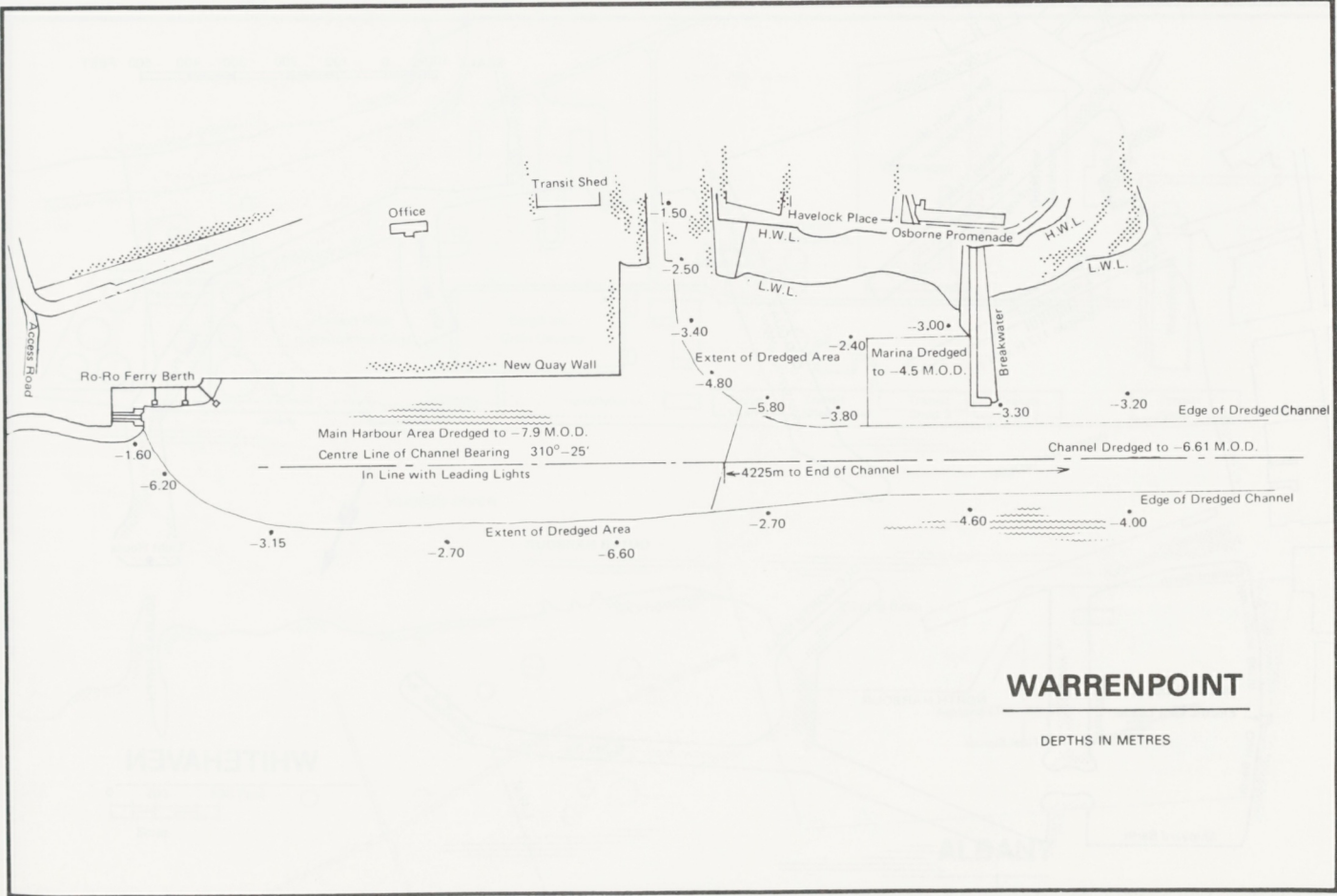






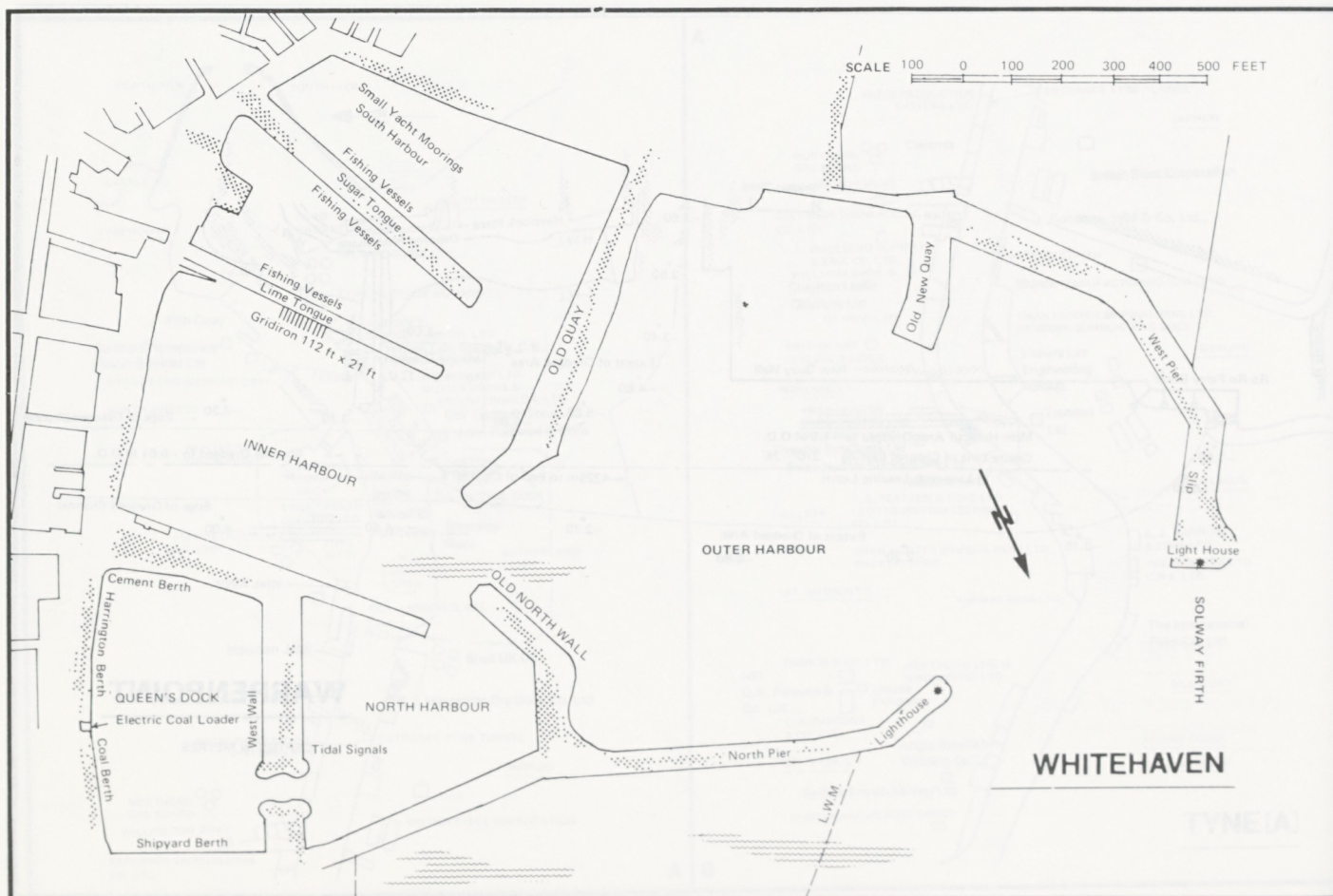
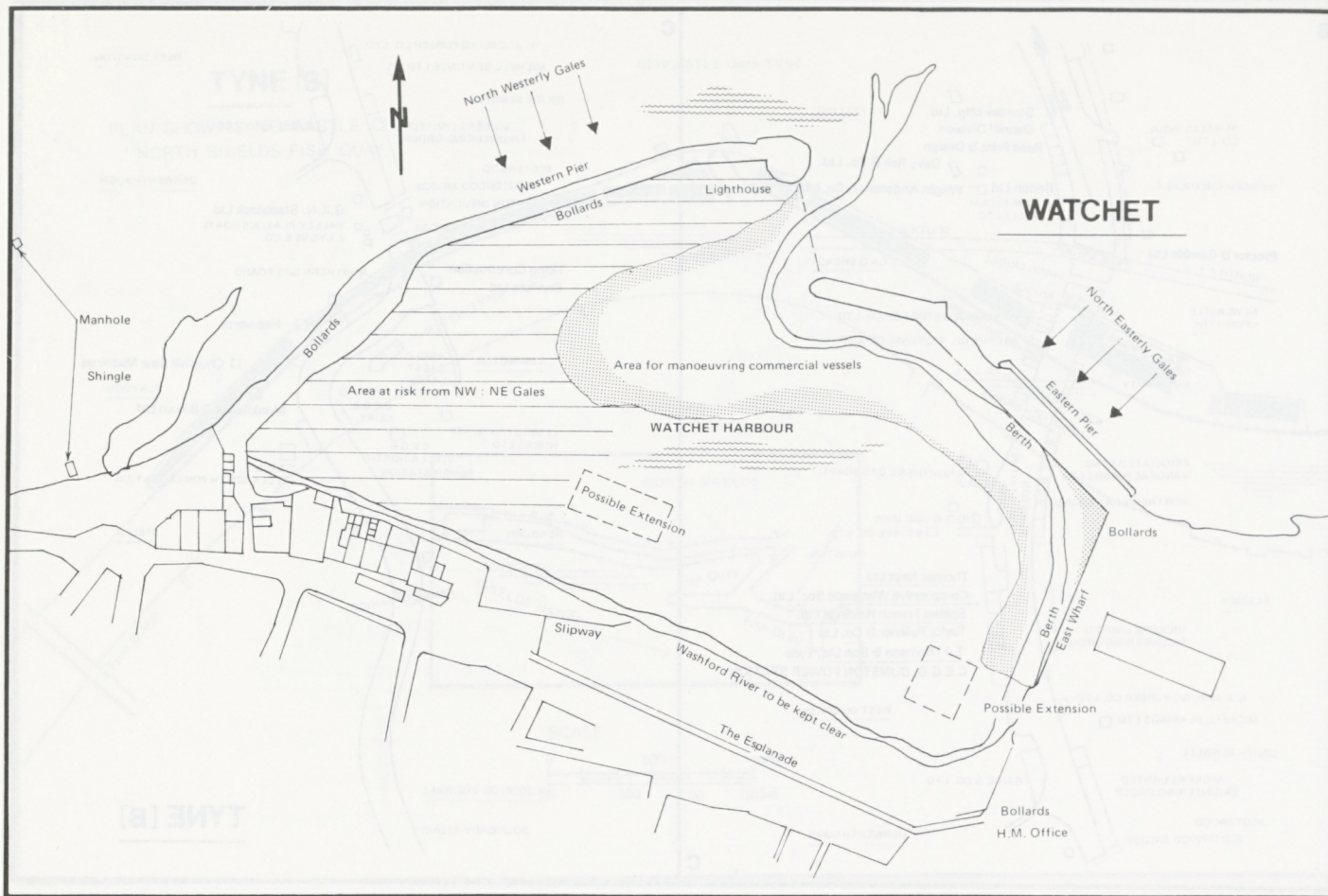


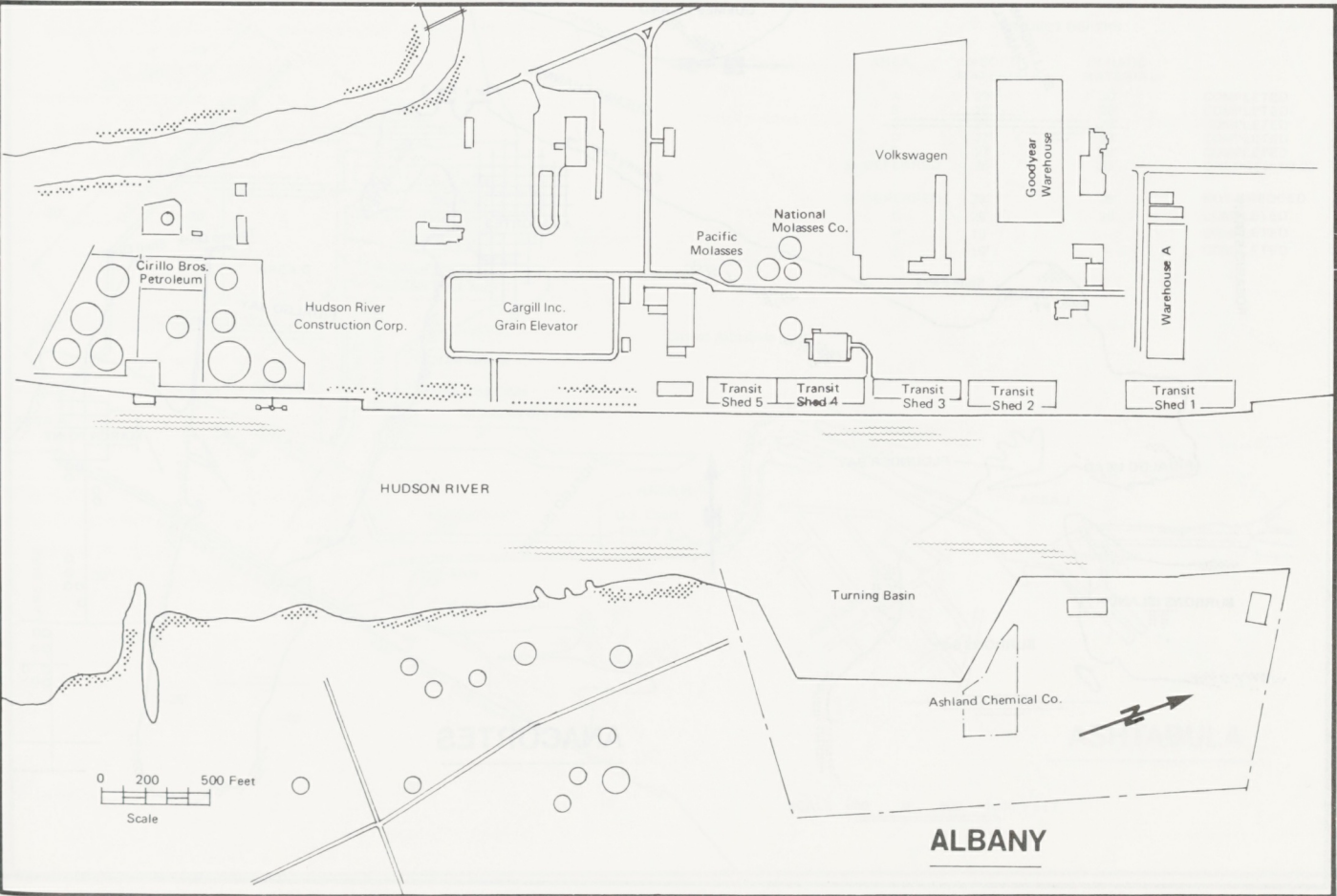
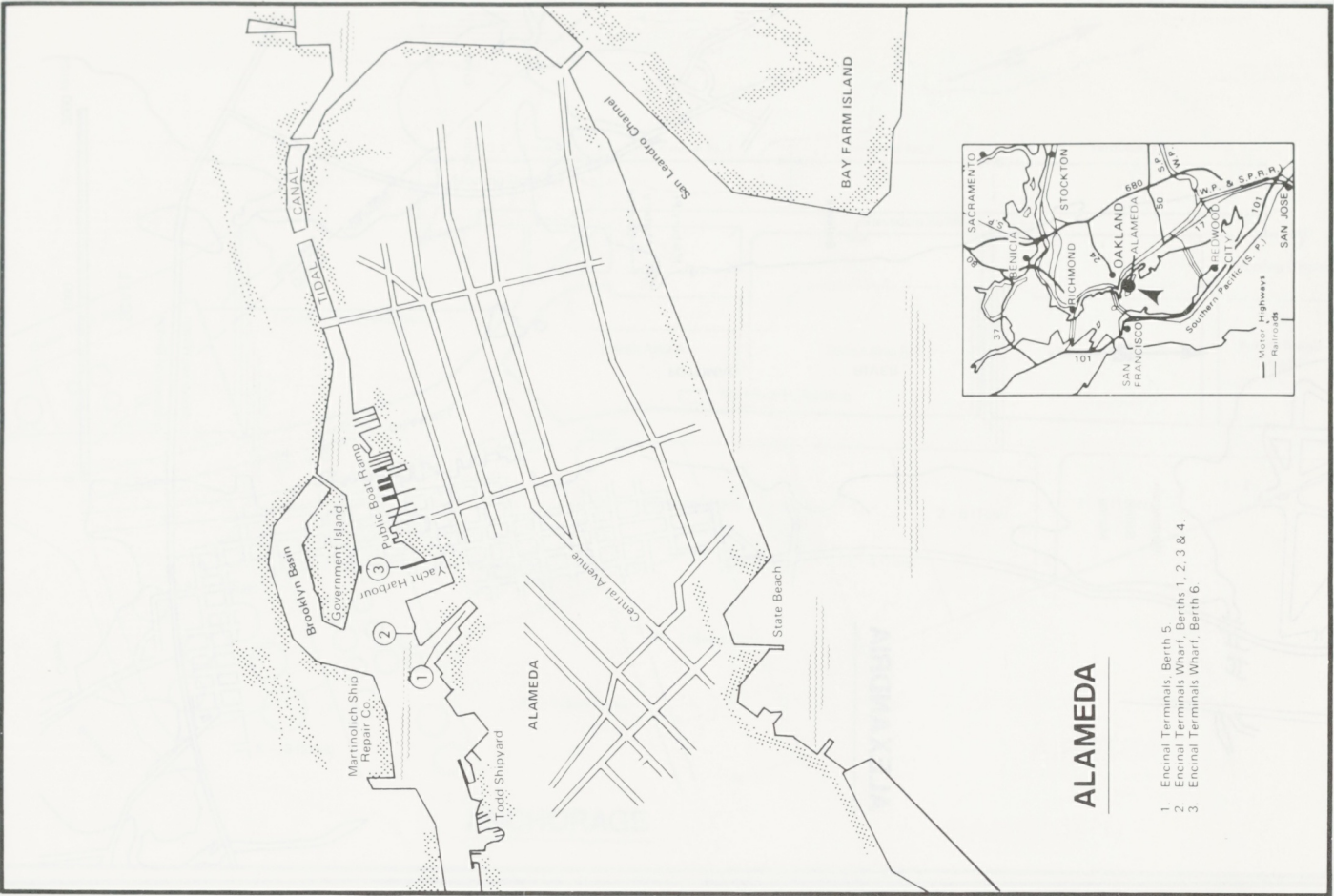
TYNE [B]

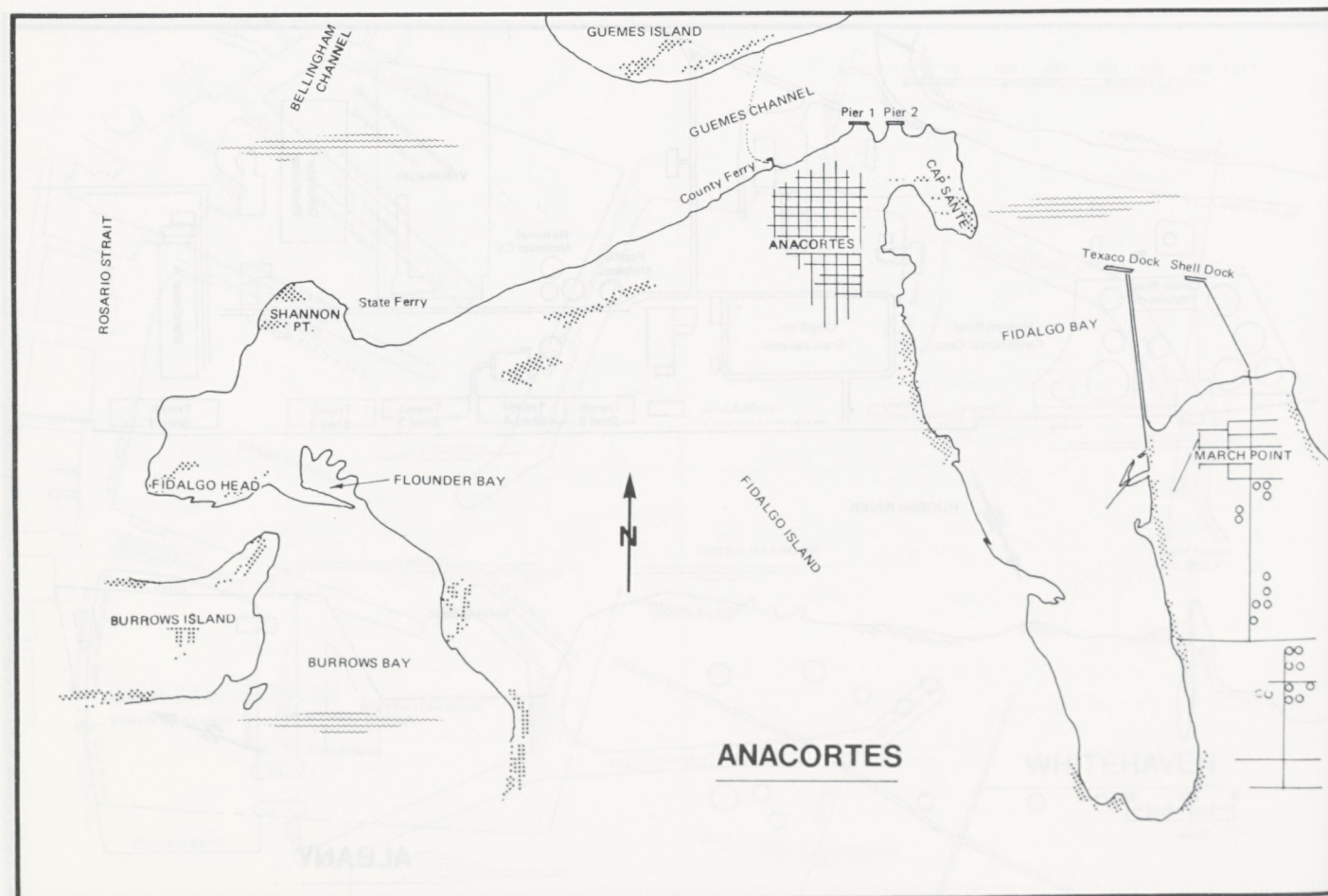
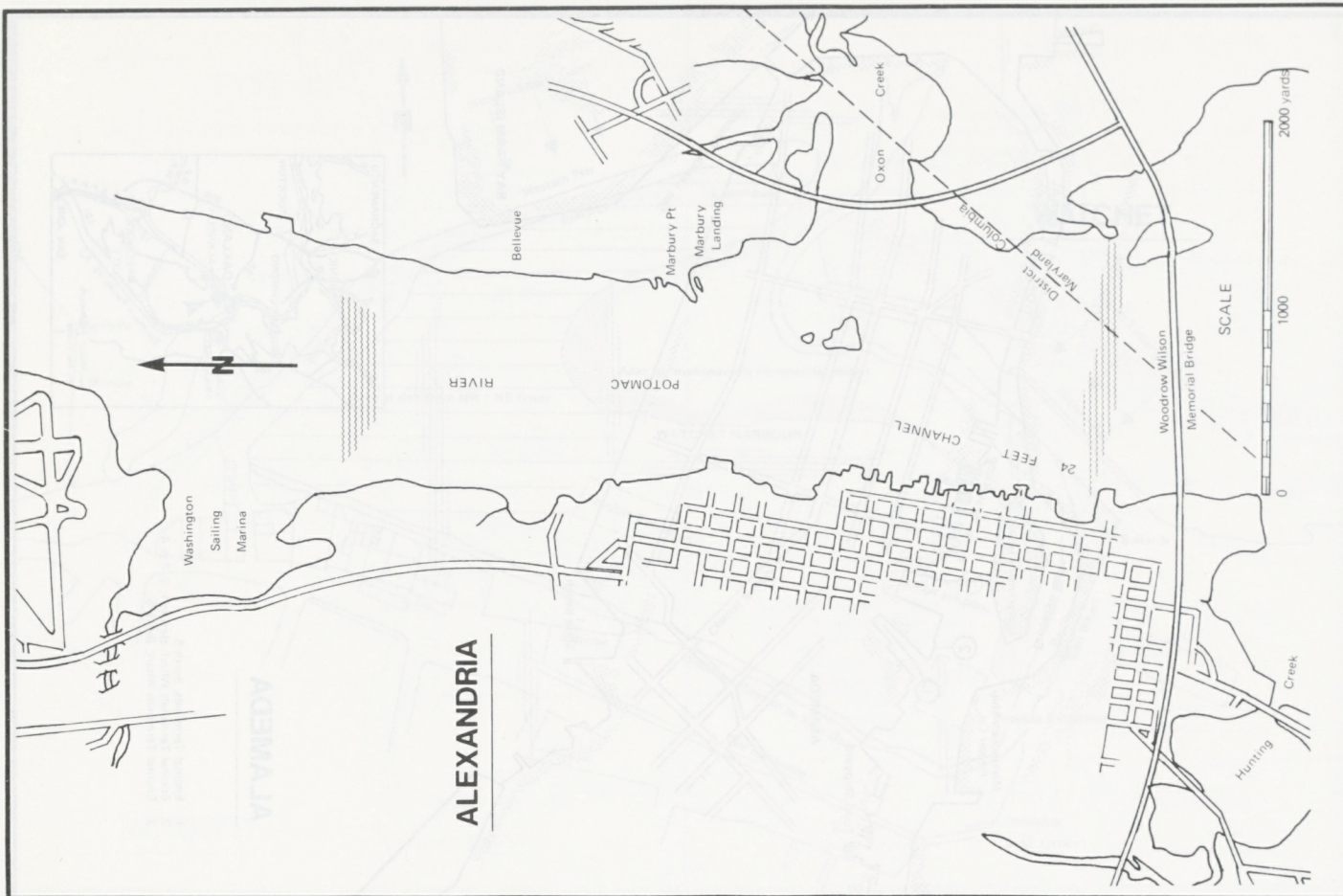


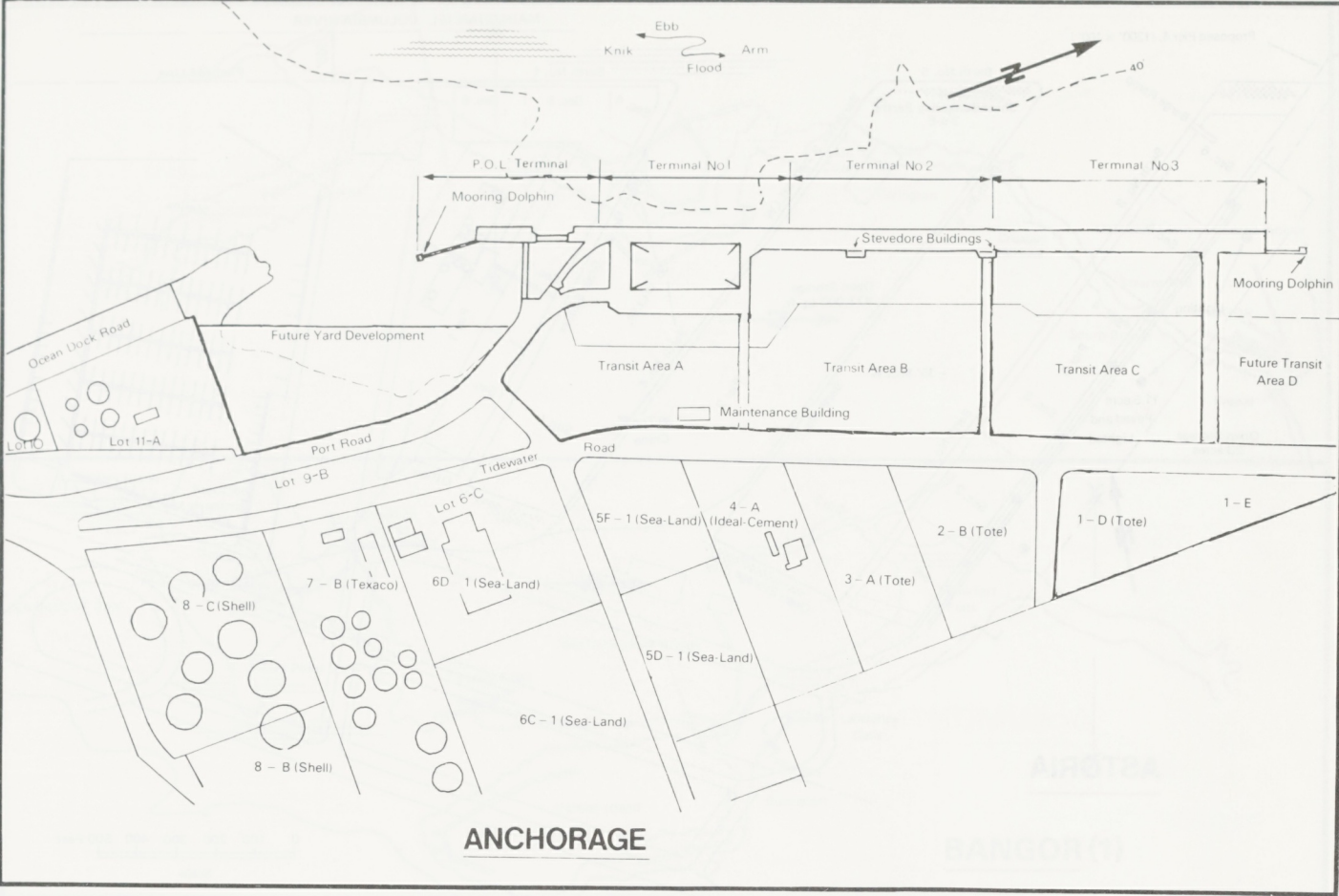
WARRENPOINT

DEPTHS IN METRES

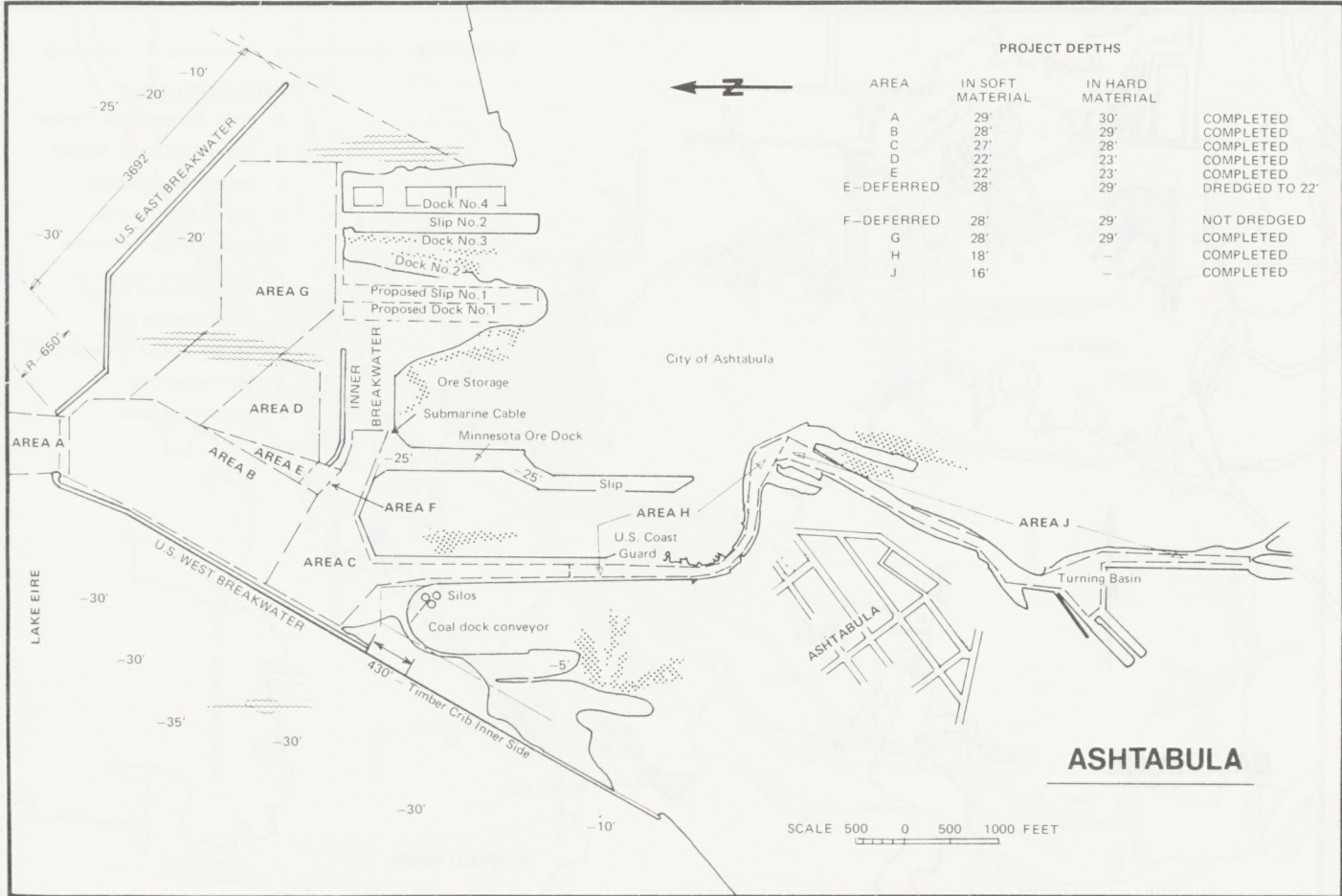




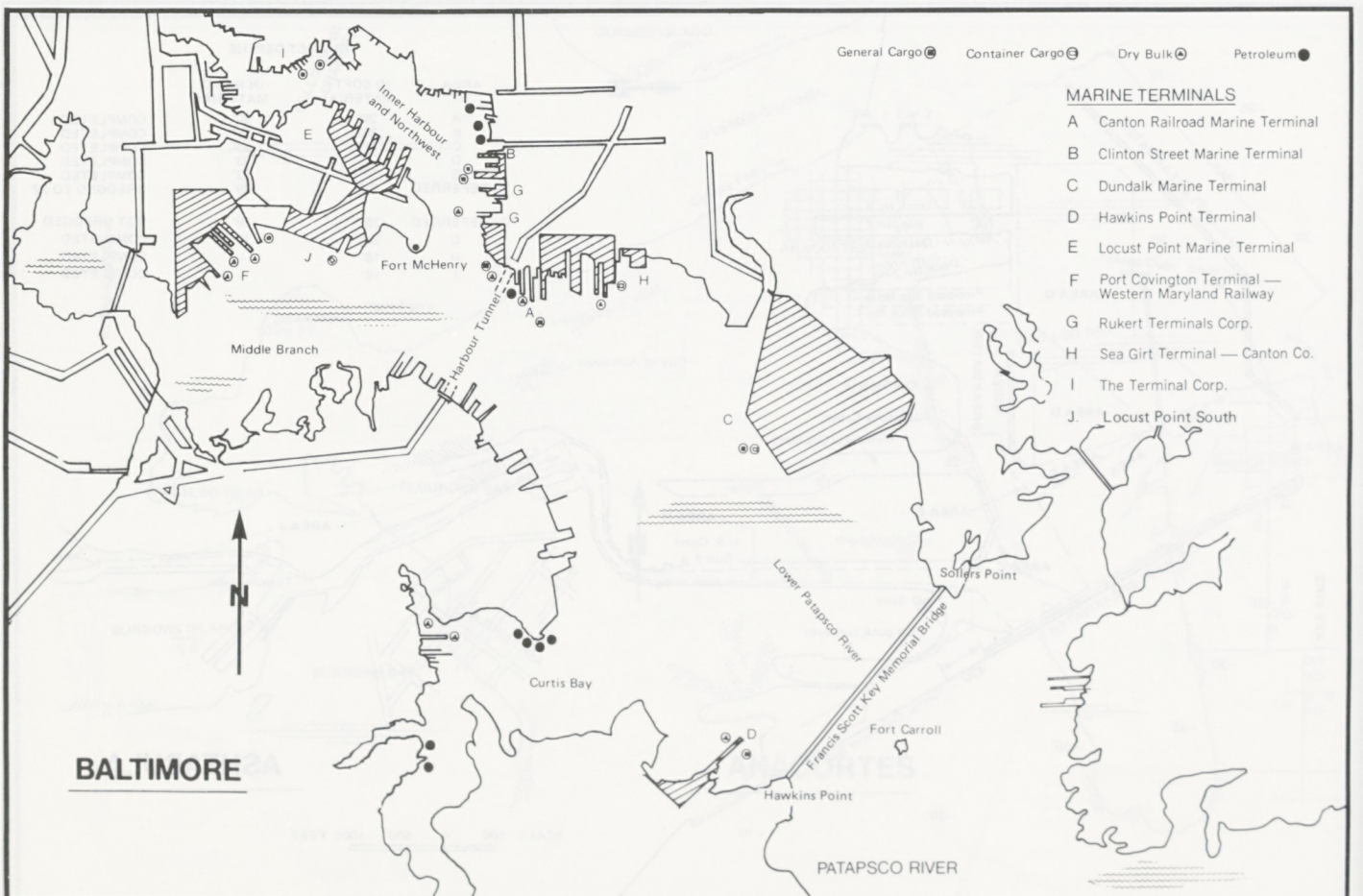
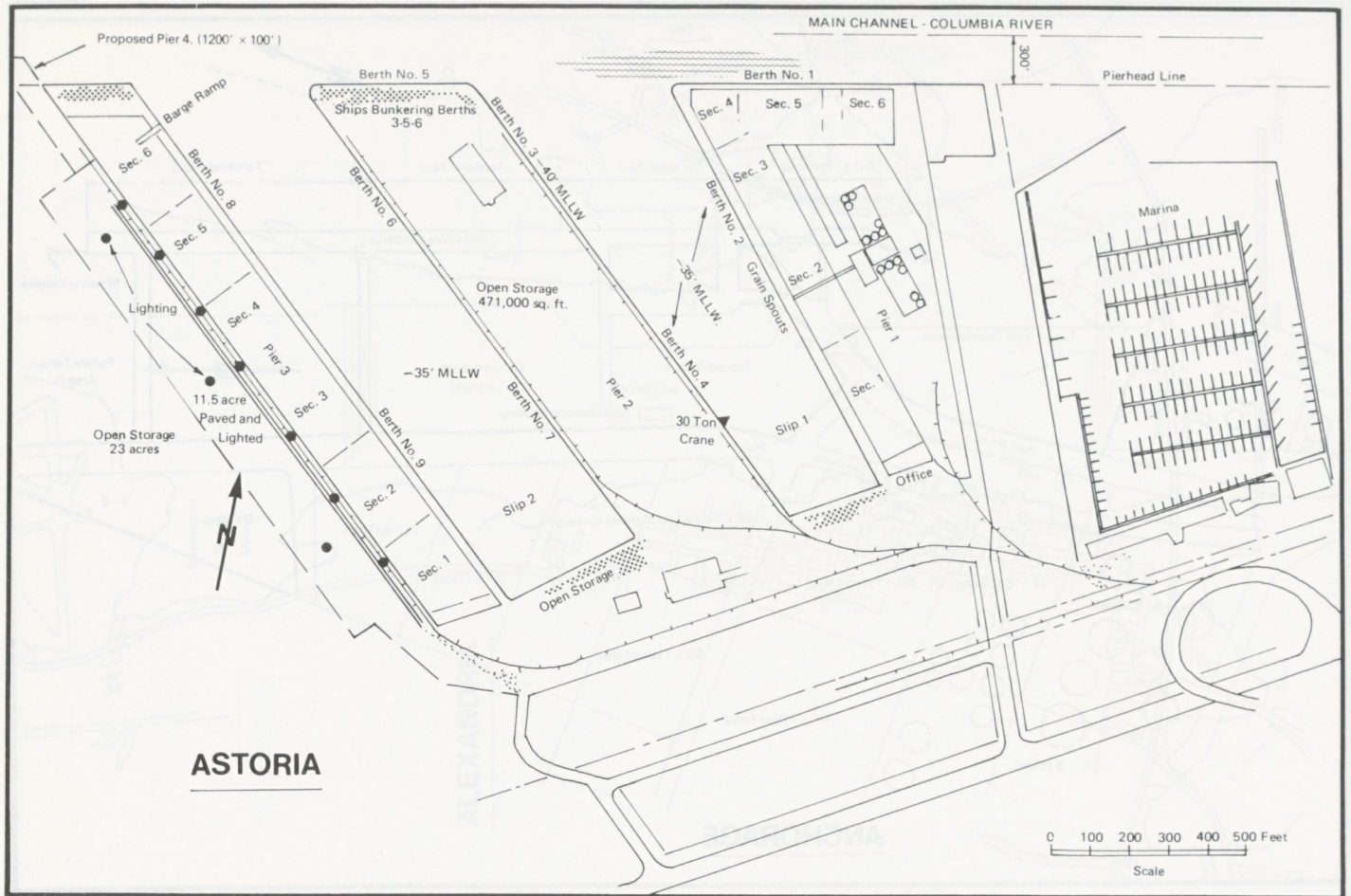


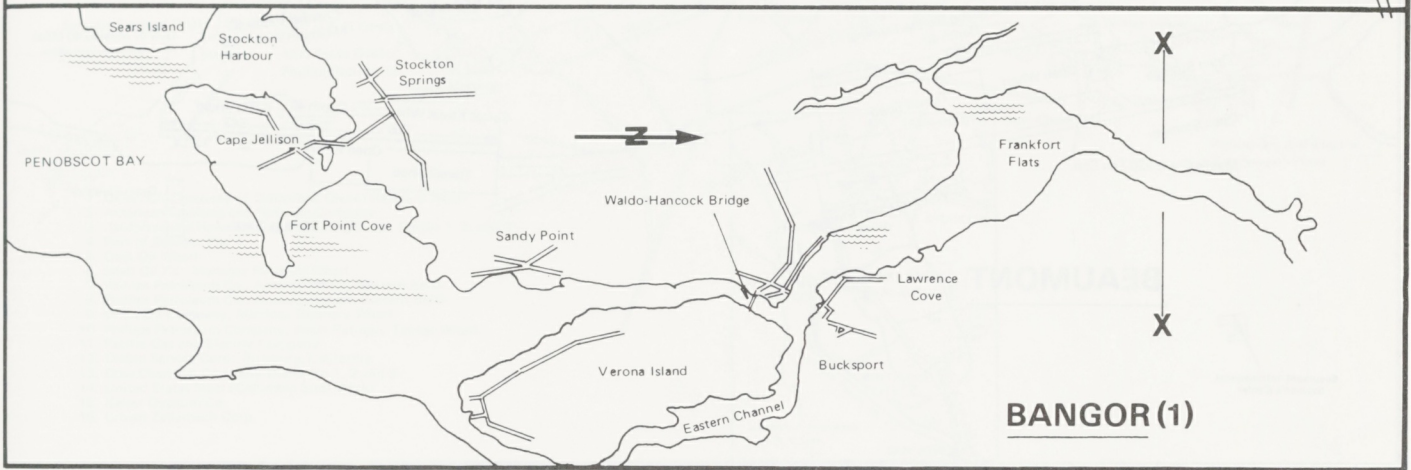
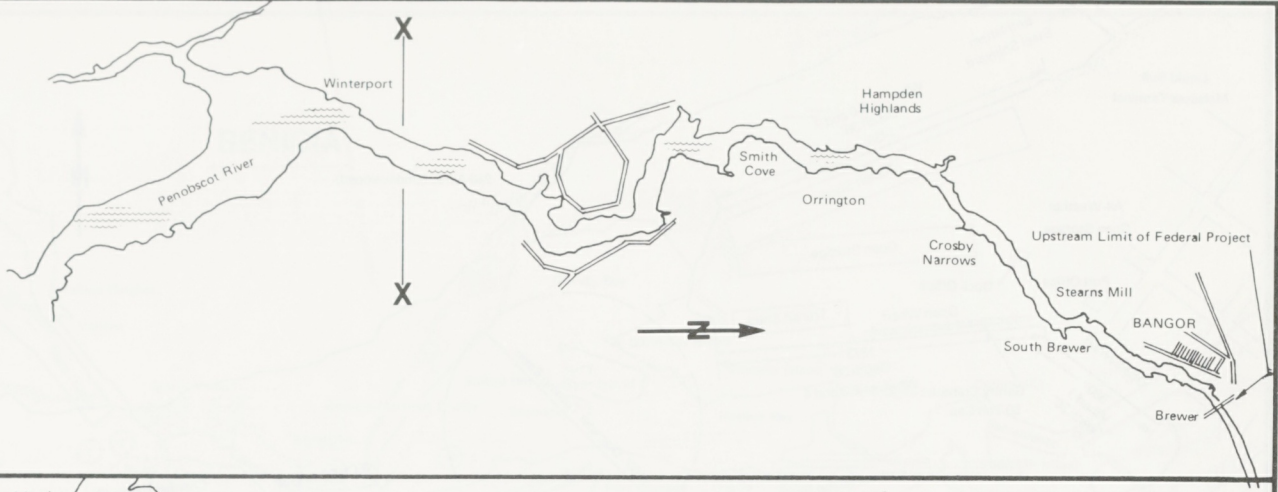


ANCHORAGE

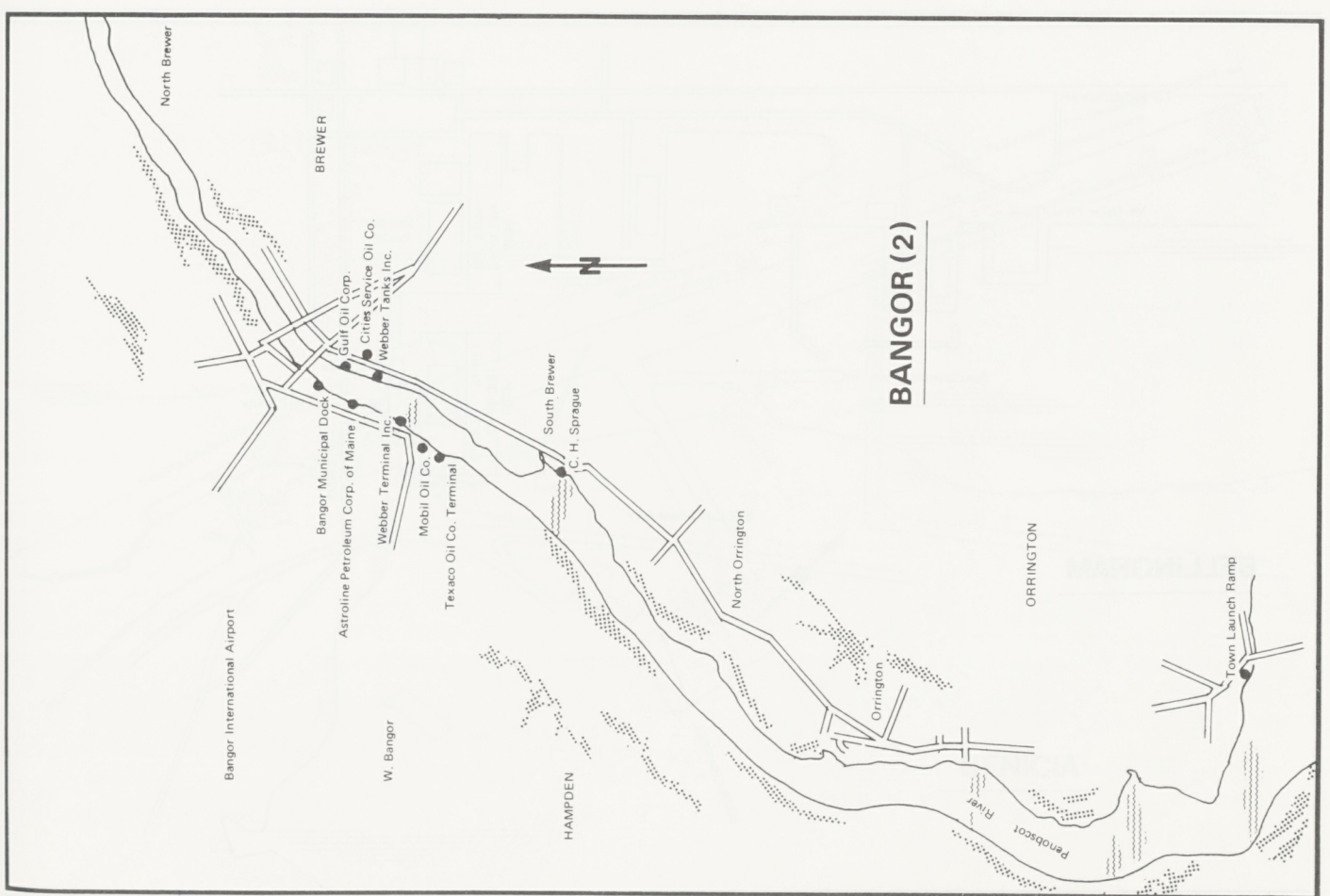


ASHTABULA

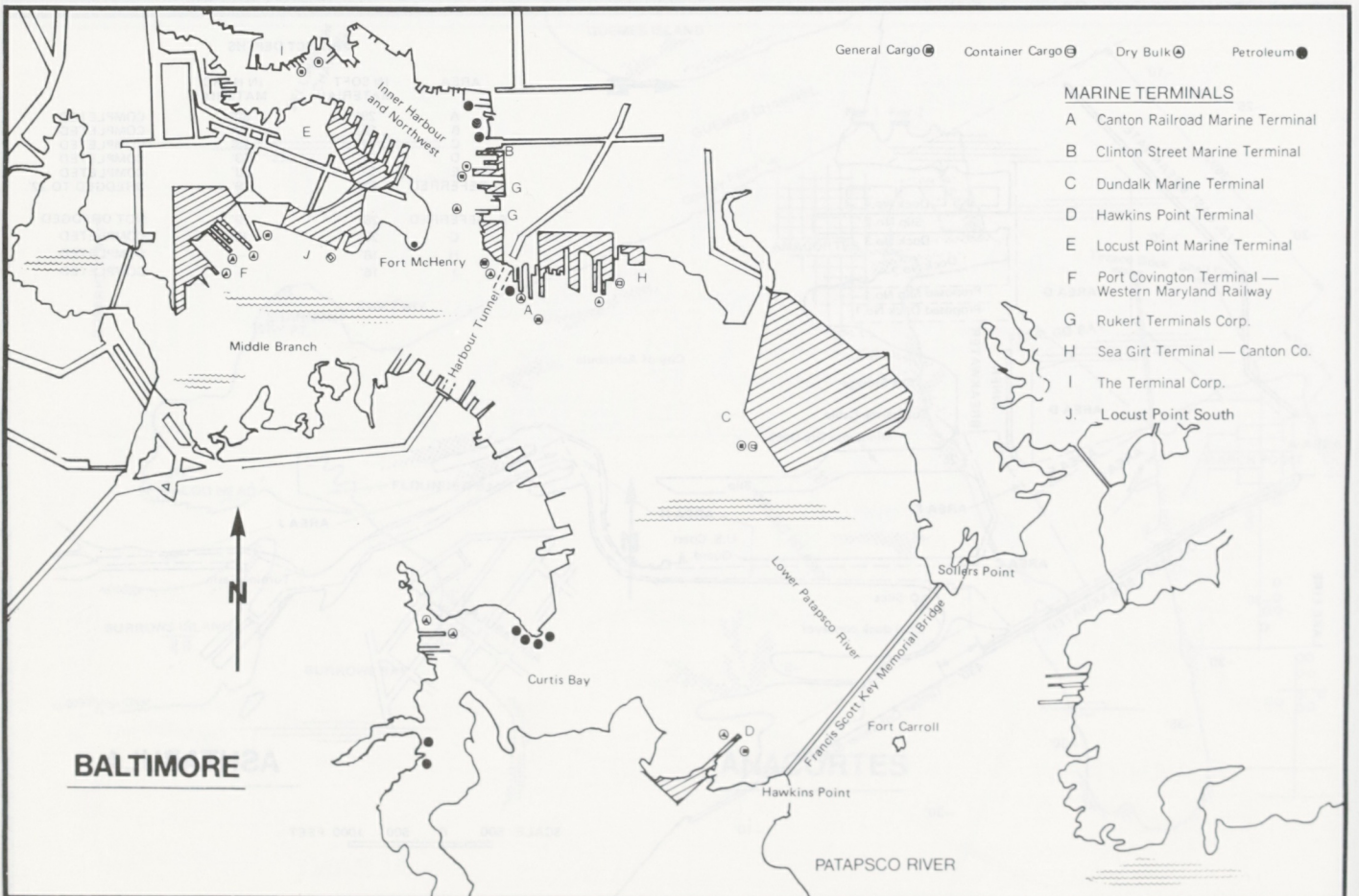
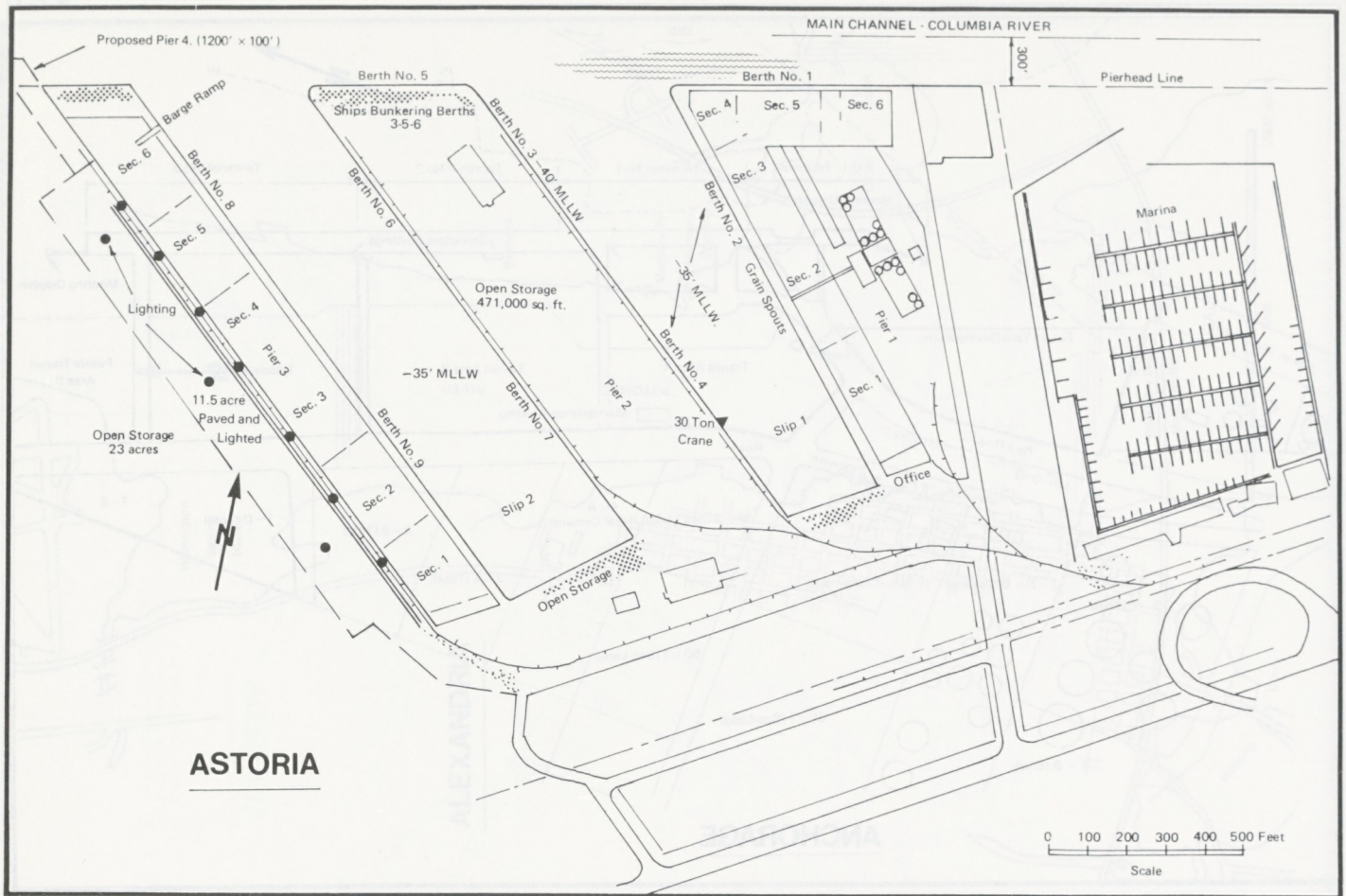


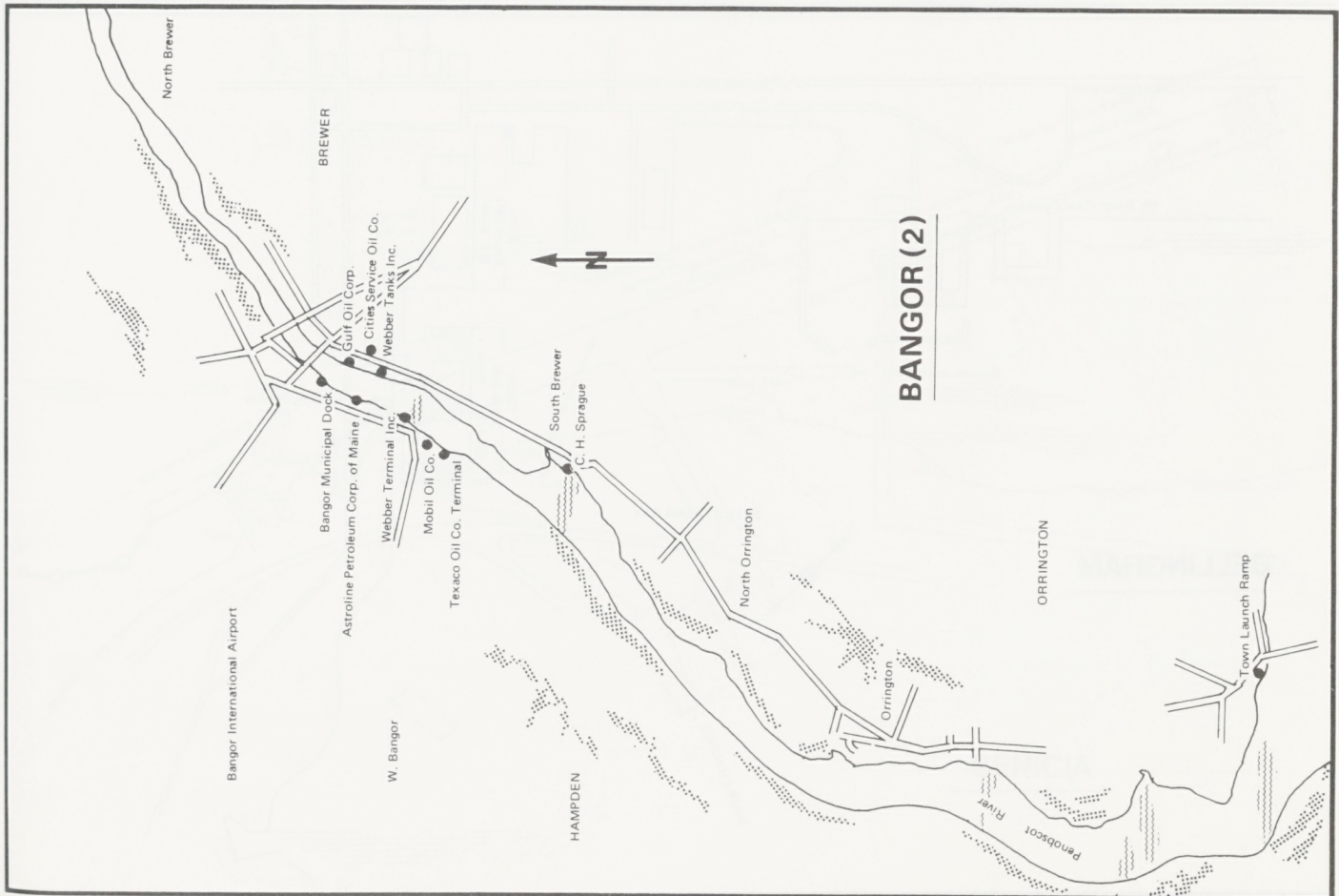
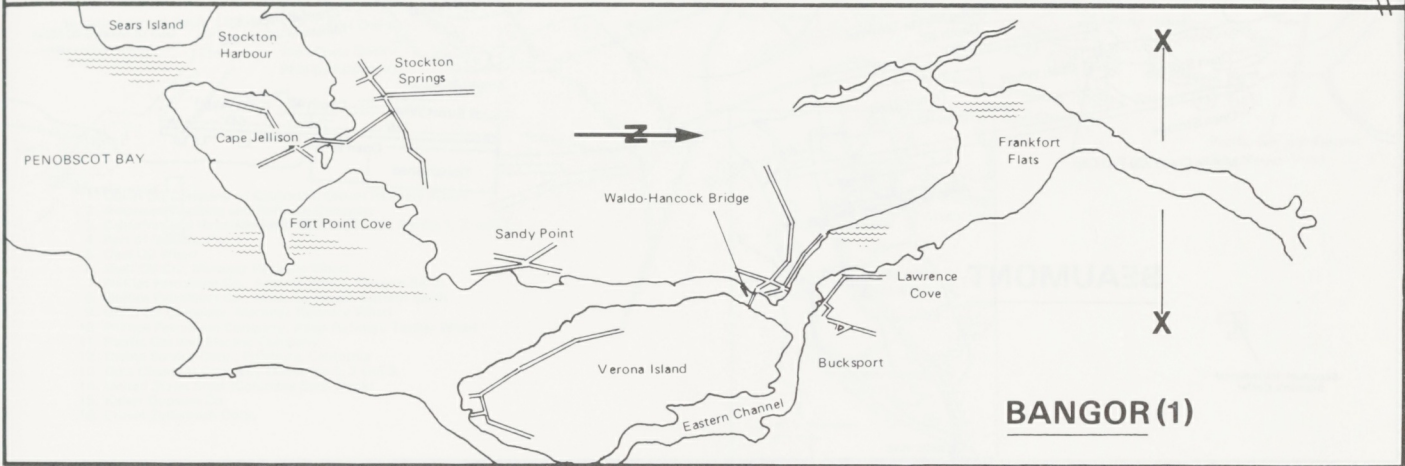
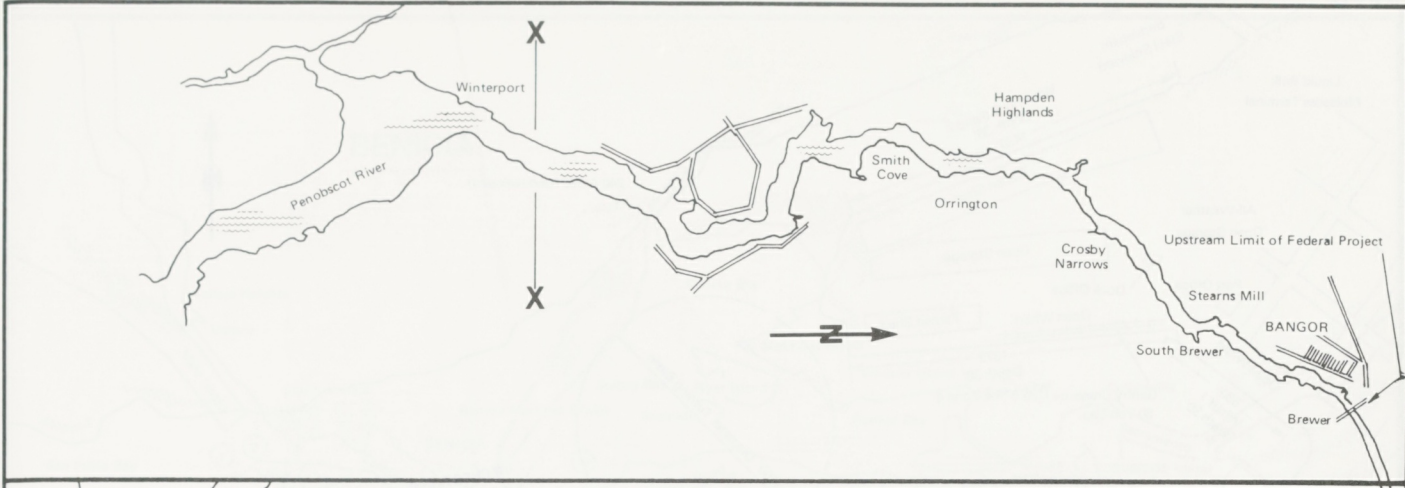


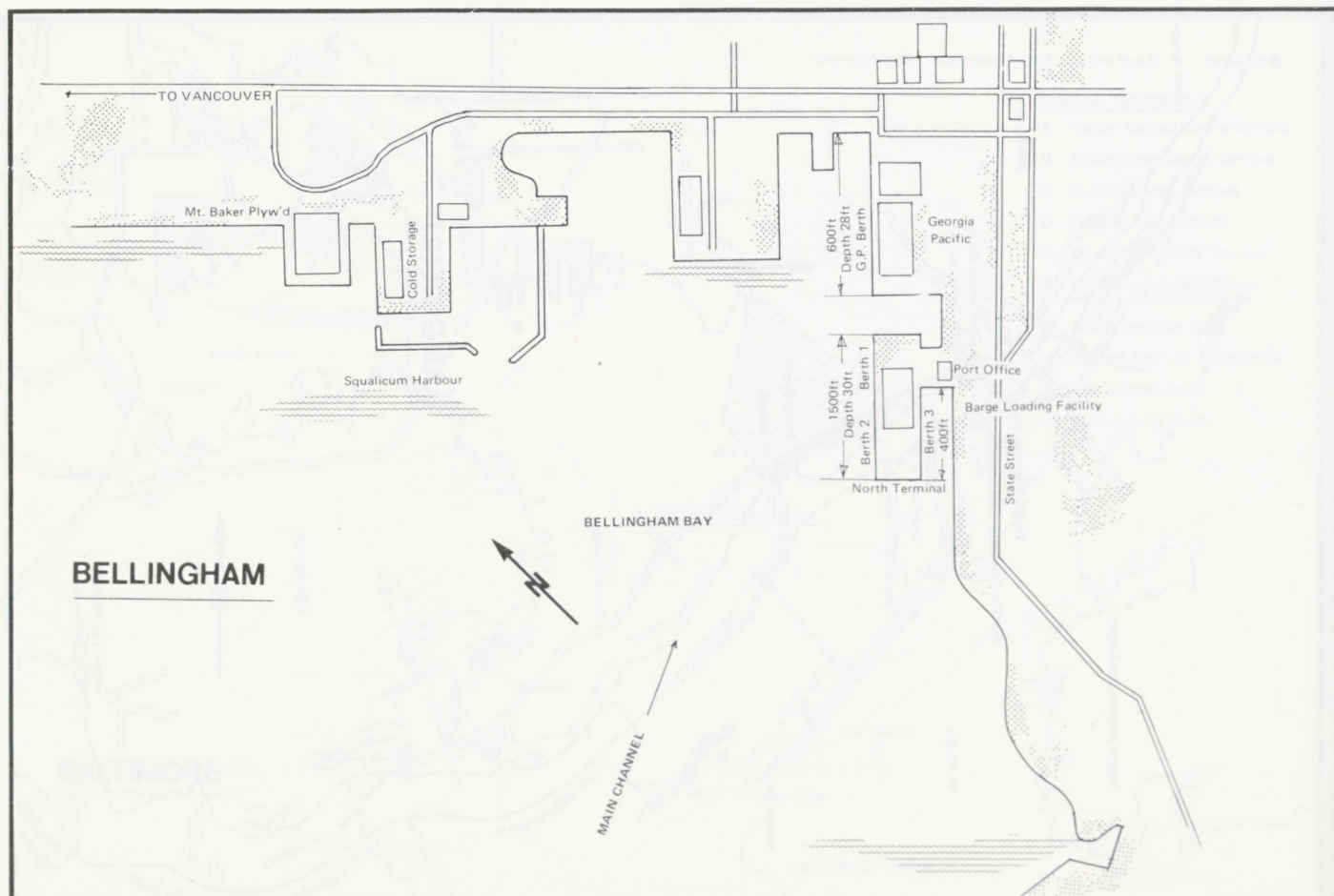
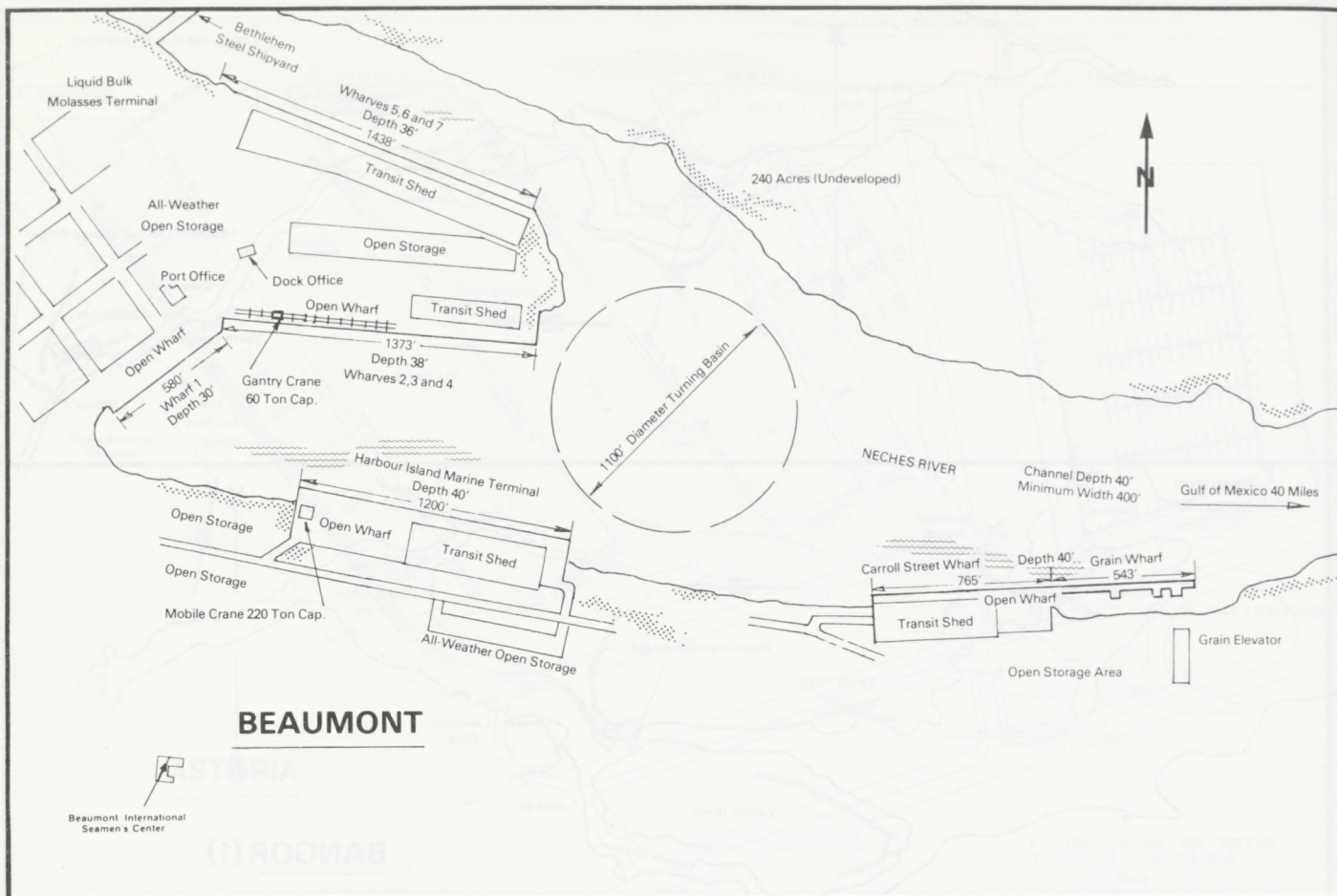
BANGOR (1)

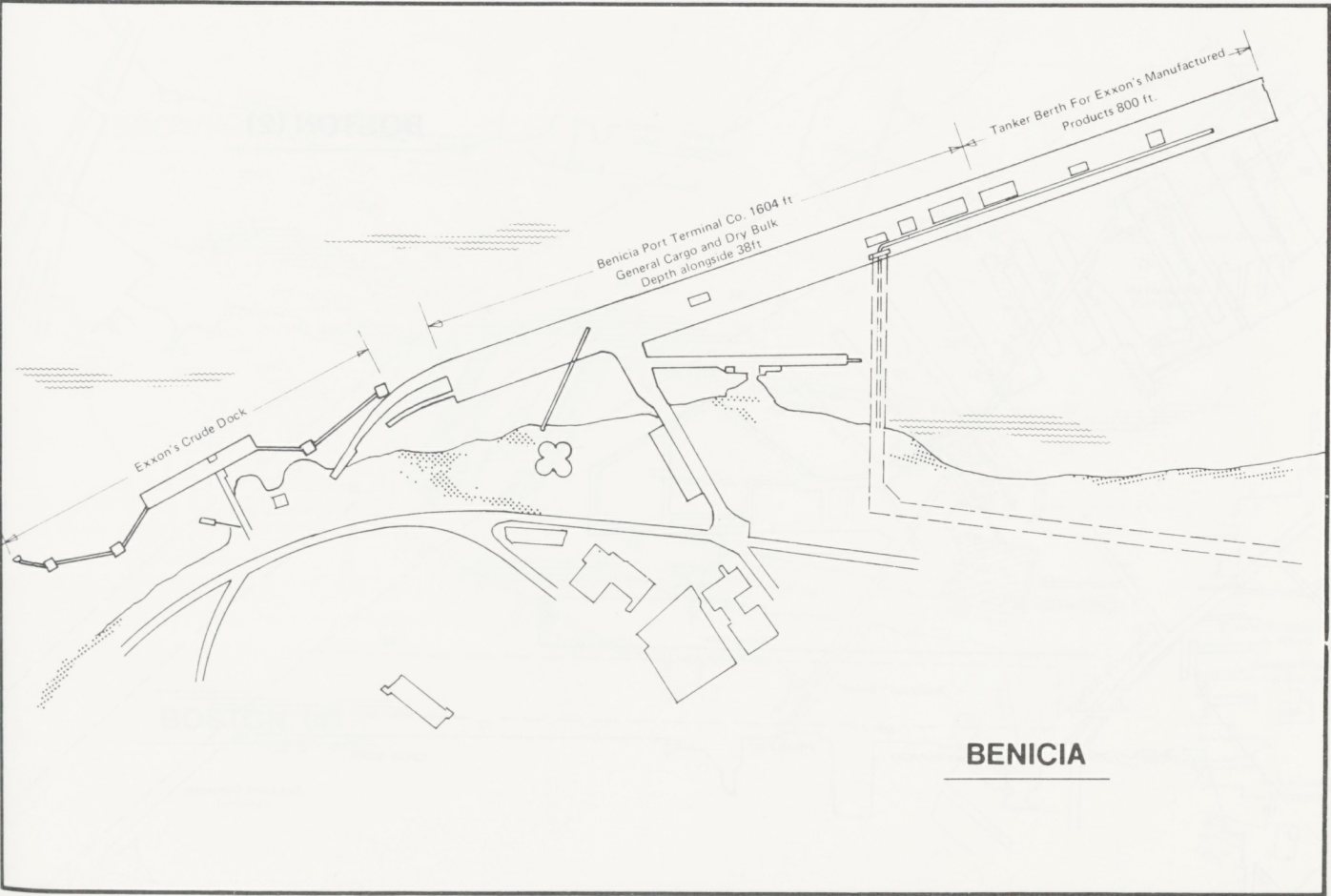
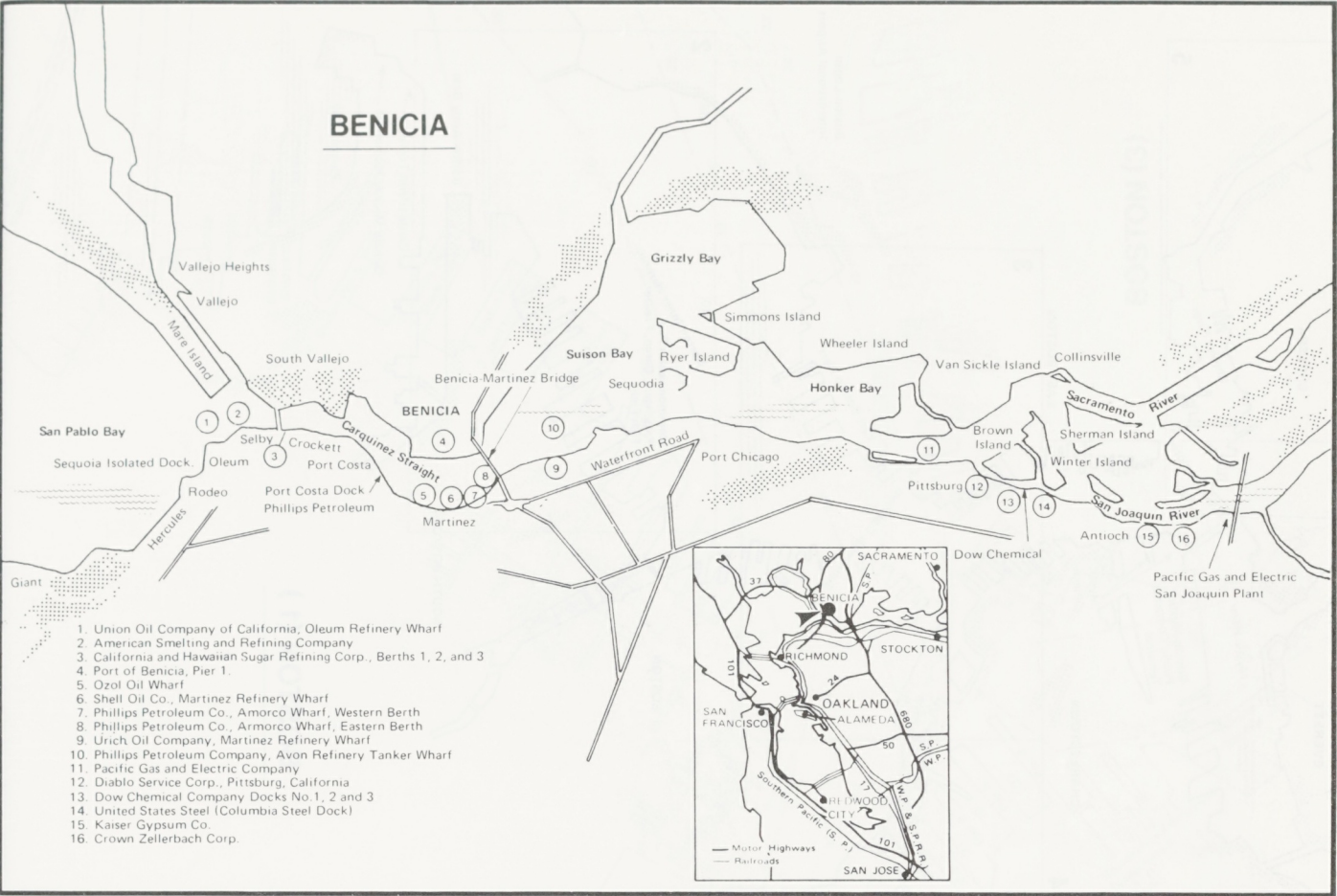


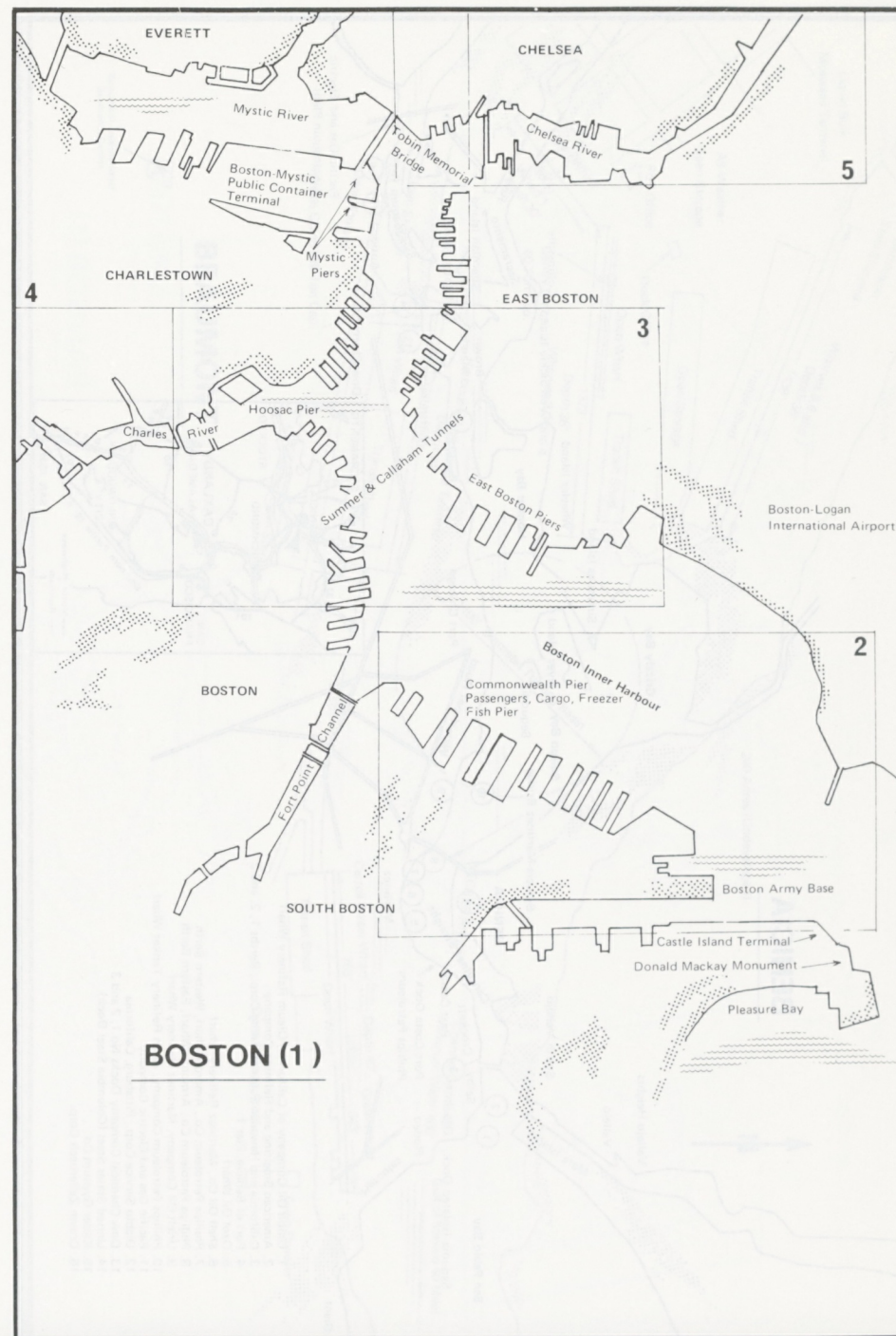
BANGOR (2)



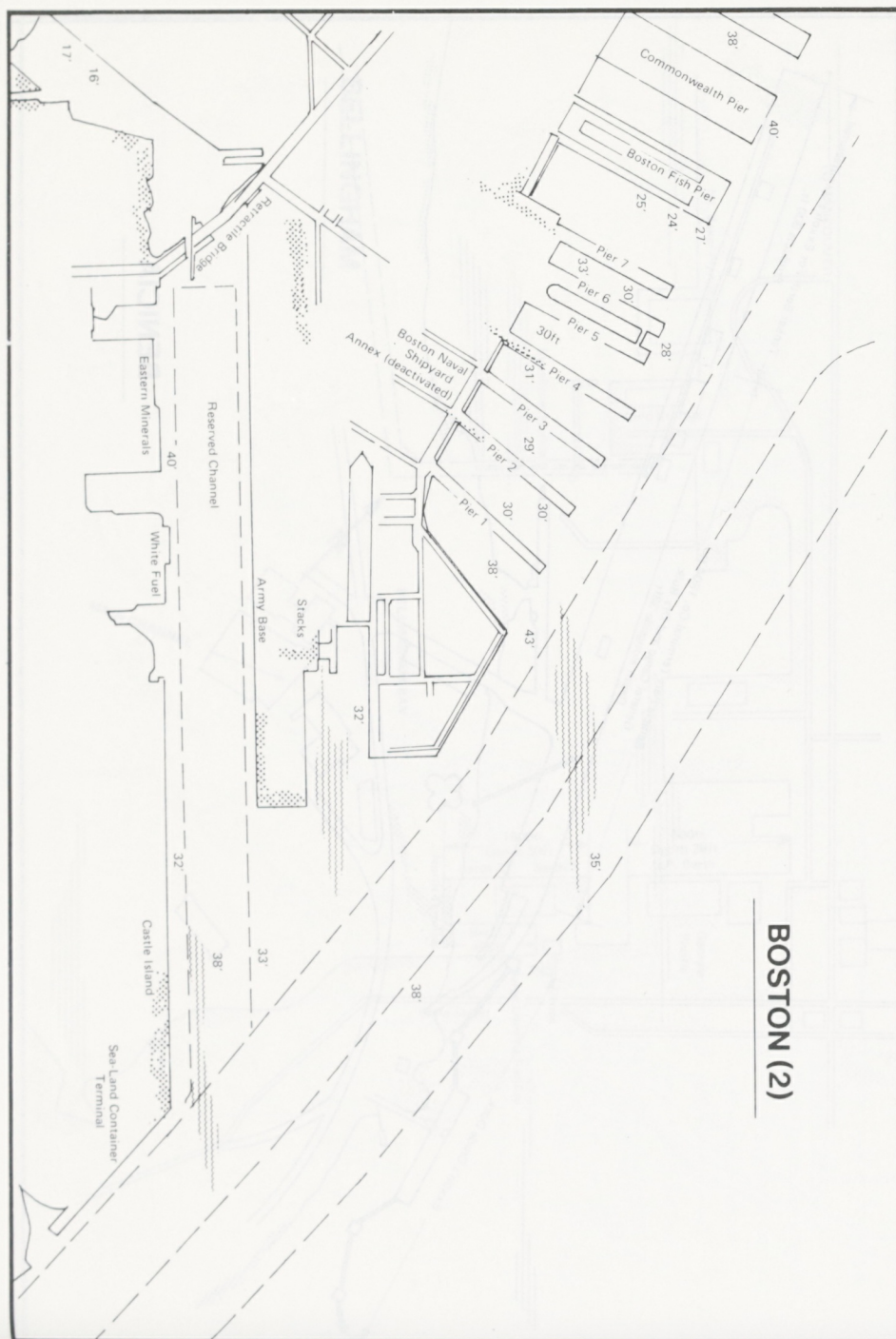




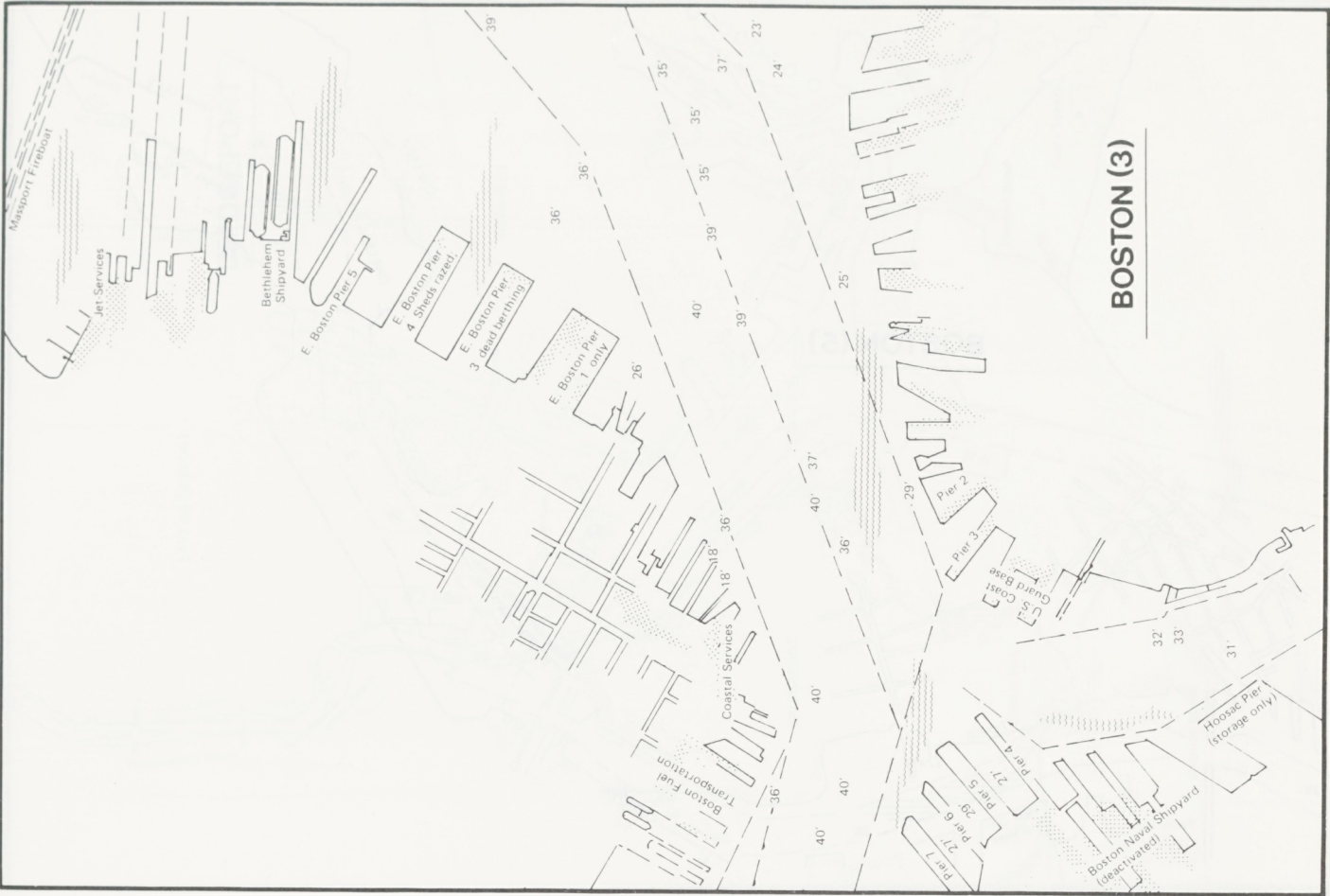




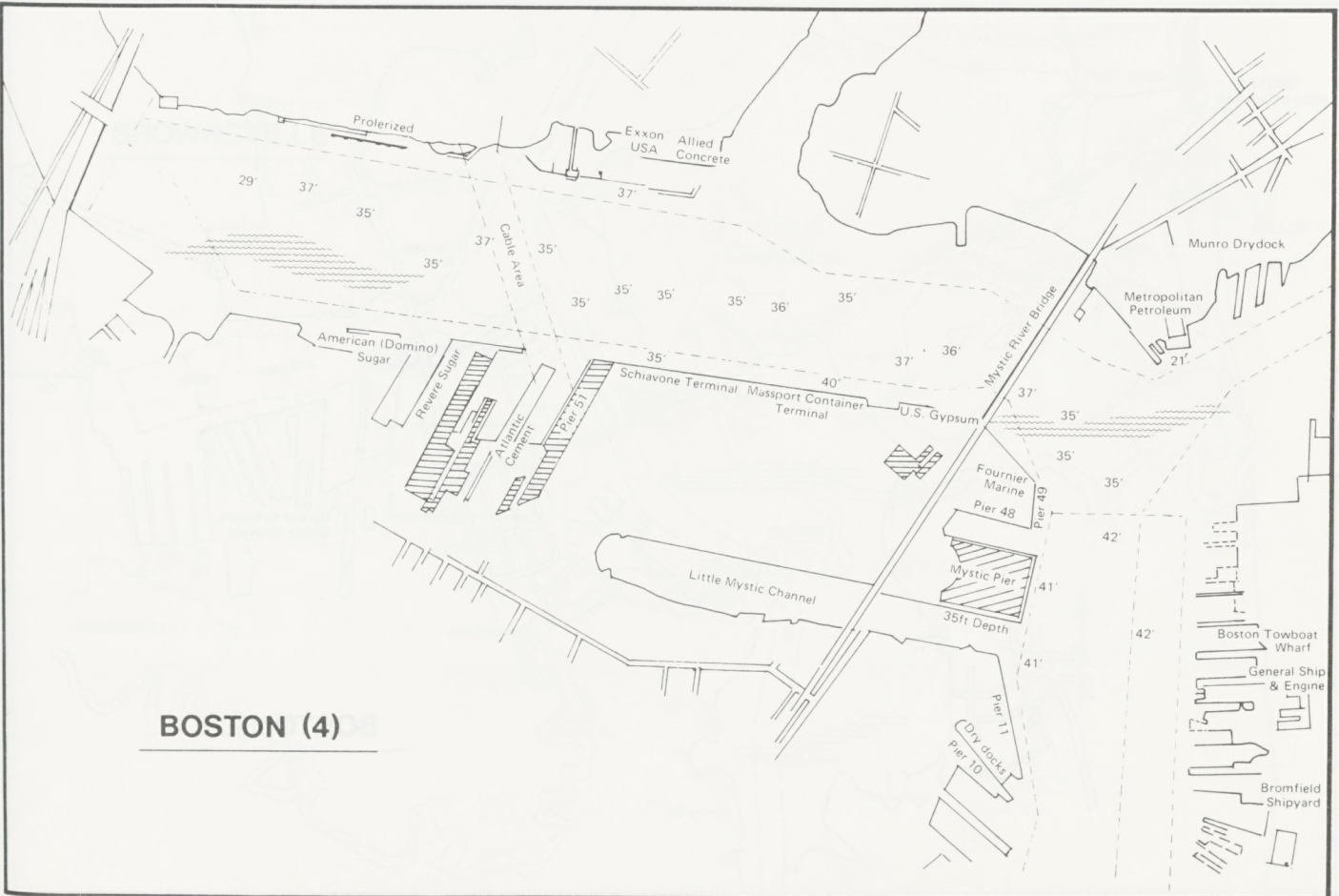
BOSTON (1)



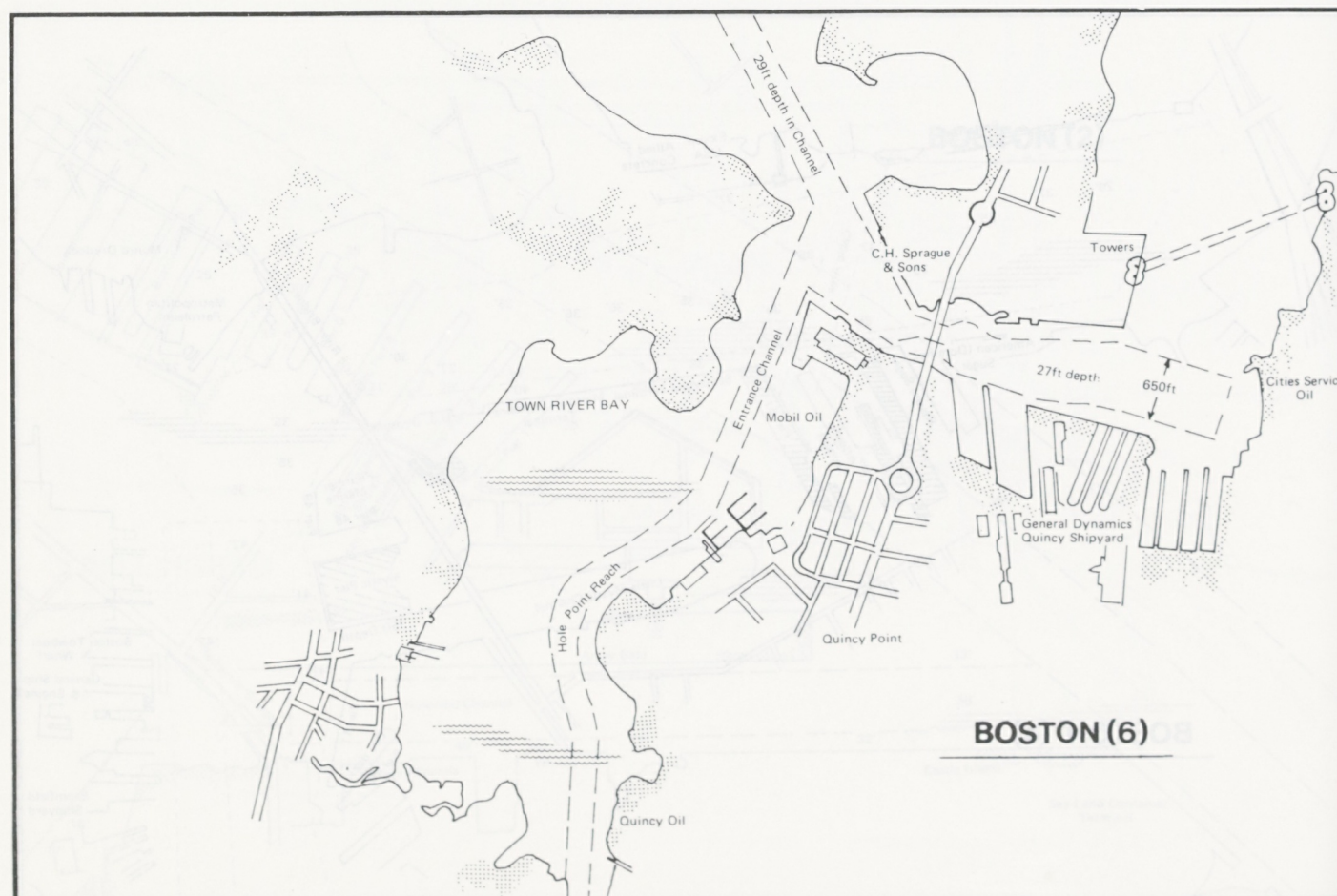
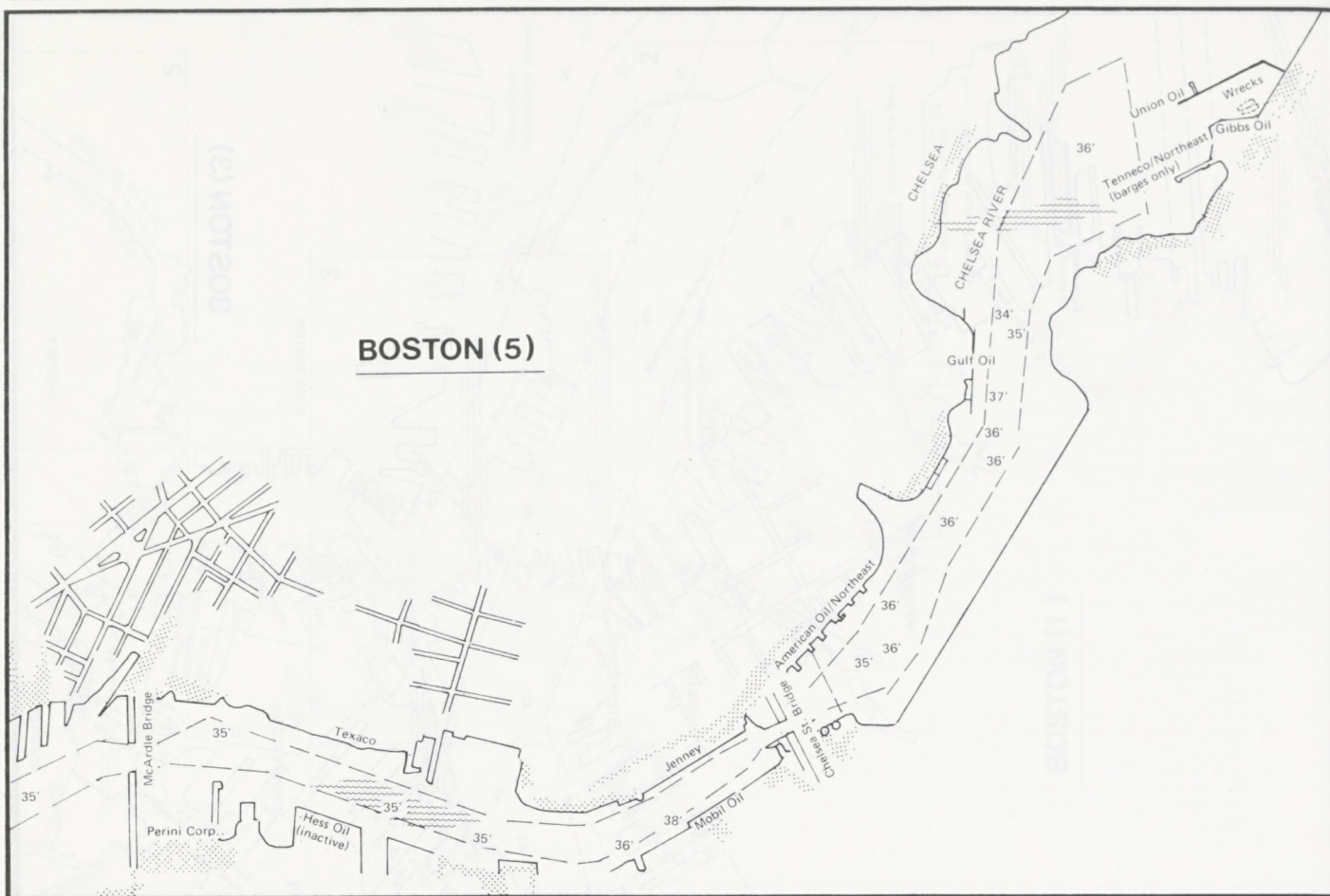
BOSTON (2)



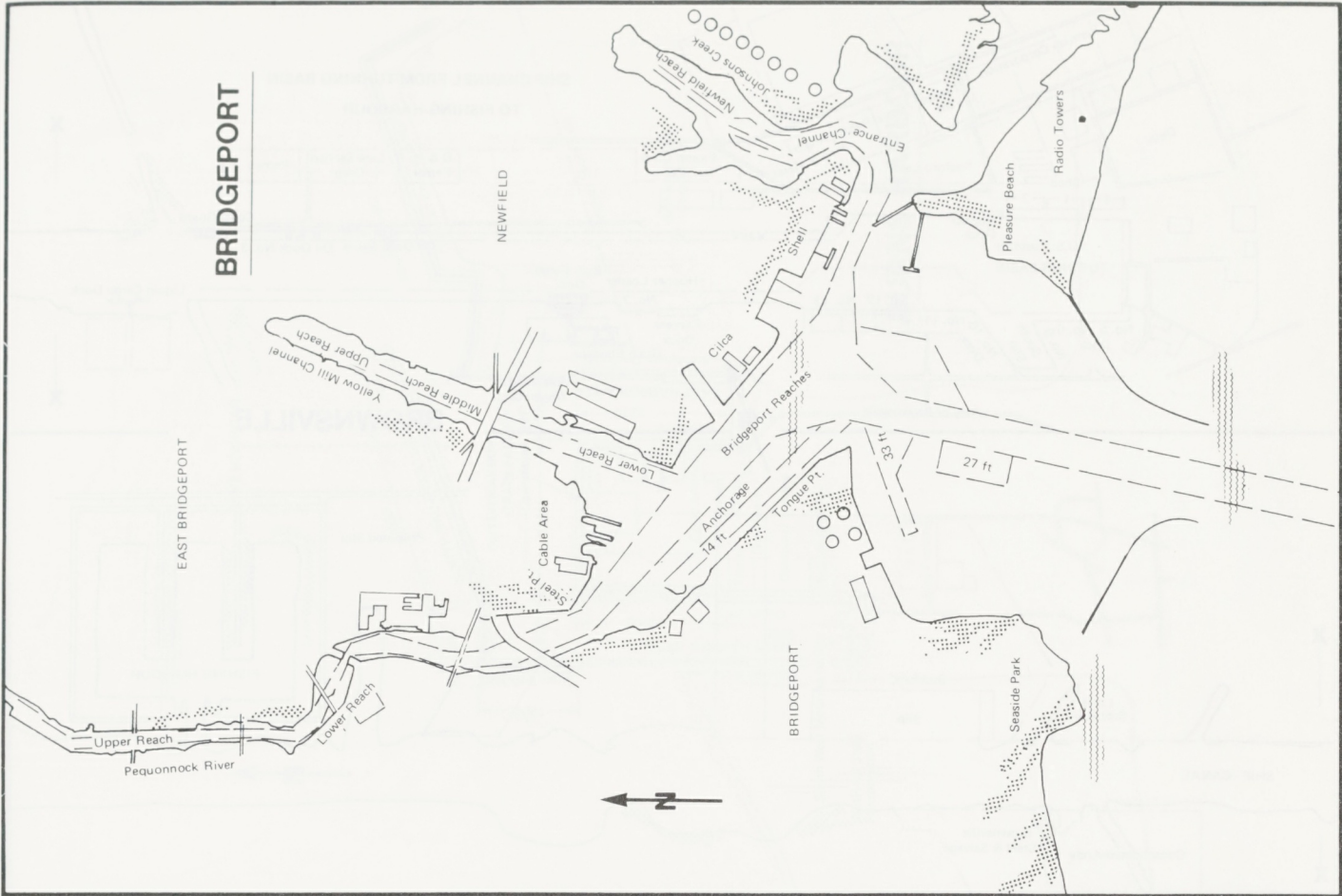
BOSTON (3)



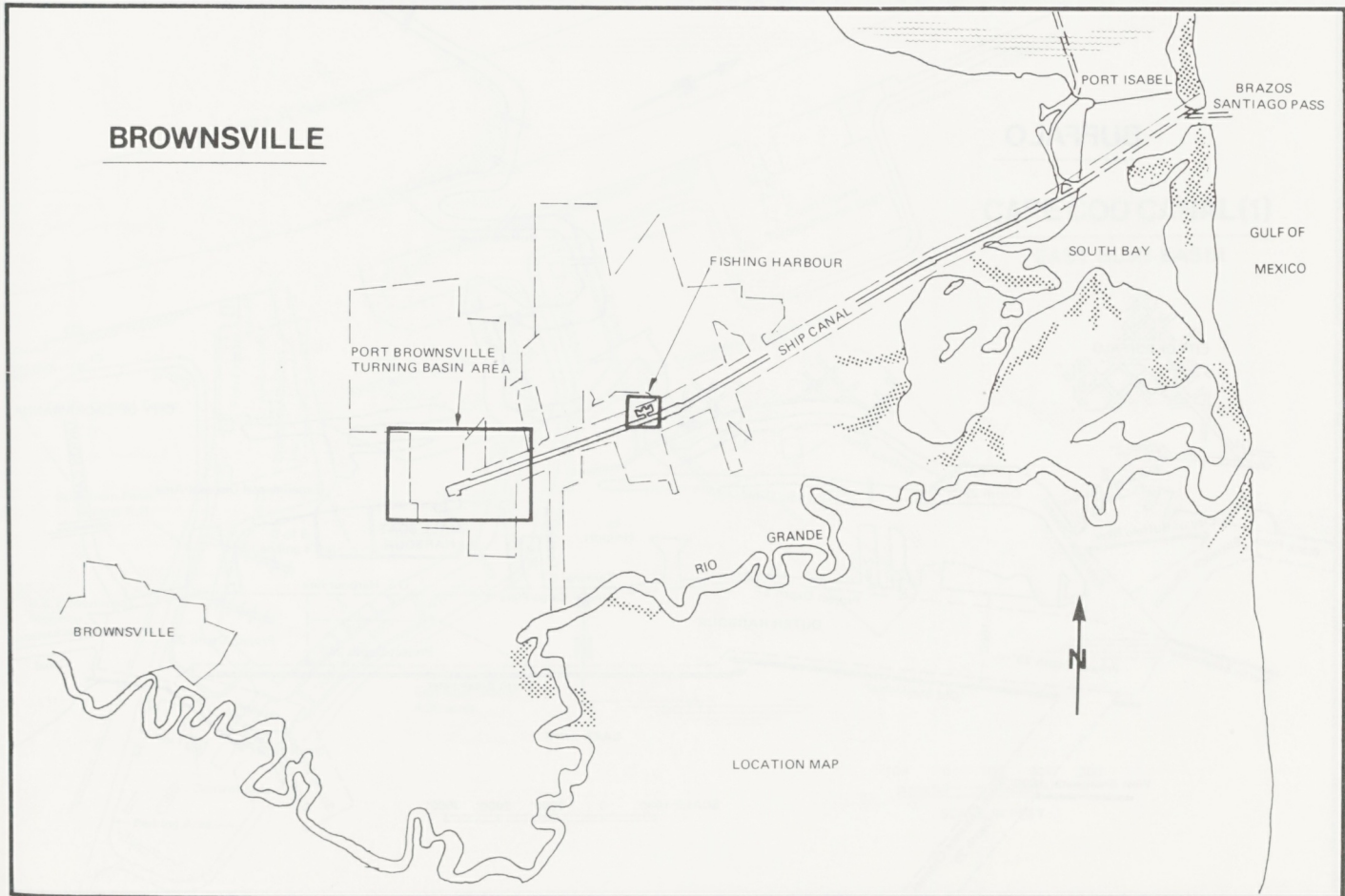
BOSTON (4)

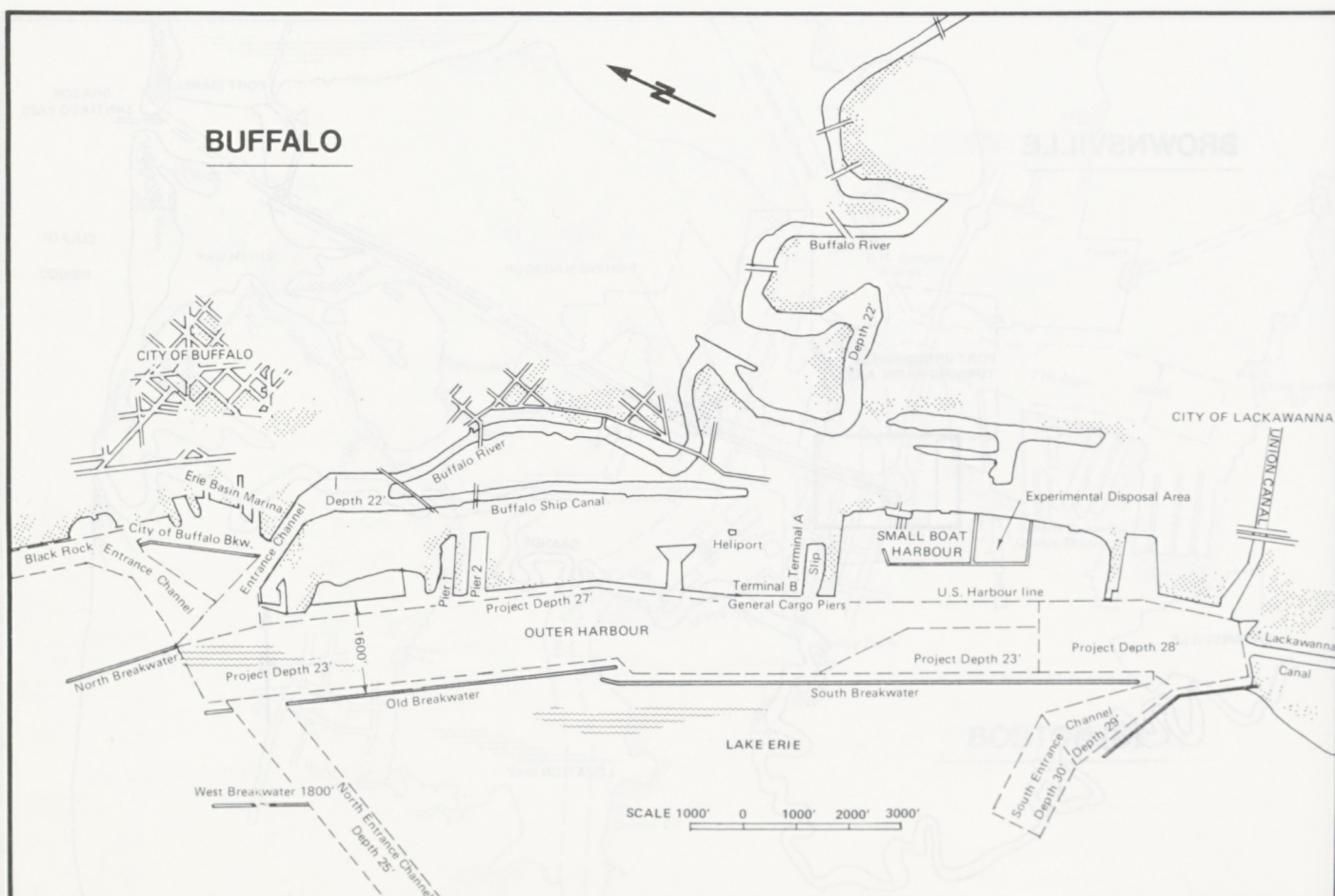
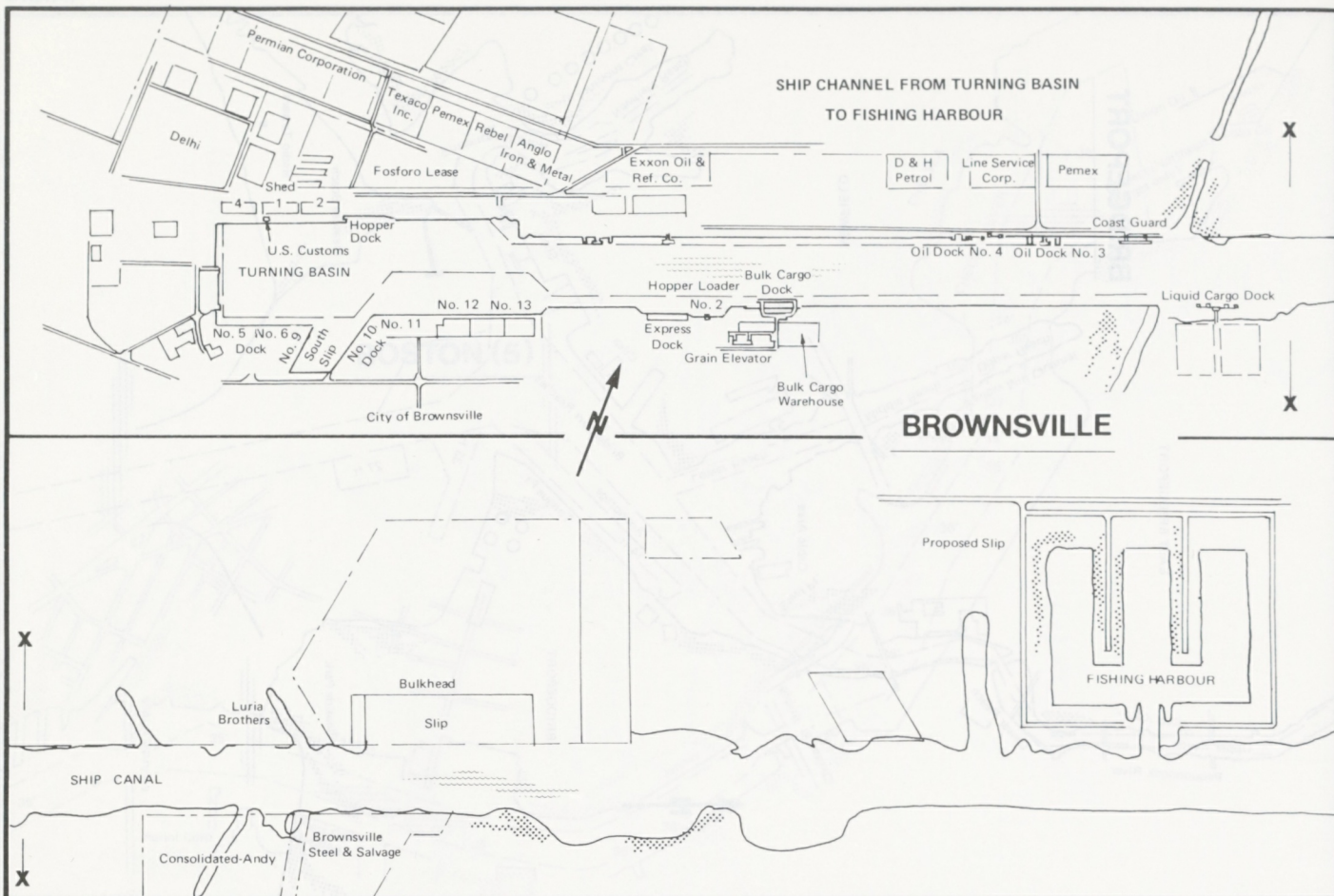


BRIDGEPORT

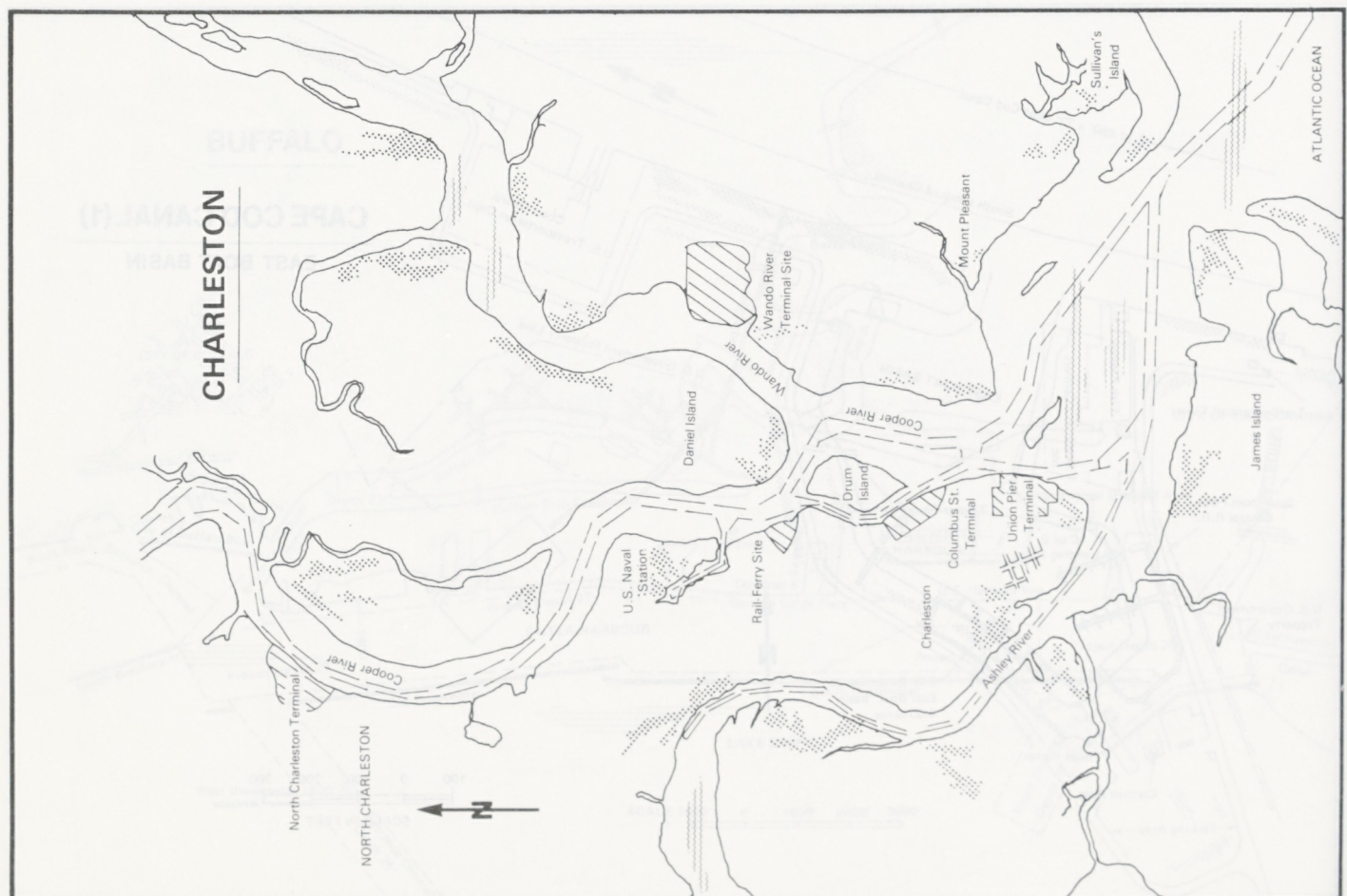
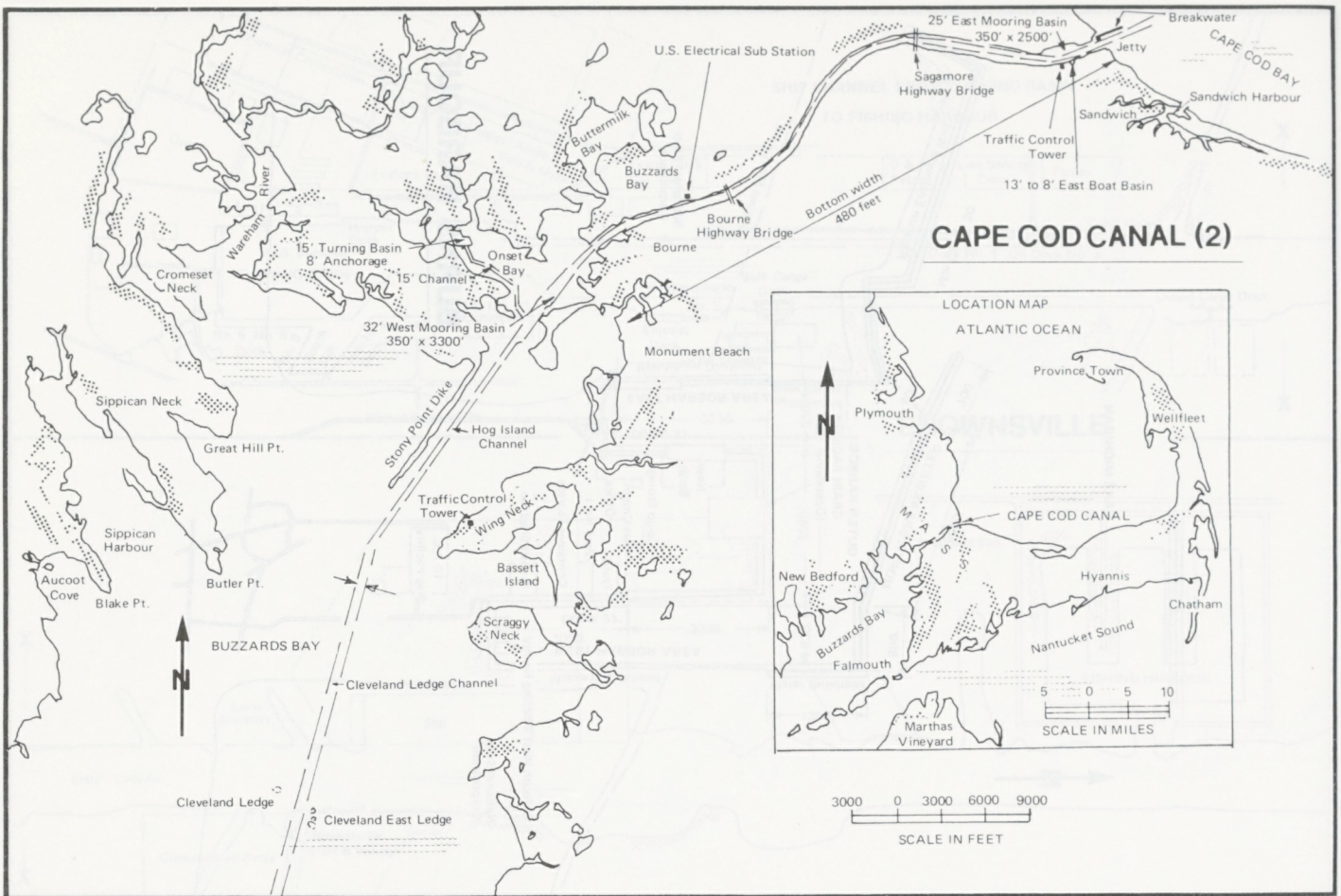


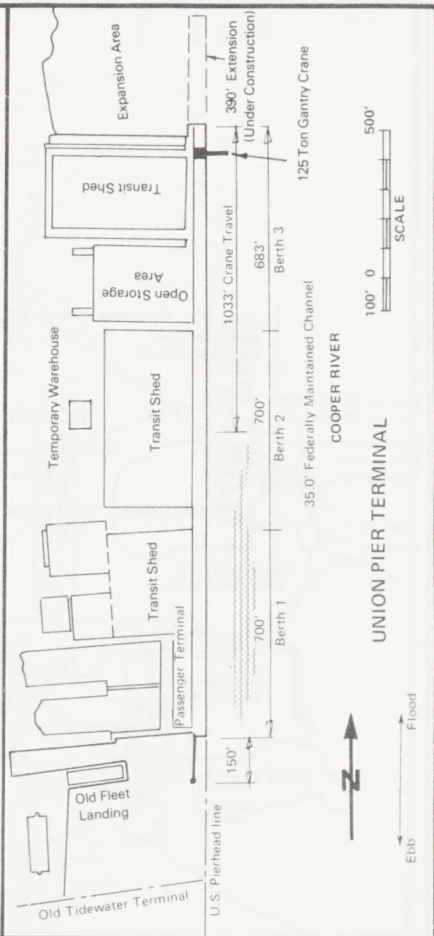
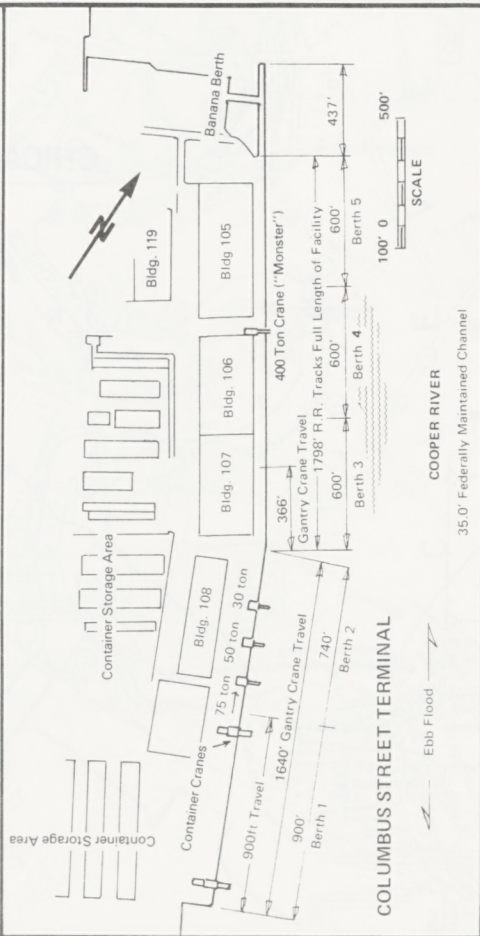
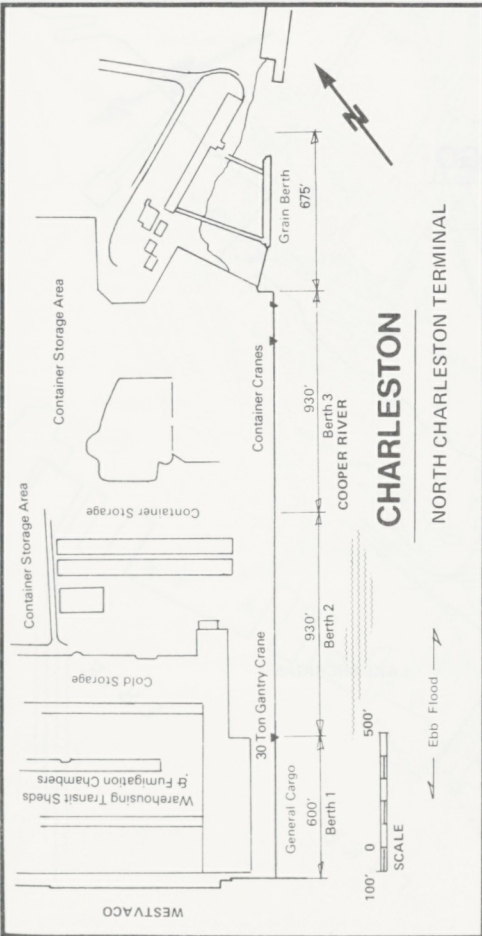
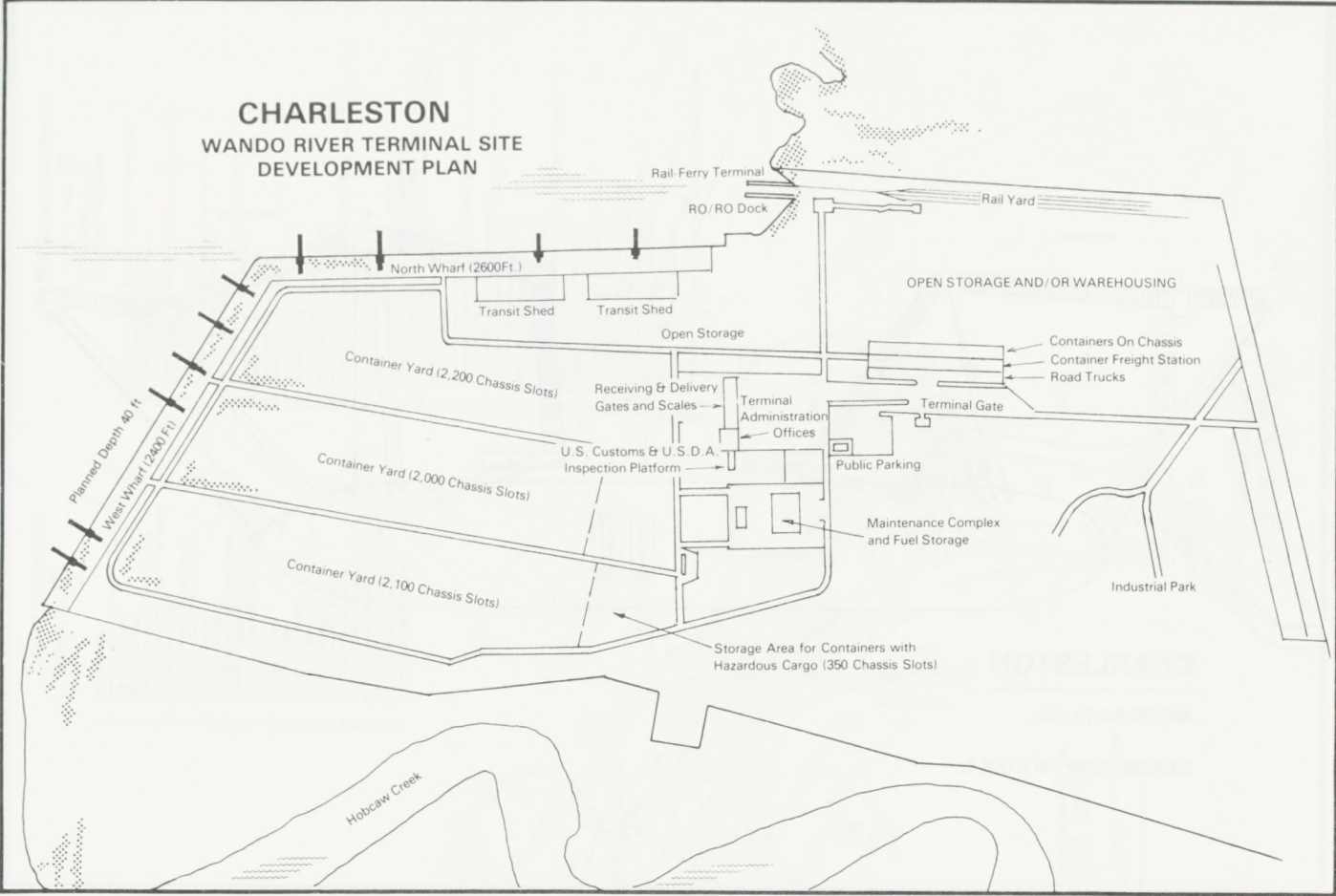
BROWNSVILLE

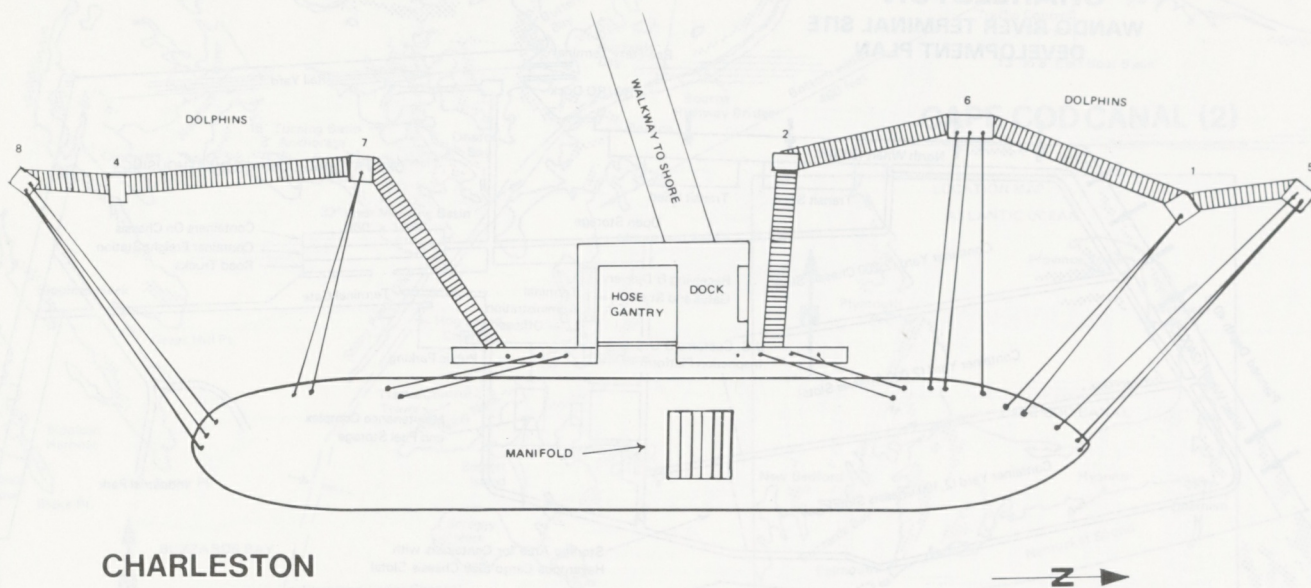










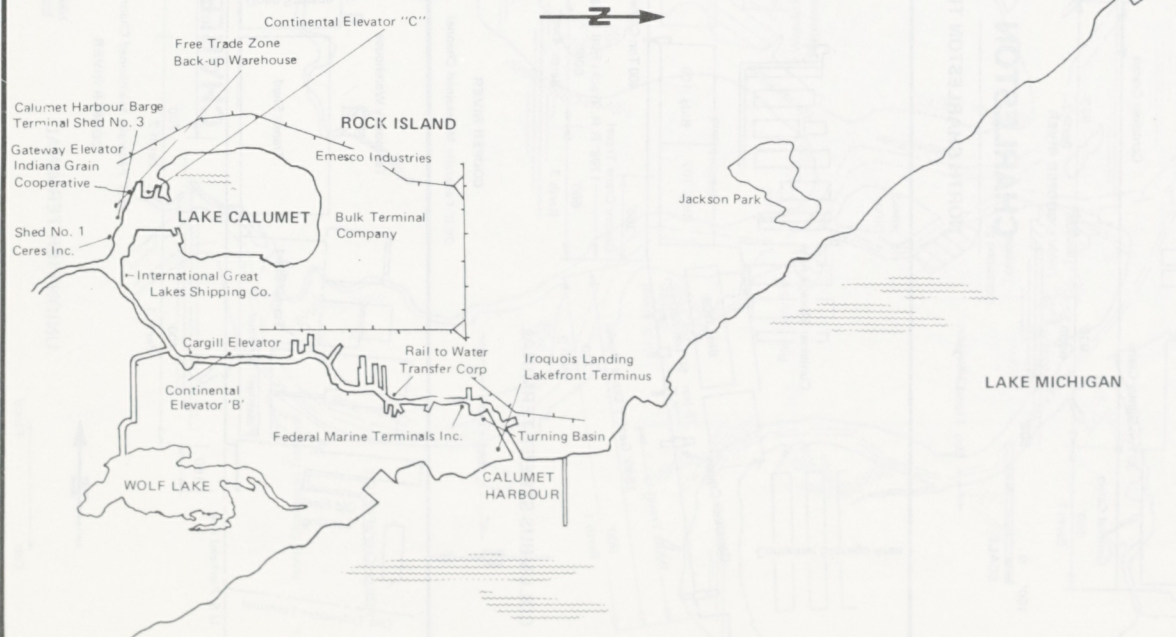


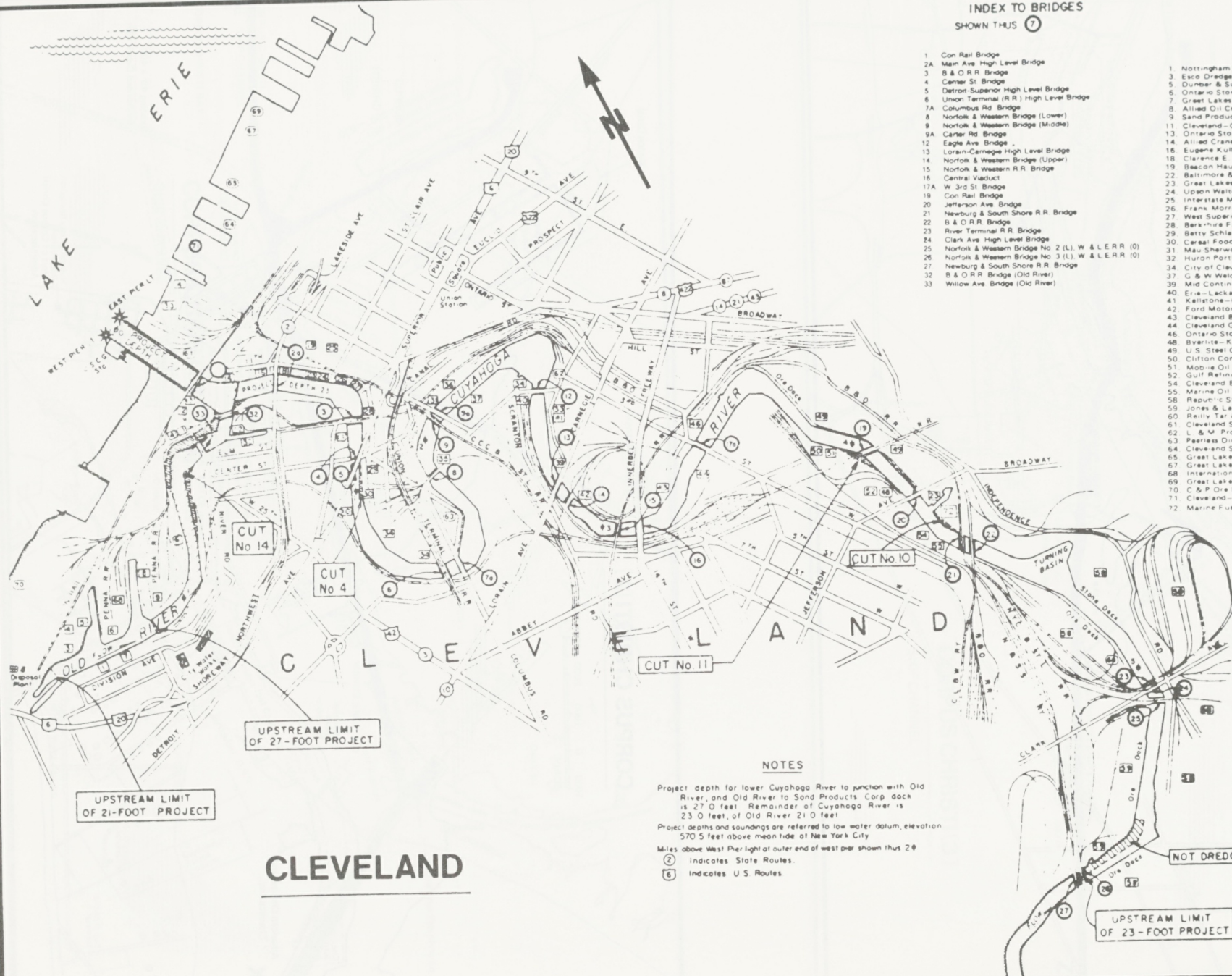
CHARLESTON

MOORING PLAN

EXXON COMPANY U.S.A.

CHICAGO





INDEX TO BRIDGES SHOWN THUS ⑦

- 1 Con Rail Bridge
- 2A Main Ave High Level Bridge
- 3 B & O R.R. Bridge
- 4 Center St Bridge
- 5 Detroit-Superior High Level Bridge
- 6 Union Terminal (R.R.) High Level Bridge
- 7A Columbus Rd. Bridge
- 8 Norton & Western Bridge (Lower)
- 9 Norton & Western Bridge (Middle)
- 9A Carter Rd. Bridge
- 12 Eagle Ave. Bridge
- 13 Lorain-Carnegie High Level Bridge
- 14 Norton & Western Bridge (Upper)
- 15 Norton & Western R.R. Bridge
- 16 Central Viaduct
- 17A W 3rd St. Bridge
- 19 Con Rail Bridge
- 20 Jefferson Ave. Bridge
- 21 Newburg & South Shore R.R. Bridge
- 22 B & O R.R. Bridge
- 23 River Terminal R.R. Bridge
- 24 Clark Ave. High Level Bridge
- 25 Norton & Western Bridge No. 2 (L) W & LERR (O)
- 26 Norton & Western Bridge No. 3 (L) W & LERR (O)
- 27 Newburg & South Shore R.R. Bridge
- 32 B & O R.R. Bridge (Old River)
- 33 Willow Ave. Bridge (Old River)

WATERFRONT OWNERSHIP SHOWN THUS ④

(O) Indicates Owner
(L) Indicates Lessee

- 1 Nottingham Steel Co. (L), Esther Friedman (O)
- 3 Esco Dredge & Fill Corp.
- 5 Dunbar & Sullivan Dredging
- 6 Ontario Stone No. 3
- 7 Great Lakes Towing Co. (L), Esther Friedman (O)
- 8 Allied Oil Co. (L)
- 9 Sand Products Corp. (L)
- 11 Cleveland-Cuyahoga County Port Authority
- 13 Ontario Stone Company No. 1
- 14 Allied Crane Service
- 16 Eugene Kulber-Star Fish Co. (Operator)
- 18 Clarence E. & Eleanor Flood
- 19 Beacon Haulage Marine
- 22 Baltimore & Ohio R.R.
- 23 Great Lakes Towing Co.
- 24 Upson Walton Co.
- 25 Interstate Mfg. Co.
- 26 Franks Morrison & Son Co.
- 27 West Superior River Front Co.
- 28 Berkshire Farm Inc.
- 29 Betty Schlam & Maurice Schlam (O), State Fisheries (Operator)
- 30 Cereal Food Processors, Inc.
- 31 Mau Sherwood Supply Co.
- 32 Huron Portland Cement Co.
- 34 City of Cleveland-Cuyahoga Lime Co.
- 37 G & W Welding Co. (L), Mary S. Bradford (O)
- 39 Mid Continent Coal & Coke Co. (L), Mary S. Bradford (O)
- 40 Erie-Lackawanna R.R. & Keystone-Cleveland, Ohio, Inc.
- 41 Keystone-Cleveland, Inc.
- 42 Ford Motor Co.
- 43 Cleveland Builders Supply
- 44 Cleveland Gypsum Co. (L), Cleveland Builders Supply Co. (O)
- 46 Ontario Stone Co. No. 2
- 48 Berylite-Koppers Tar & Chemical
- 49 U.S. Steel Corporation
- 50 Clifton Concrete Supply Co. (L)
- 51 Mobile Oil Corporation
- 52 Gulf Refining Co.
- 54 Cleveland Builders Supply No. 1
- 55 Marine Oil Terminal & Storage Co. (L), Geo. Castle Esq. (O)
- 58 Republic Steel Corp.
- 59 Jones & Laughlin Steel Corp.
- 60 Reilly Tar & Chemical Corp.
- 61 Cleveland Stevedore Co. Dock No. 20
- 62 L & M Properties Dock
- 63 Peerless Div. American Cement Corp.
- 64 Cleveland Stevedore Co. Dock No. 26
- 65 Great Lakes International Corp. Dock No. 28
- 67 Great Lakes International Corp.
- 68 International Salt Co.
- 69 Great Lakes International Corp.
- 70 C & P Ore Dock
- 71 Cleveland-Cuyahoga County Port Authority Dock No. 24
- 72 Marine Fueling, Inc.

NOTES

Project depth for lower Cuyahoga River to junction with Old River, and Old River to Sand Products Corp. dock is 27.0 feet. Remainder of Cuyahoga River is 23.0 feet, of Old River 21.0 feet.

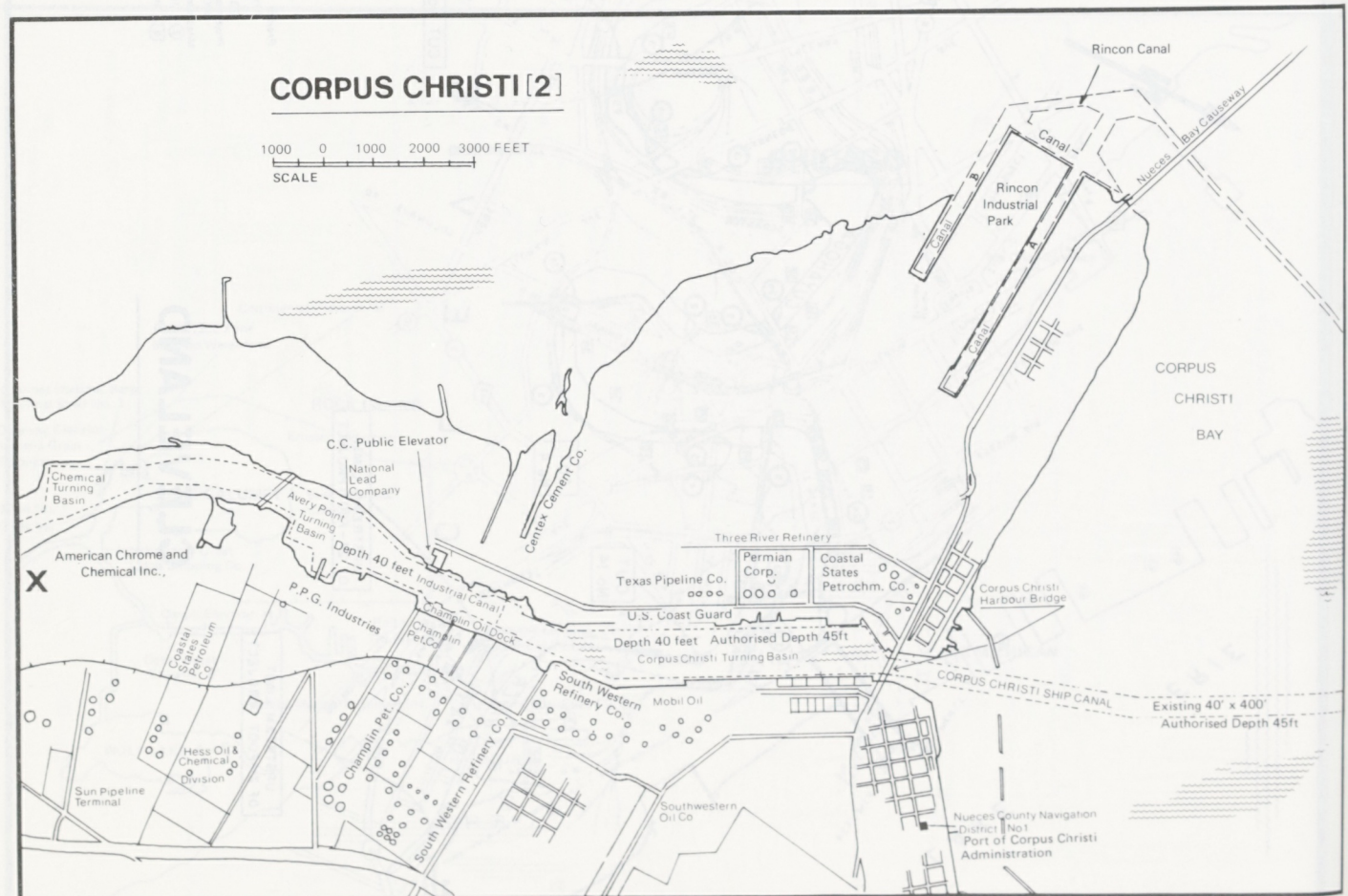
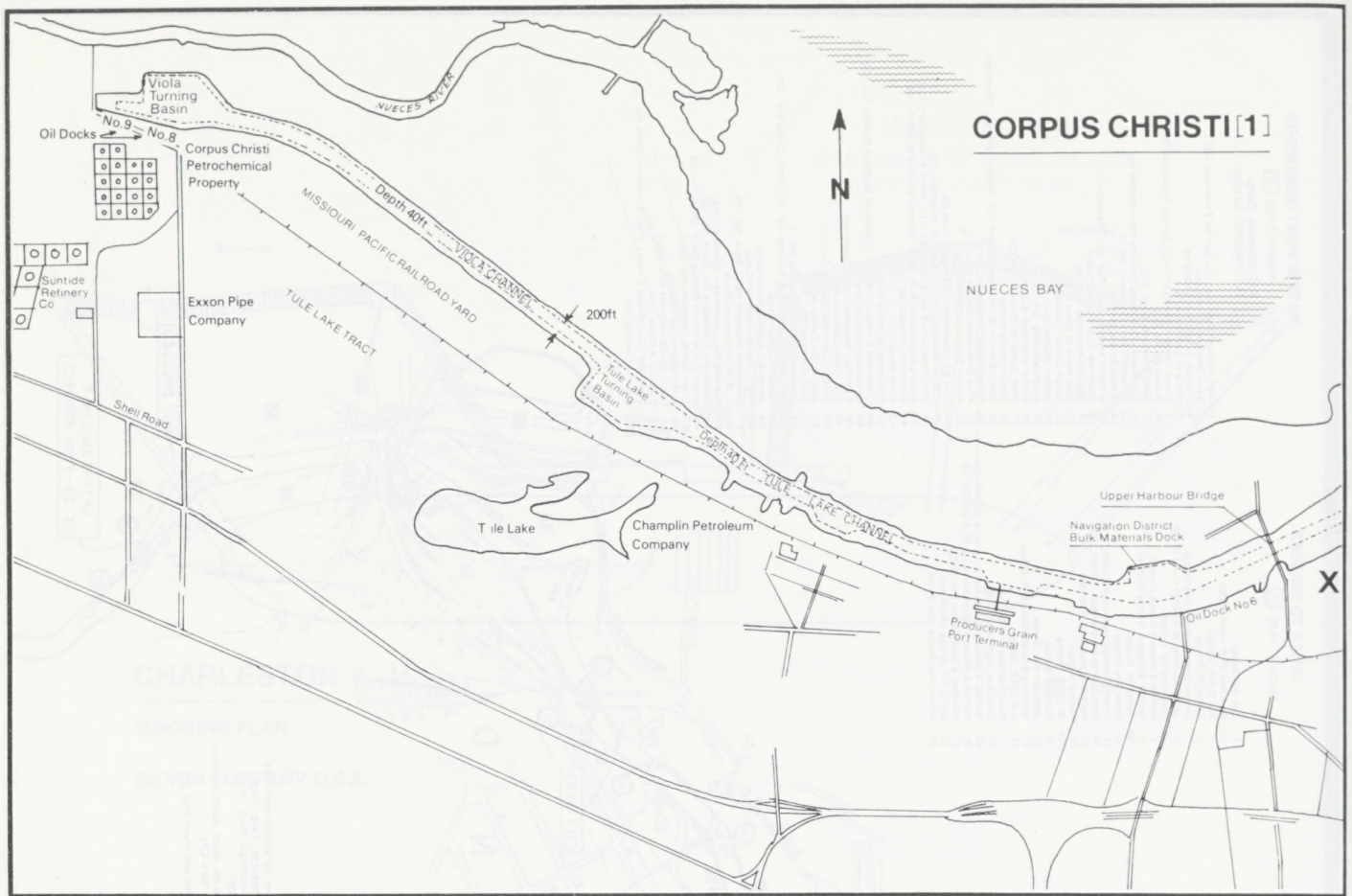
Project depths and soundings are referred to low water datum, elevation 570.5 feet above mean tide at New York City.

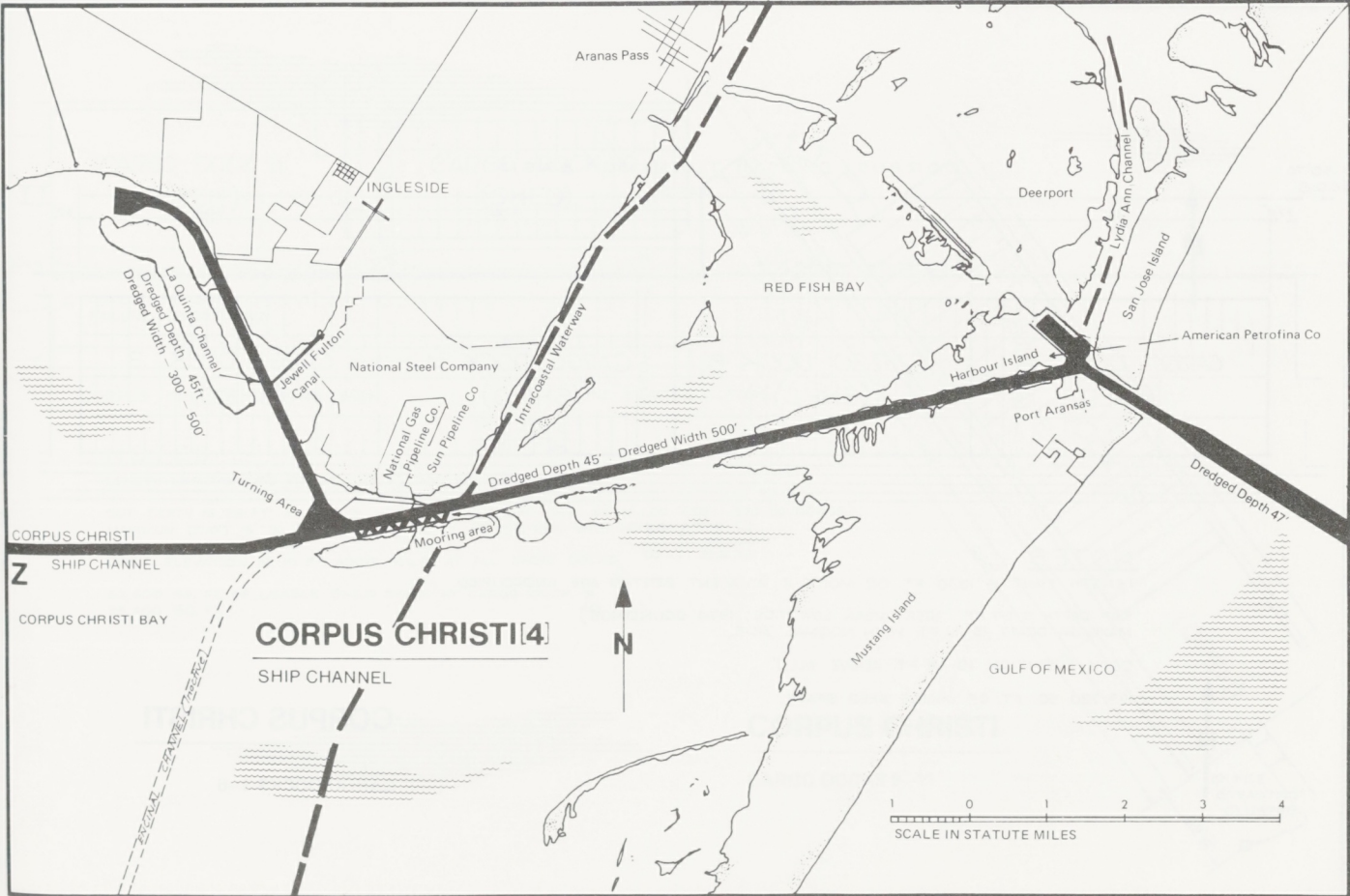
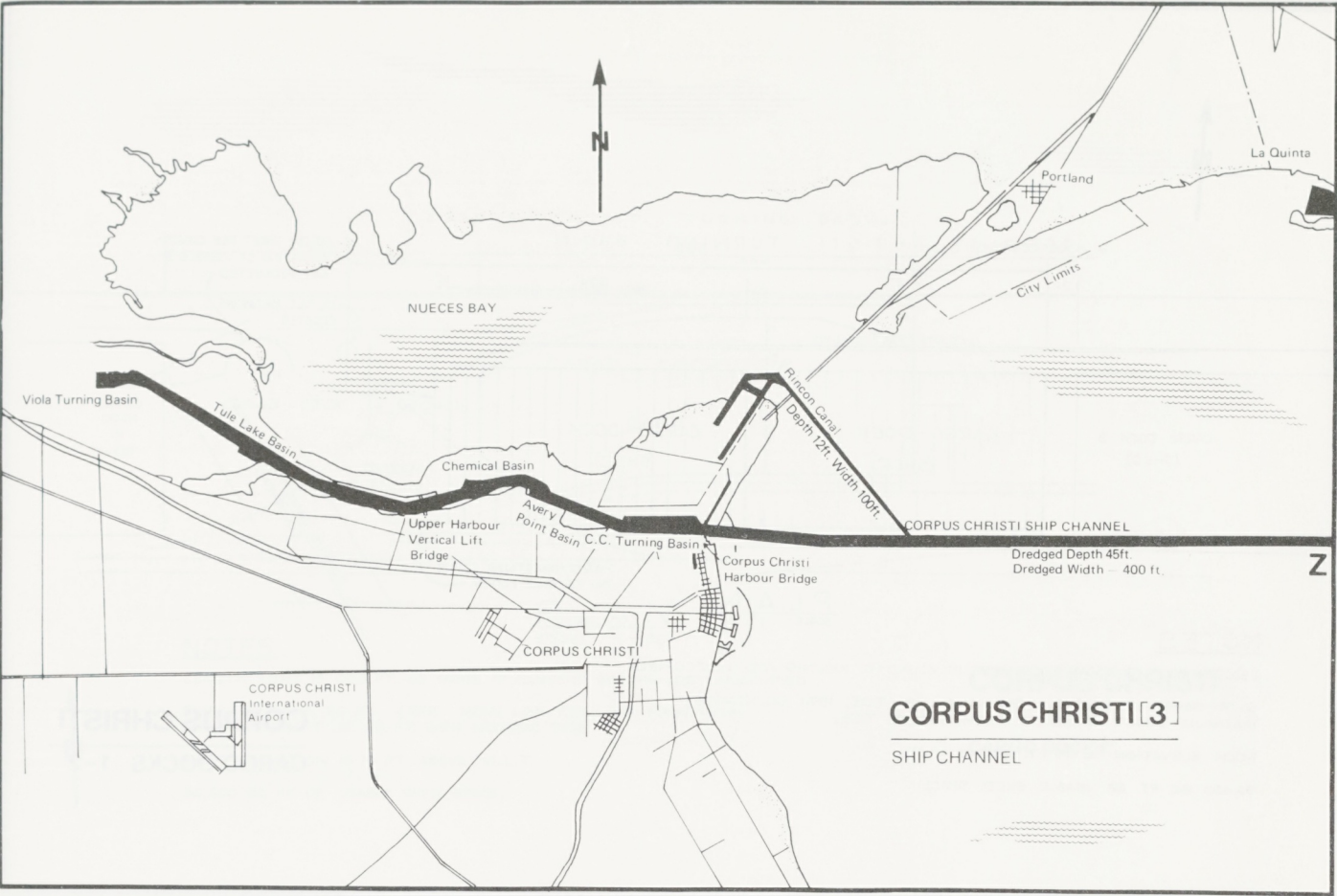
Miles above West Pier light at outer end of west pier shown thus 2 ②

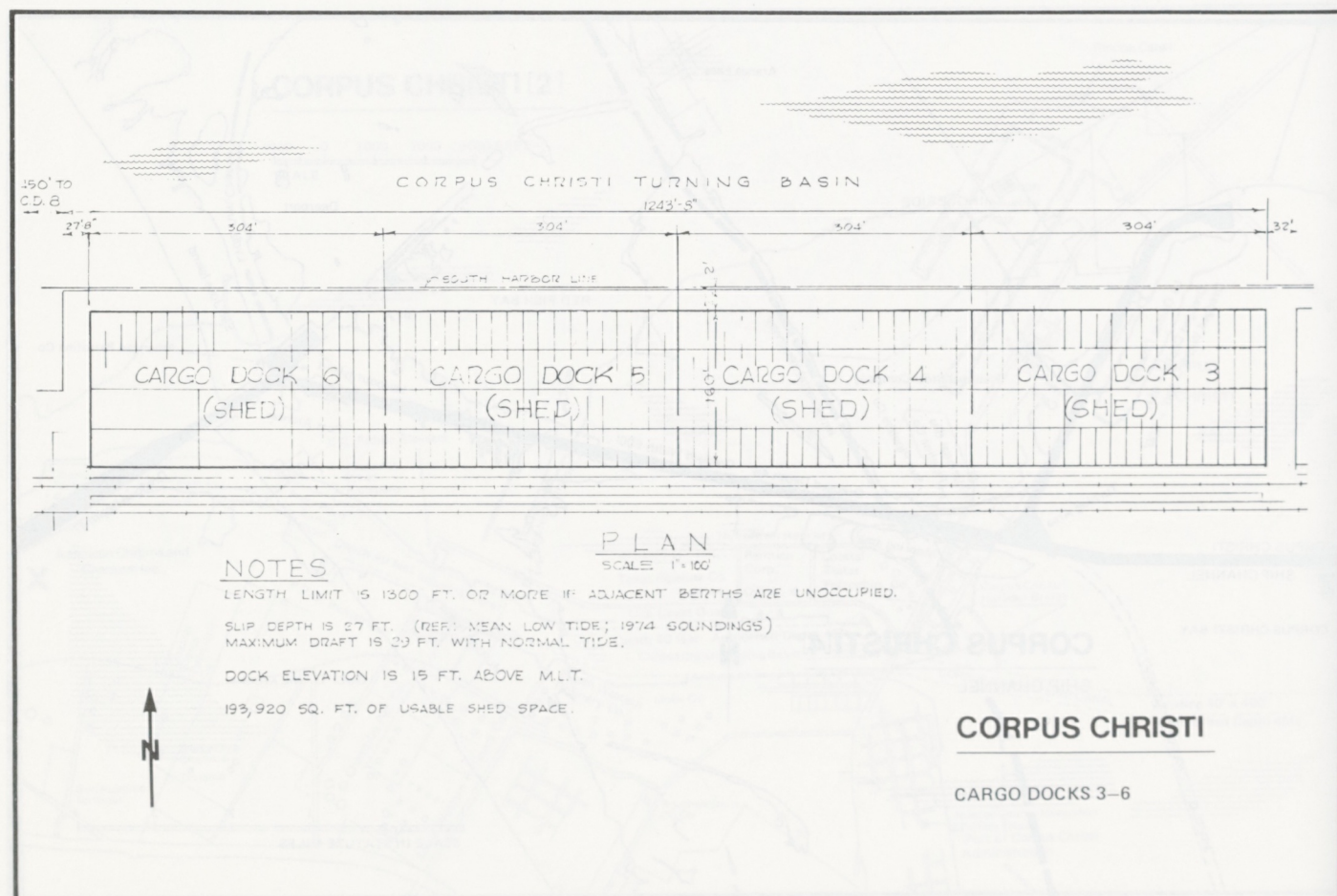
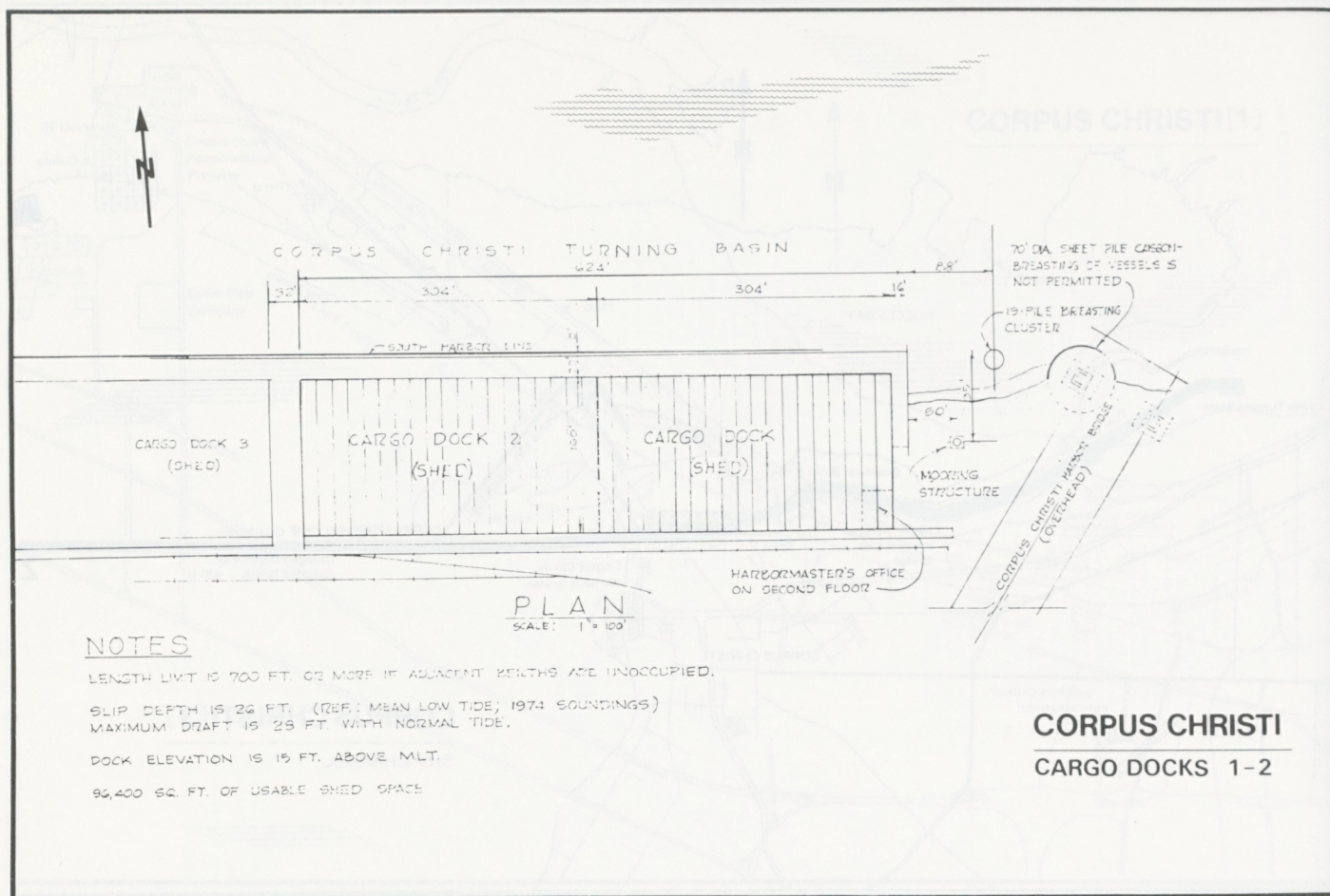
② Indicates State Routes

⑥ Indicates U.S. Routes

CLEVELAND

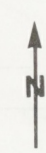






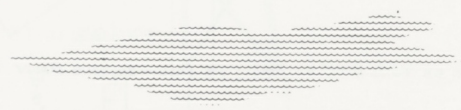
CARGO DOCK 8

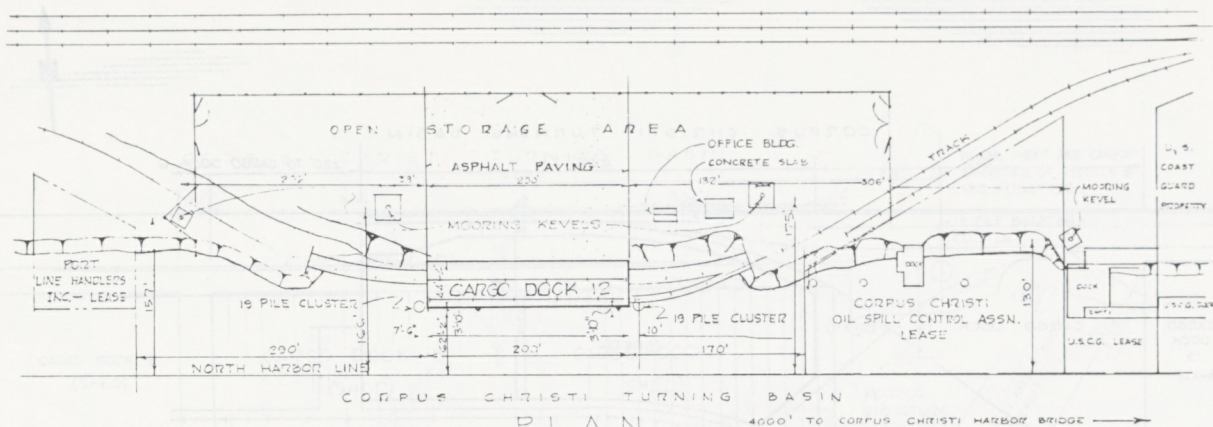
66,600 SQ. FT. OF USABLE SHED SPACE.



CARGO DOCKS 9-11

62,000 SQ. FT. OF USABLE SHED SPACE AT CARGO DOCK 9
38,400 SQ. FT. " " " " " " " " " " 10

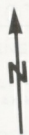


**NOTES**

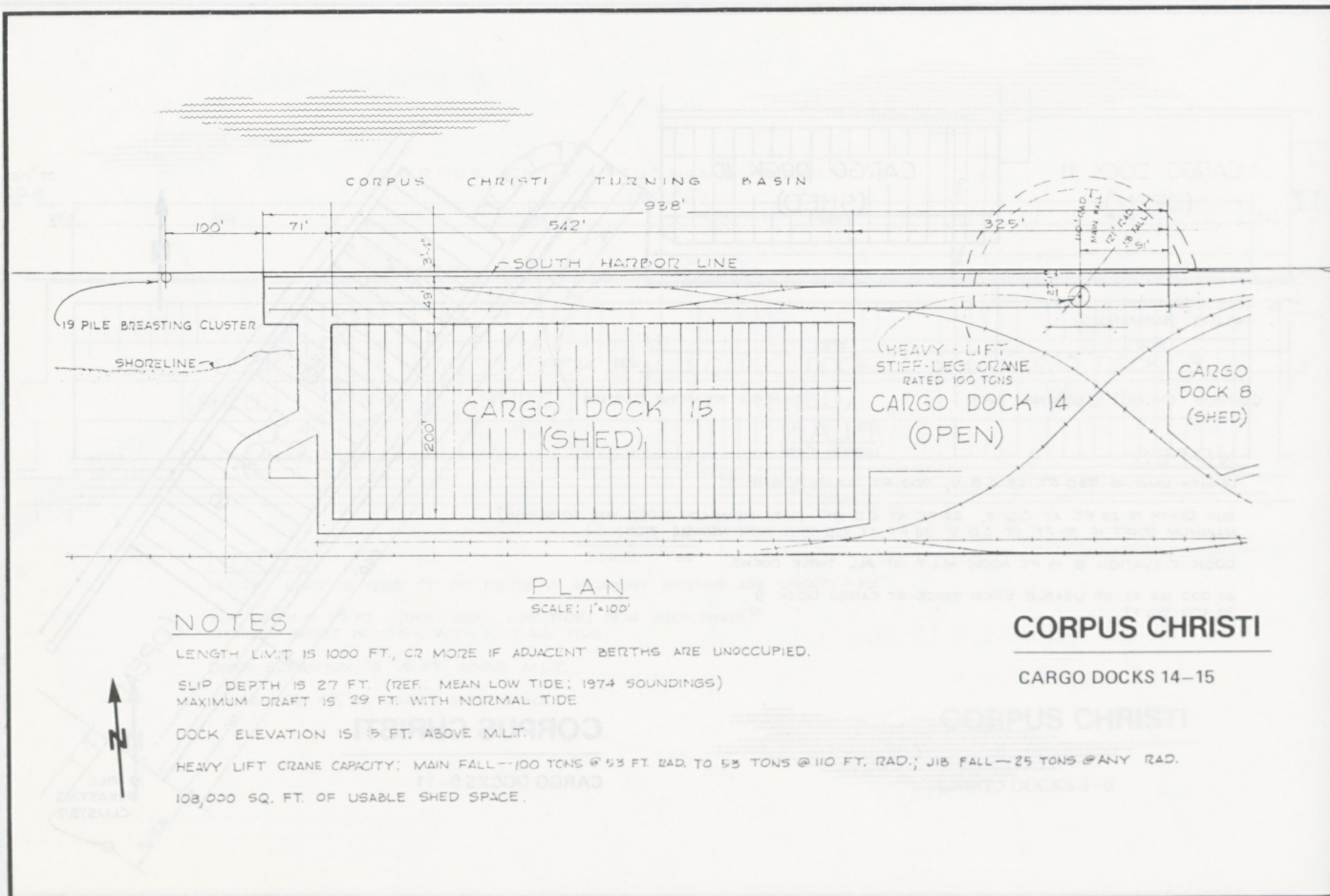
LENGTH LIMIT IS 700 FT.

SLIP DEPTH IS 17.5 FT. (REF. MEAN LOW TIDE; 1972 SOUNDINGS)
MAXIMUM DRAFT IS 19.5 FT. WITH NORMAL TIDE.

DOCK ELEVATION IS 12 FT. ABOVE M.L.T.

**CORPUS CHRISTI**

CARGO DOCK 12

**NOTES**

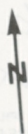
LENGTH L.M.T. IS 1000 FT, OR MORE IF ADJACENT BERTHS ARE UNOCCUPIED.

SLIP DEPTH IS 27 FT. (REF. MEAN LOW TIDE; 1974 SOUNDINGS)
MAXIMUM DRAFT IS 29 FT. WITH NORMAL TIDE

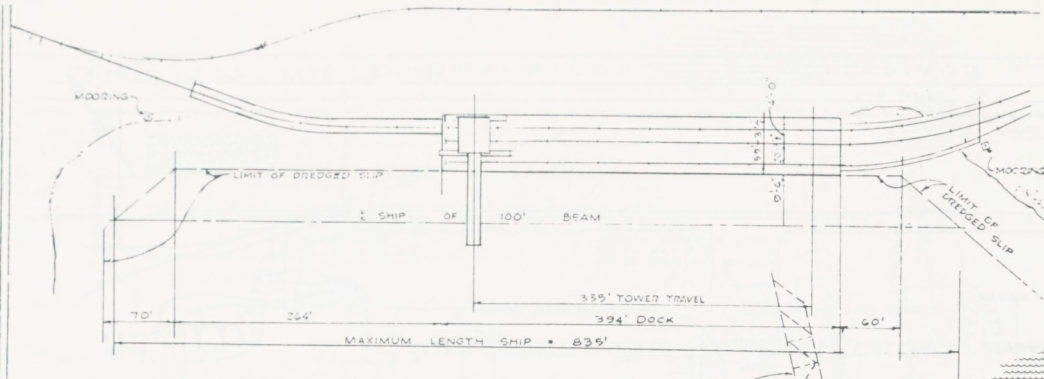
DOCK ELEVATION IS 15 FT. ABOVE M.L.T.

HEAVY LIFT CRANE CAPACITY: MAIN FALL—100 TONS @ 53 FT. RAD. TO 53 TONS @ 110 FT. RAD.; JIB FALL—25 TONS @ ANY RAD.

108,000 SQ. FT. OF USABLE SHED SPACE.

**CORPUS CHRISTI**

CARGO DOCKS 14-15



NOTES

MOORING BOLLARDS ARE MOUNTED ON THE DOCK, 2 FT. BEHIND THE FACE OF THE FENDER TIMBER, 32 FT. AND 172 FT. EACH WAY FROM THE CENTER LINE OF THE DOCK.

DIRECTION OF SHIP'S HEAD DEPENDS ON HATCHES TO BE WORKED ON A LONG SHIP.

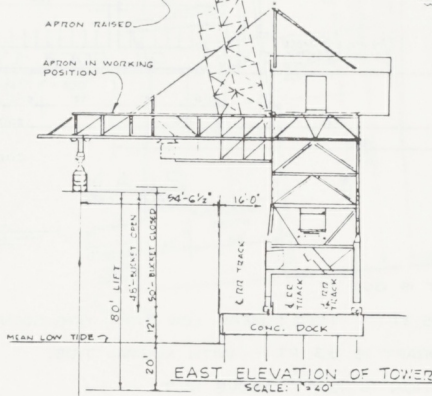
MOORING LINES USED ARE DETERMINED BY THE SHIP'S POSITION.

CARGO HANDLING SHORE EQUIPMENT CONSISTS OF A TRAVELING UNLOADING TOWER WITH A 10 TON CAPACITY BUCKET FOR WHICH OUTER LIMITS OF TRAVEL ARE SHOWN.

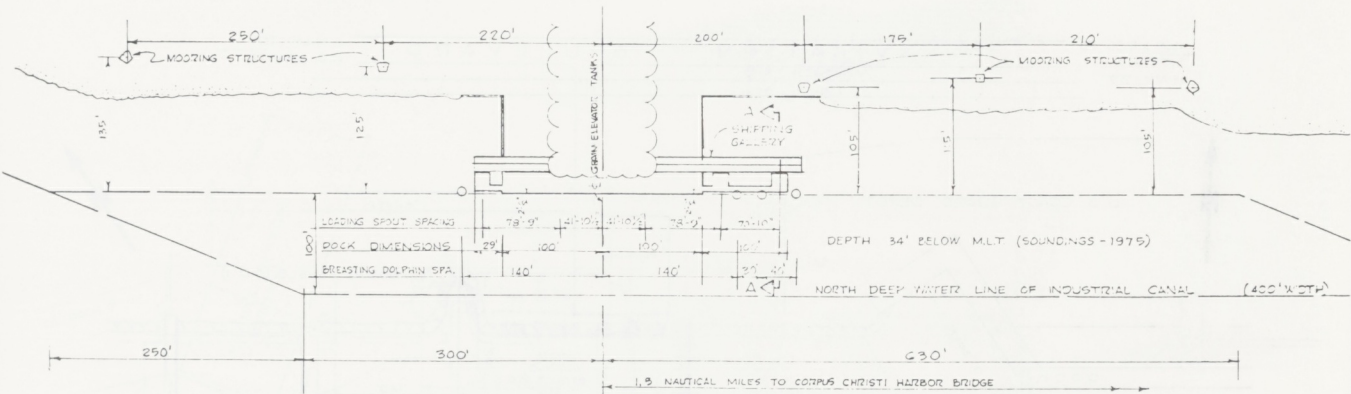
THE AREA WITHIN THE LIMITS OF DREDGED SLIP HAS A MINIMUM DEPTH OF 32 FT. BELOW MEAN LOW TIDE ACCORDING TO SOUNDINGS MADE IN 1974.

BEAM UNLIMITED.

PLAN
SCALE: 1" = 100'

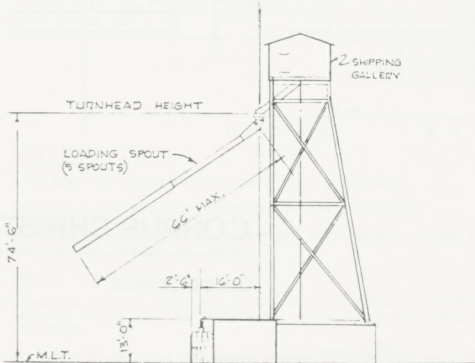


CORPUS CHRISTI
BULK MATERIALS DOCK



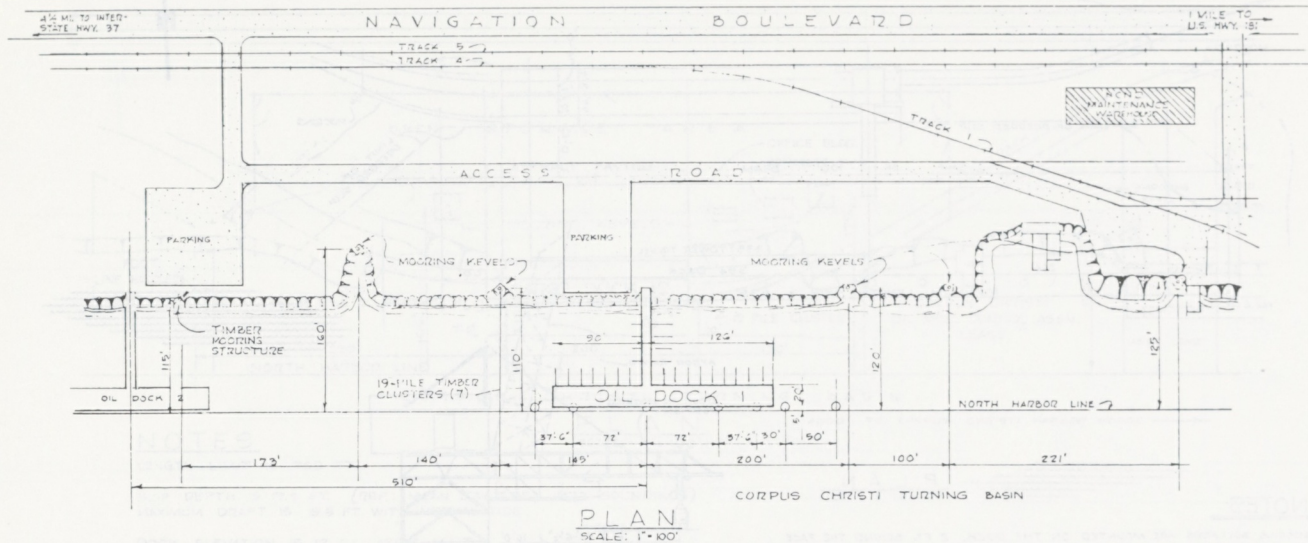
PLAN
SCALE: 1" = 100'

FOR ADDITIONAL INFORMATION, CONTACT
CORPUS CHRISTI PUBLIC ELEVATOR, P.O. BOX 2229,
CORPUS CHRISTI, TEXAS 78403, PHONE 512-882-1966



SECTION A-A
SCALE: 1" = 30'

CORPUS CHRISTI
Public Grain Elevator Dock

**NOTES**

LENGTH LIMIT IS 800 FT.

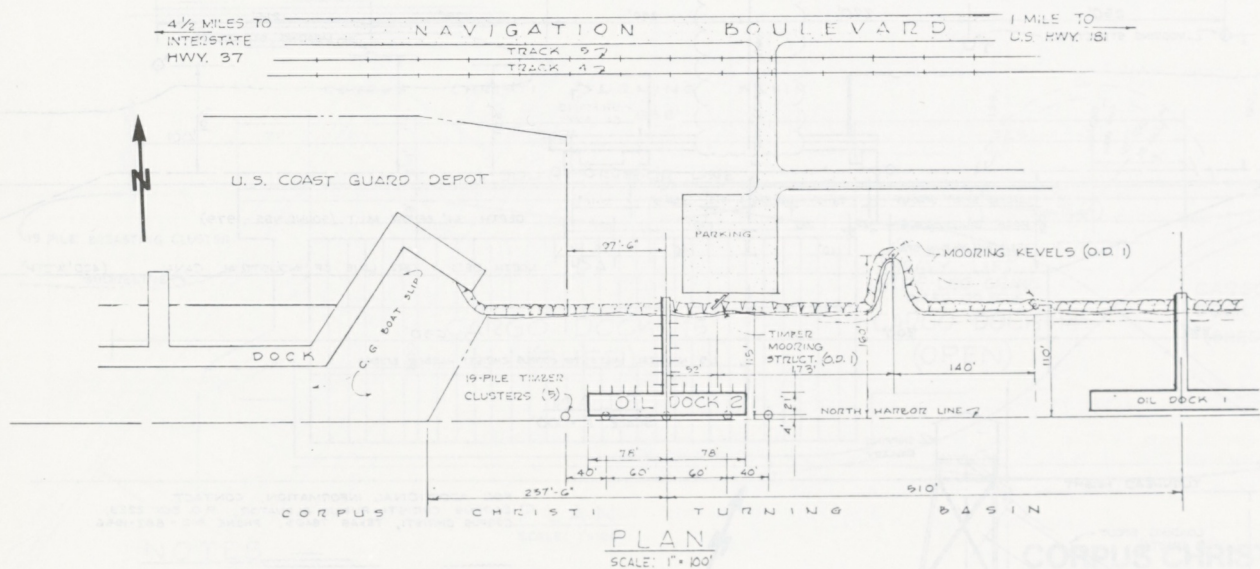
SLIP DEPTH IS 31 FT. (REF.: MEAN LOW TIDE; 1976 SOUNDINGS)

MAXIMUM DRAFT IS 33 FT. WITH NORMAL TIDE.

DOCK ELEVATION IS 12 FT. ABOVE MLT.

CORPUS CHRISTI

OIL DOCK No.1

**NOTES**

OIL DOCK 2 IS LIMITED TO BARGE OPERATIONS.

LENGTH LIMIT IS 350 FT.

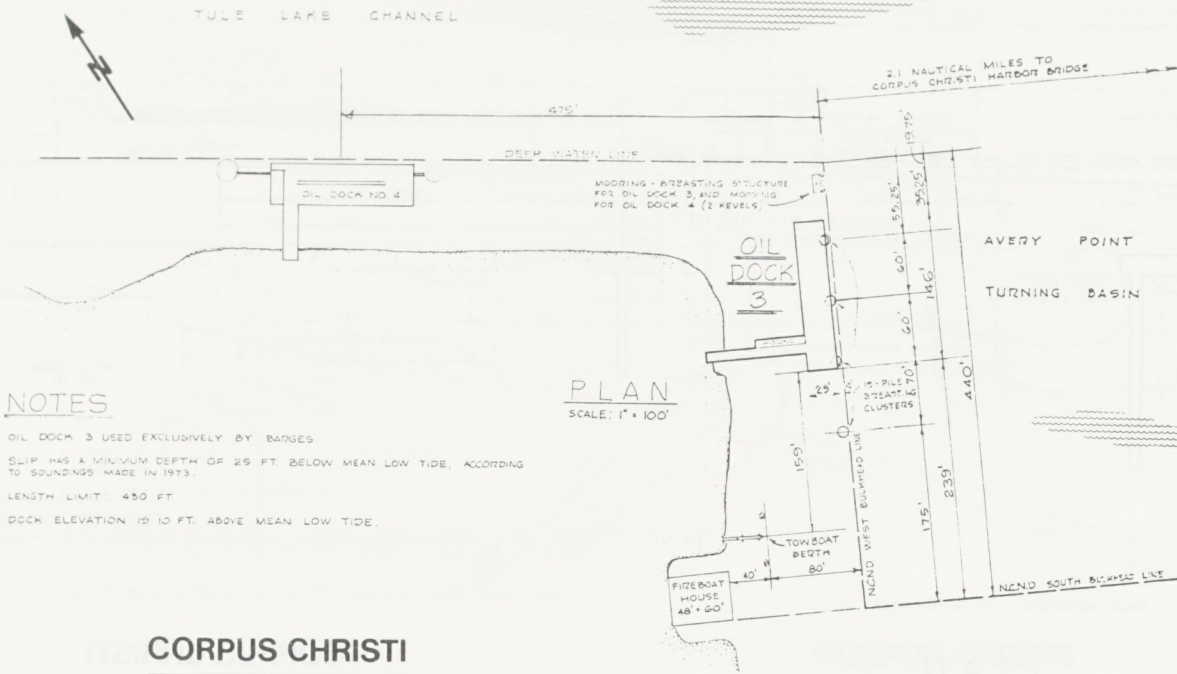
SLIP DEPTH IS 26 FT. BELOW MEAN LOW TIDE (1976 SOUNDINGS)

MAXIMUM DRAFT IS 28 FT. WITH NORMAL TIDE.

DOCK ELEVATION IS 10 FT. ABOVE MLT.

CORPUS CHRISTI

OIL DOCK No.2



NOTES

OIL DOCK 3 USED EXCLUSIVELY BY BARGES.

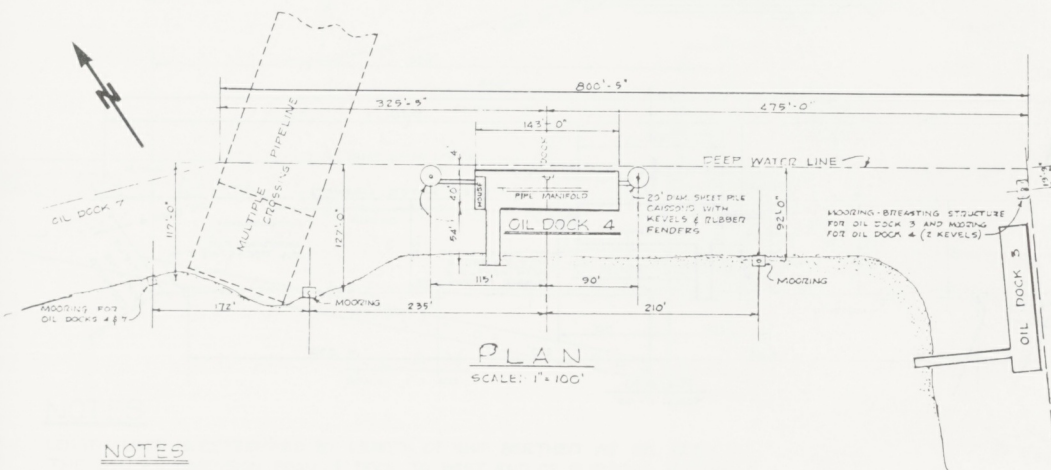
SLIP HAS A MINIMUM DEPTH OF 25 FT. BELOW MEAN LOW TIDE, ACCORDING TO SOUNDINGS MADE IN 1973.

LENGTH LIMIT: 450 FT.

DOCK ELEVATION IS 10 FT. ABOVE MEAN LOW TIDE.

CORPUS CHRISTI

OIL DOCK NO.3



NOTES

SHIP MAY BE MOORED HEADED IN EITHER DIRECTION.

MOORING LINES USED DEPEND ON SHIP'S POSITION.

SLIP HAS A MINIMUM DEPTH OF 37 FT. BELOW MEAN LOW TIDE ACCORDING TO SOUNDINGS MADE IN 1974.

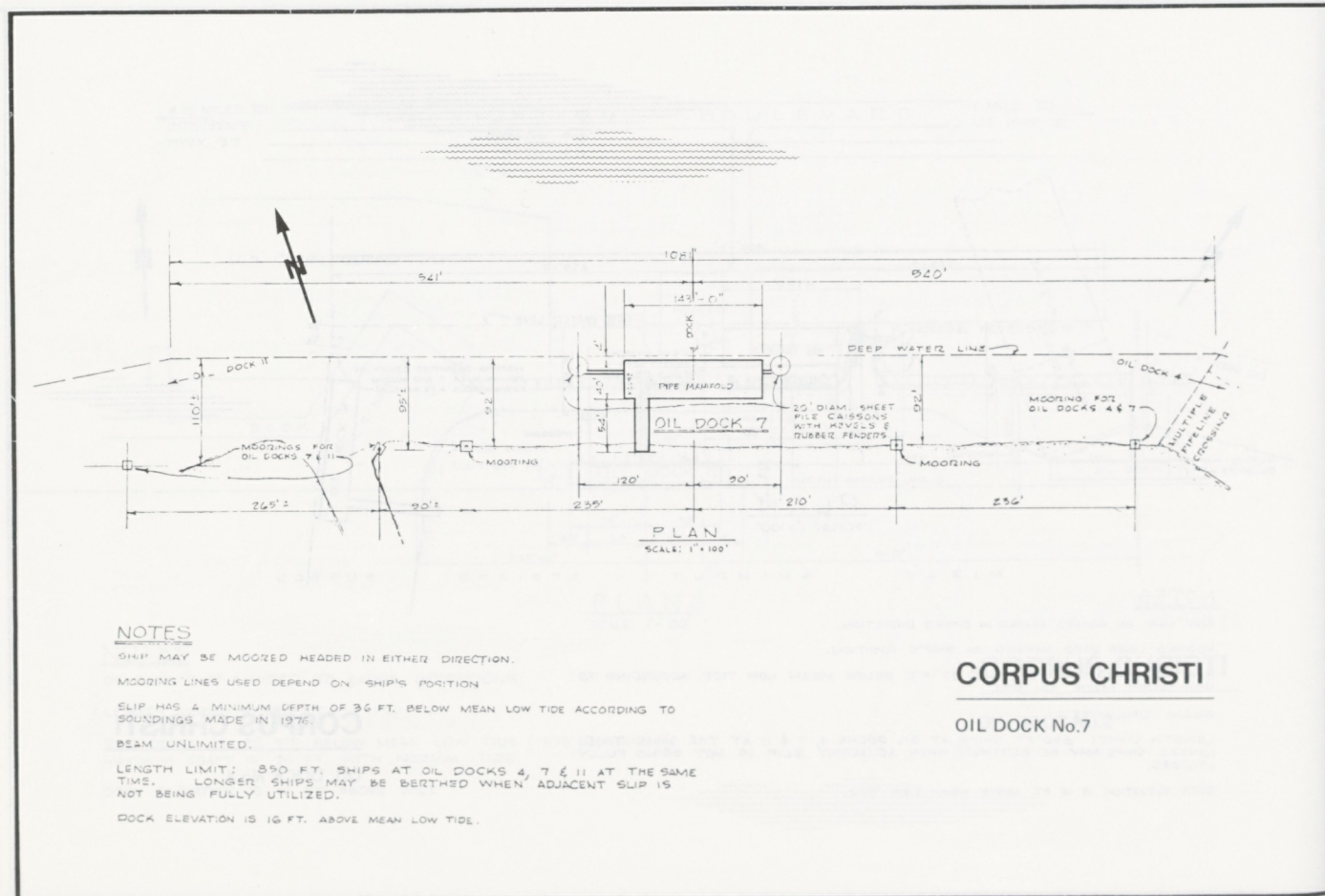
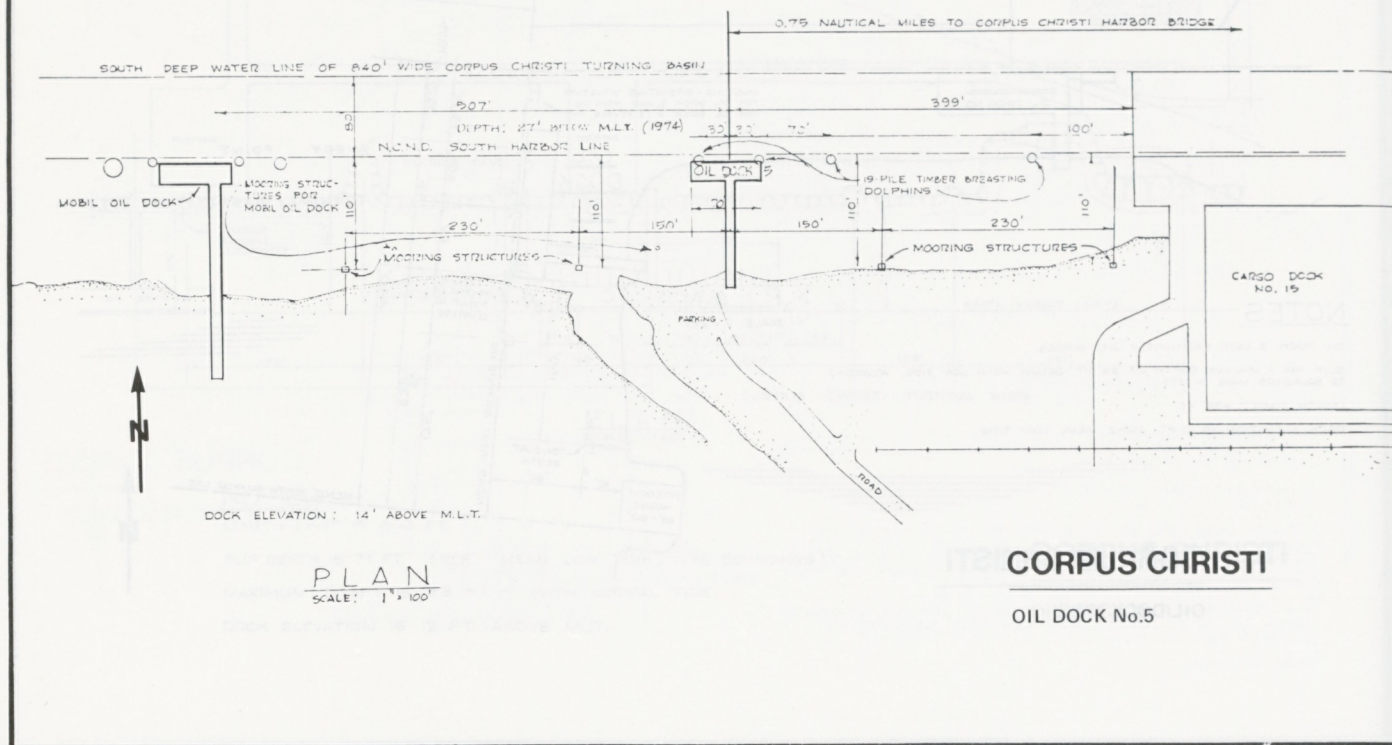
BEAM UNLIMITED.

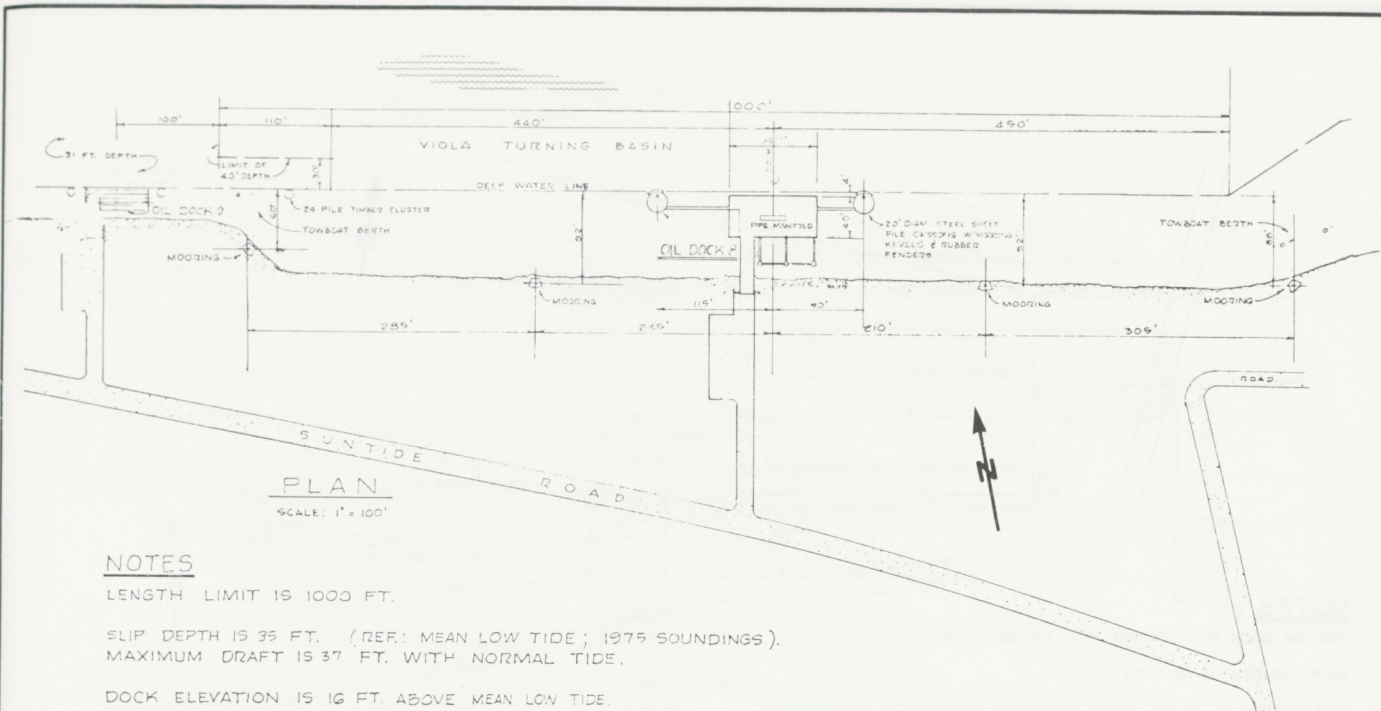
LENGTH LIMIT: 350 FT. SHIPS AT OIL DOCKS 4, 7 & 11 AT THE SAME TIME. LONGER SHIPS MAY BE BERTHED WHEN ADJACENT SLIP IS NOT BEING FULLY UTILIZED.

DOCK ELEVATION IS 16 FT. ABOVE MEAN LOW TIDE.

CORPUS CHRISTI

OIL DOCK No.4



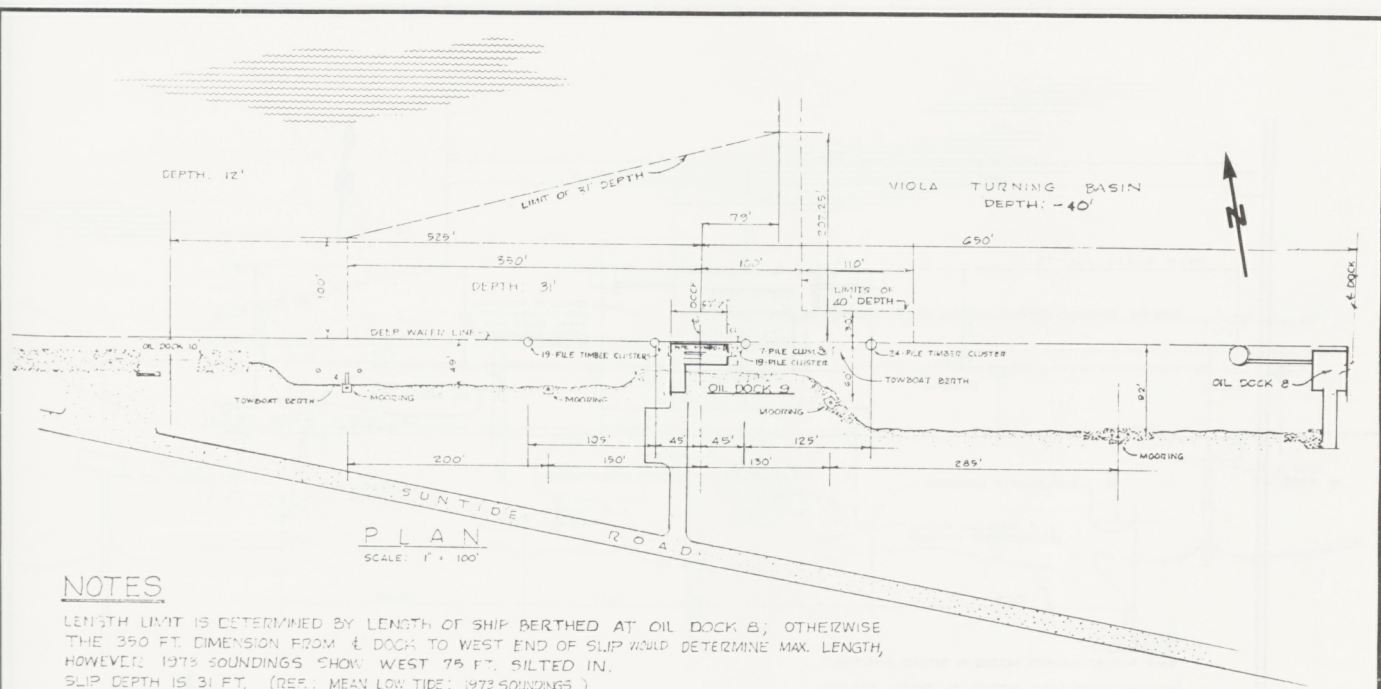


NOTES

LENGTH LIMIT IS 1000 FT.
SLIP DEPTH IS 35 FT. (REF: MEAN LOW TIDE; 1975 SOUNDINGS).
MAXIMUM DRAFT IS 37 FT. WITH NORMAL TIDE.
DOCK ELEVATION IS 16 FT. ABOVE MEAN LOW TIDE.

CORPUS CHRISTI

OIL DOCK No.8

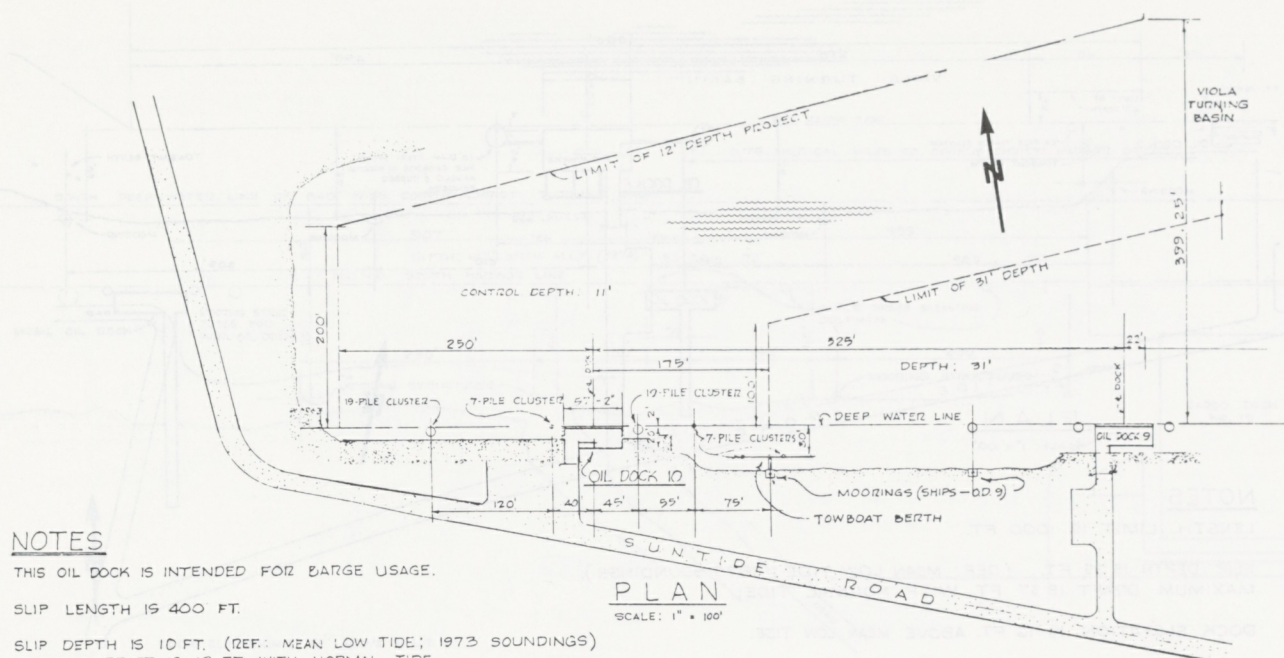


NOTES

LENGTH LIMIT IS DETERMINED BY LENGTH OF SHIP BERTHED AT OIL DOCK 8; OTHERWISE THE 350 FT. DIMENSION FROM E DOCK TO WEST END OF SLIP WOULD DETERMINE MAX. LENGTH, HOWEVER 1973 SOUNDINGS SHOW WEST 75 FT. SILTED IN.
SLIP DEPTH IS 31 FT. (REF: MEAN LOW TIDE; 1973 SOUNDINGS)
MAXIMUM DRAFT IS 33 FT. WITH NORMAL TIDE.
DOCK ELEVATION IS 9 FT.-6 IN. ABOVE MEAN LOW TIDE.

CORPUS CHRISTI

OIL DOCK No.9

**NOTES**

THIS OIL DOCK IS INTENDED FOR BARGE USAGE.

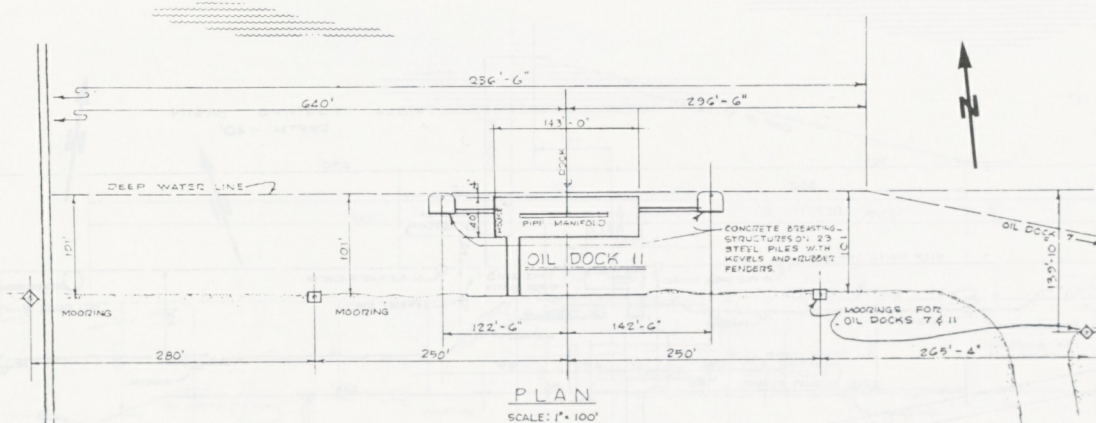
SLIP LENGTH IS 400 FT.

SLIP DEPTH IS 10 FT. (REF: MEAN LOW TIDE; 1973 SOUNDINGS)
MAXIMUM DRAFT IS 12 FT. WITH NORMAL TIDE.

DOCK ELEVATION IS 9 FT., 6 IN. ABOVE MEAN LOW TIDE.

CORPUS CHRISTI

OIL DOCK No.10

**NOTES**

SHIP MAY BE MOORED HEADED IN EITHER DIRECTION.

MOORING LINES USED DEPEND ON SHIP'S POSITION.

SLIP HAS A MINIMUM DEPTH OF 37 FT. BELOW MEAN LOW TIDE ACCORDING TO SOUNDINGS MADE IN 1972.

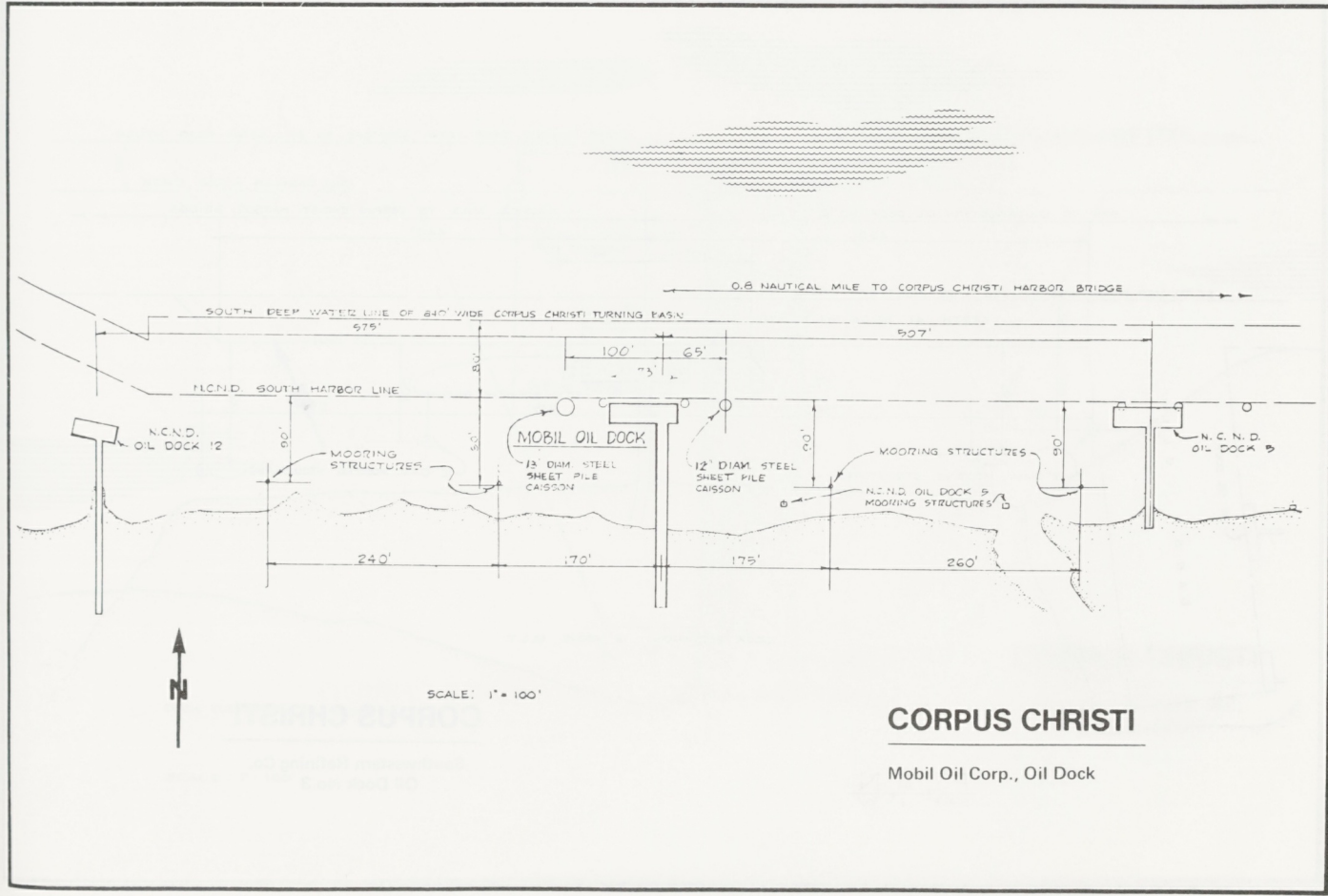
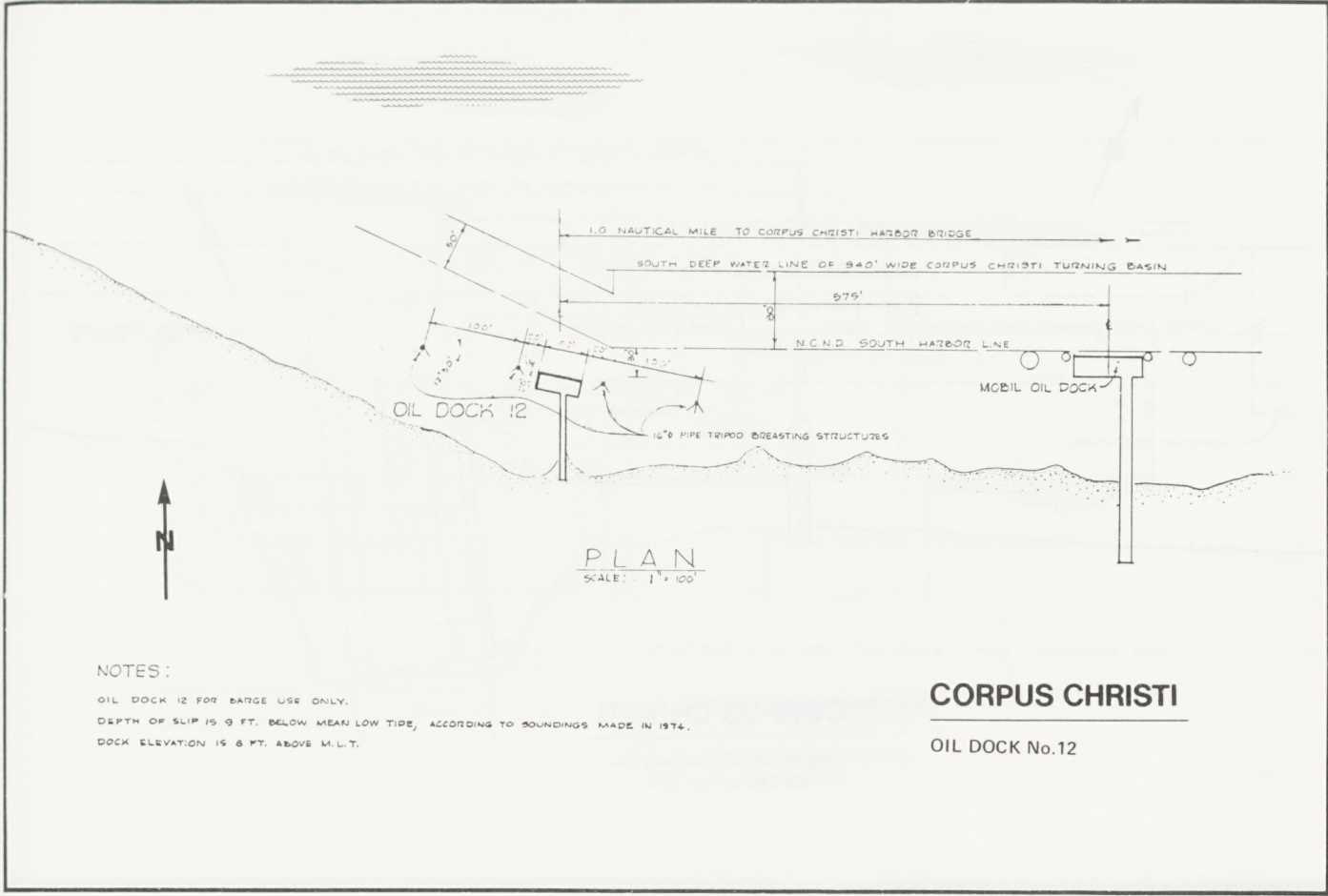
BEAM UNLIMITED.

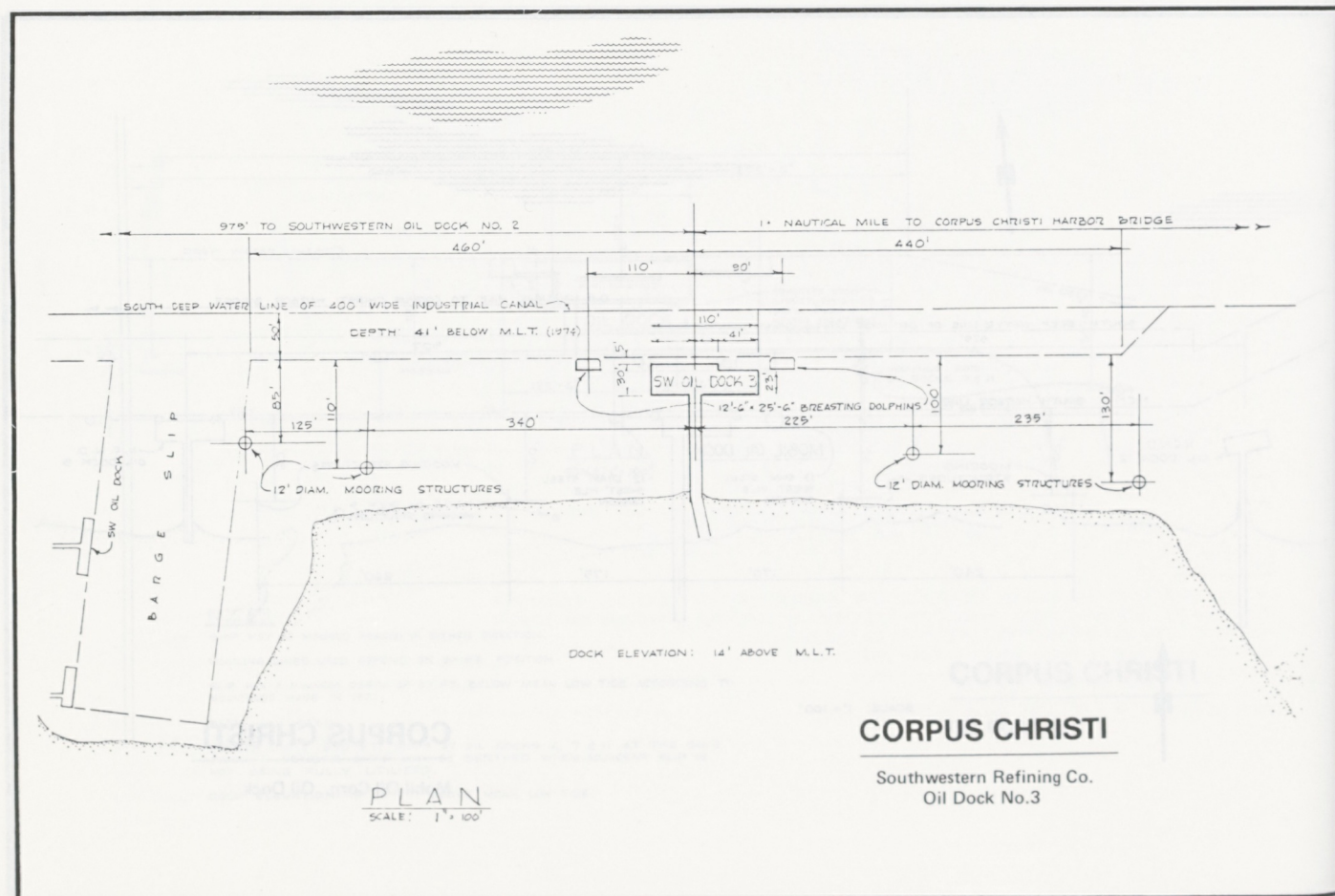
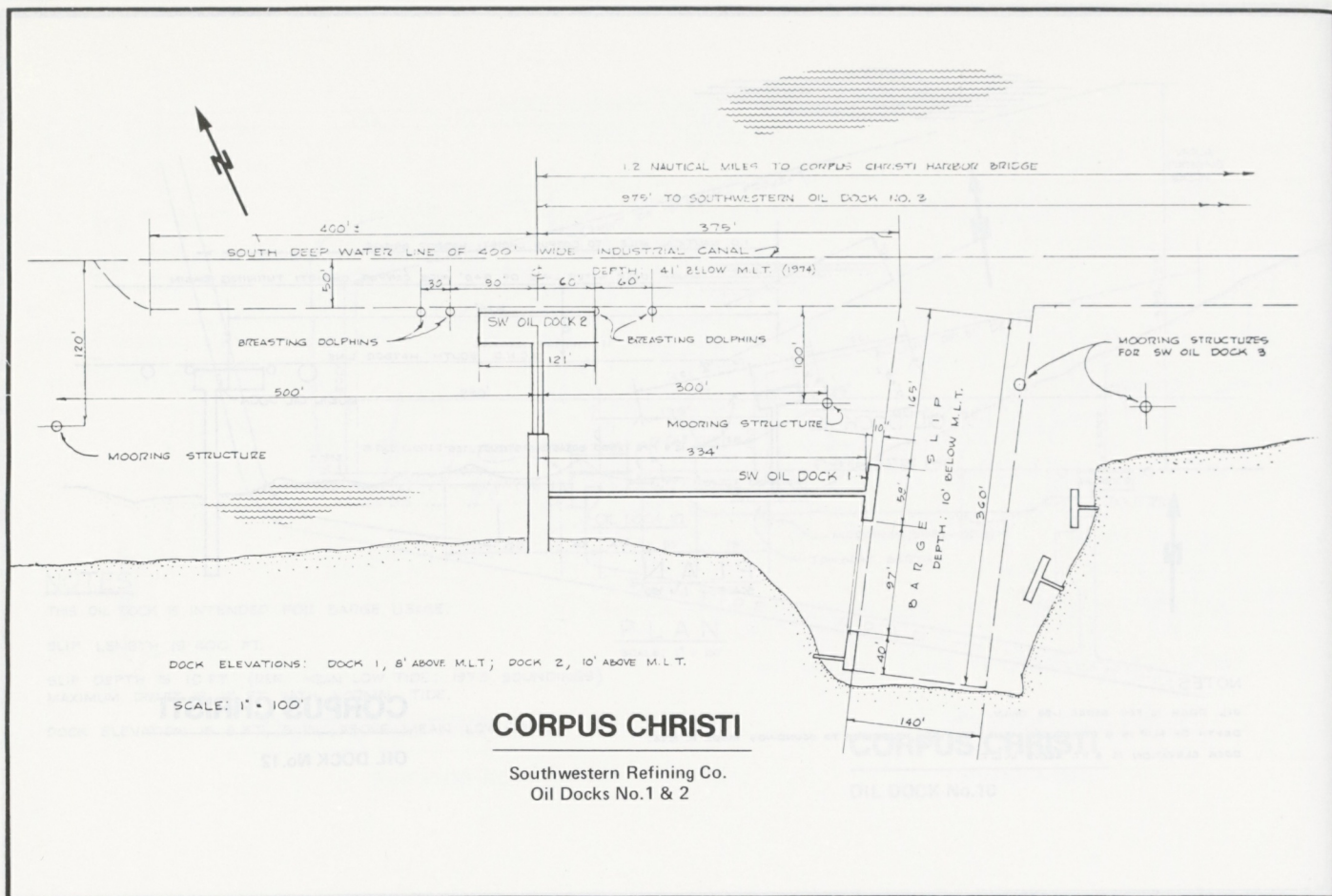
LENGTH LIMIT: 290 FT. SHIPS AT OIL DOCKS 4, 7 & 11 AT THE SAME TIME. LONGER SHIPS MAY BE BERTHED WHEN ADJACENT SLIP IS NOT BEING FULLY UTILIZED.

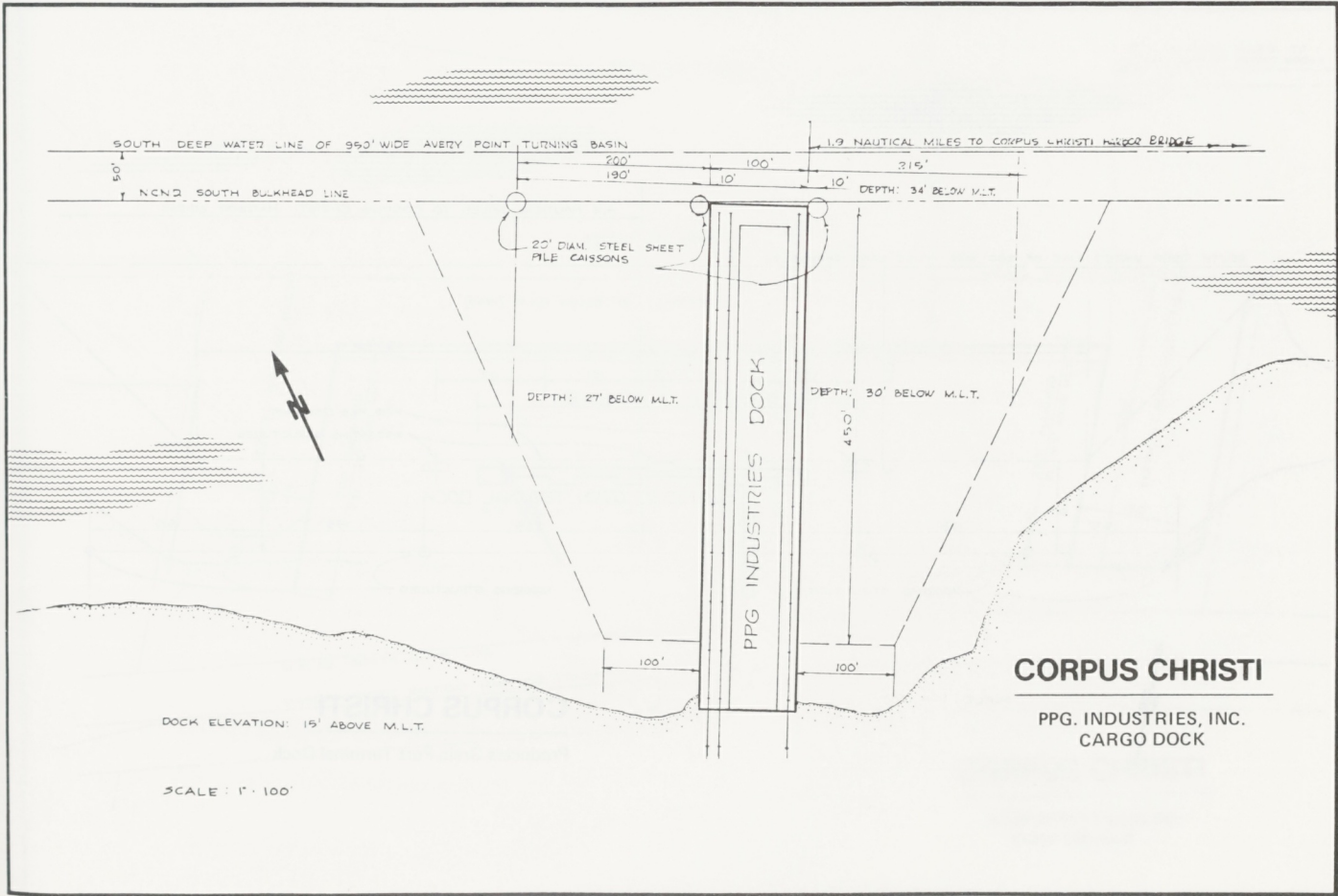
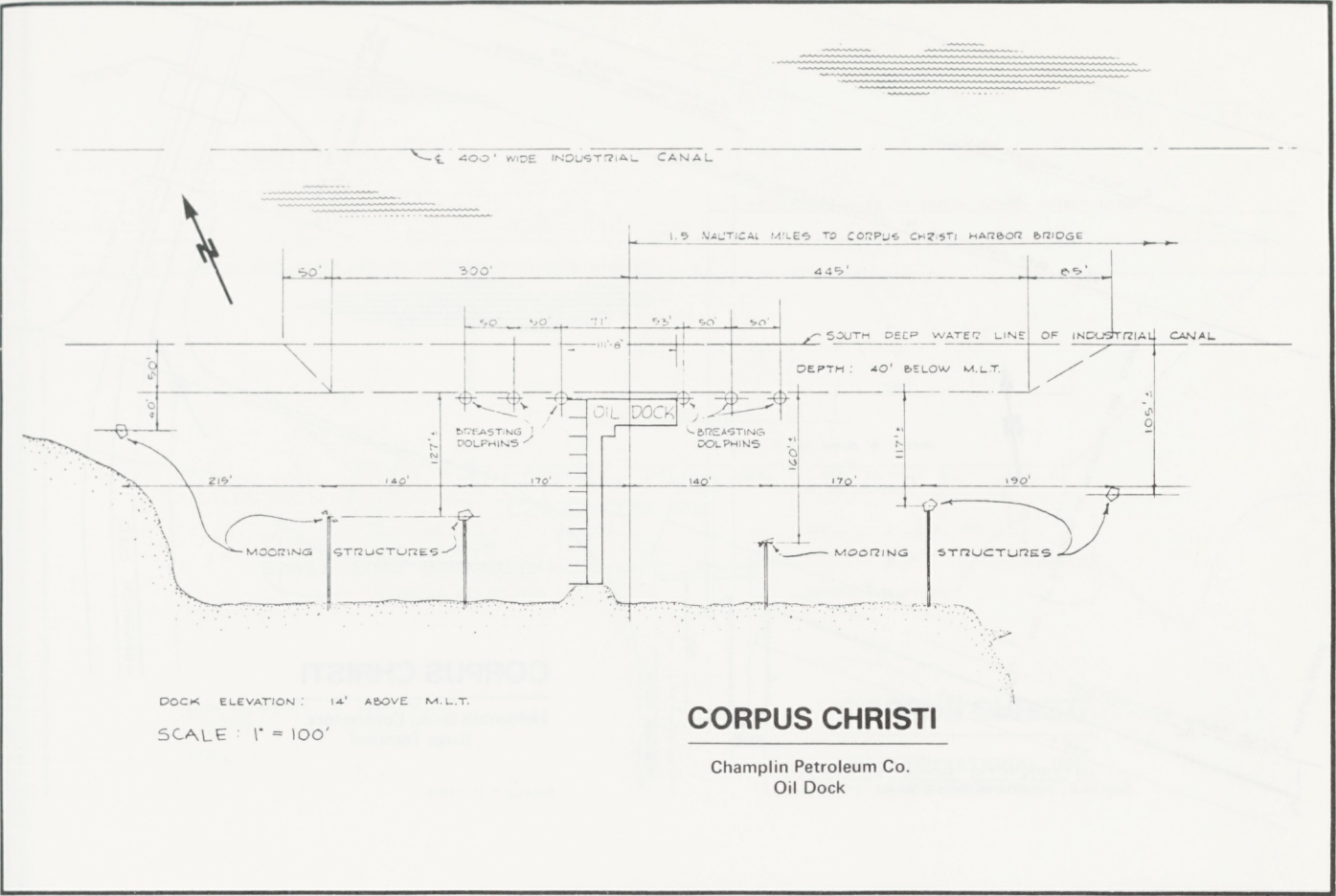
DOCK ELEVATION IS 16 FT. ABOVE MEAN LOW TIDE.

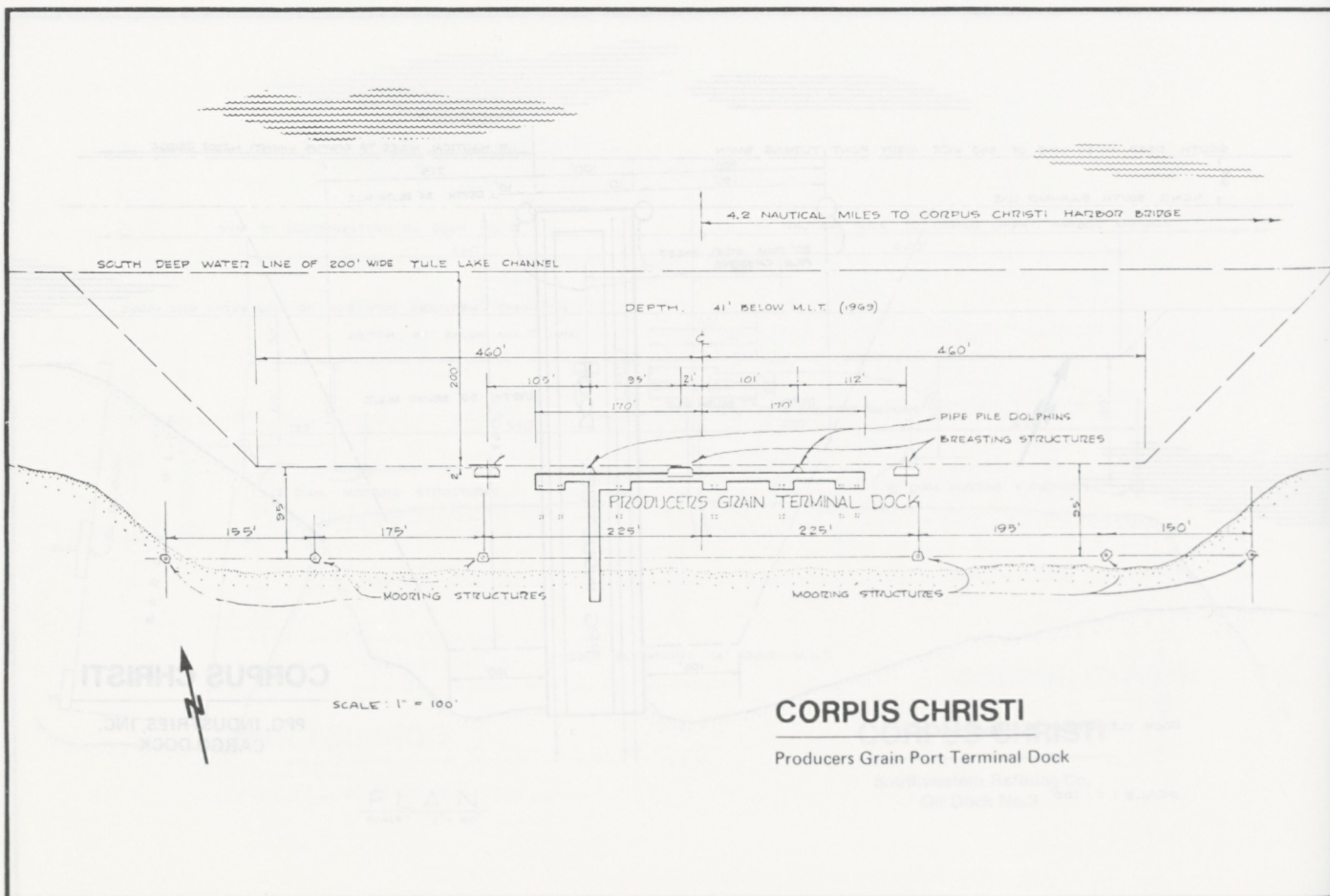
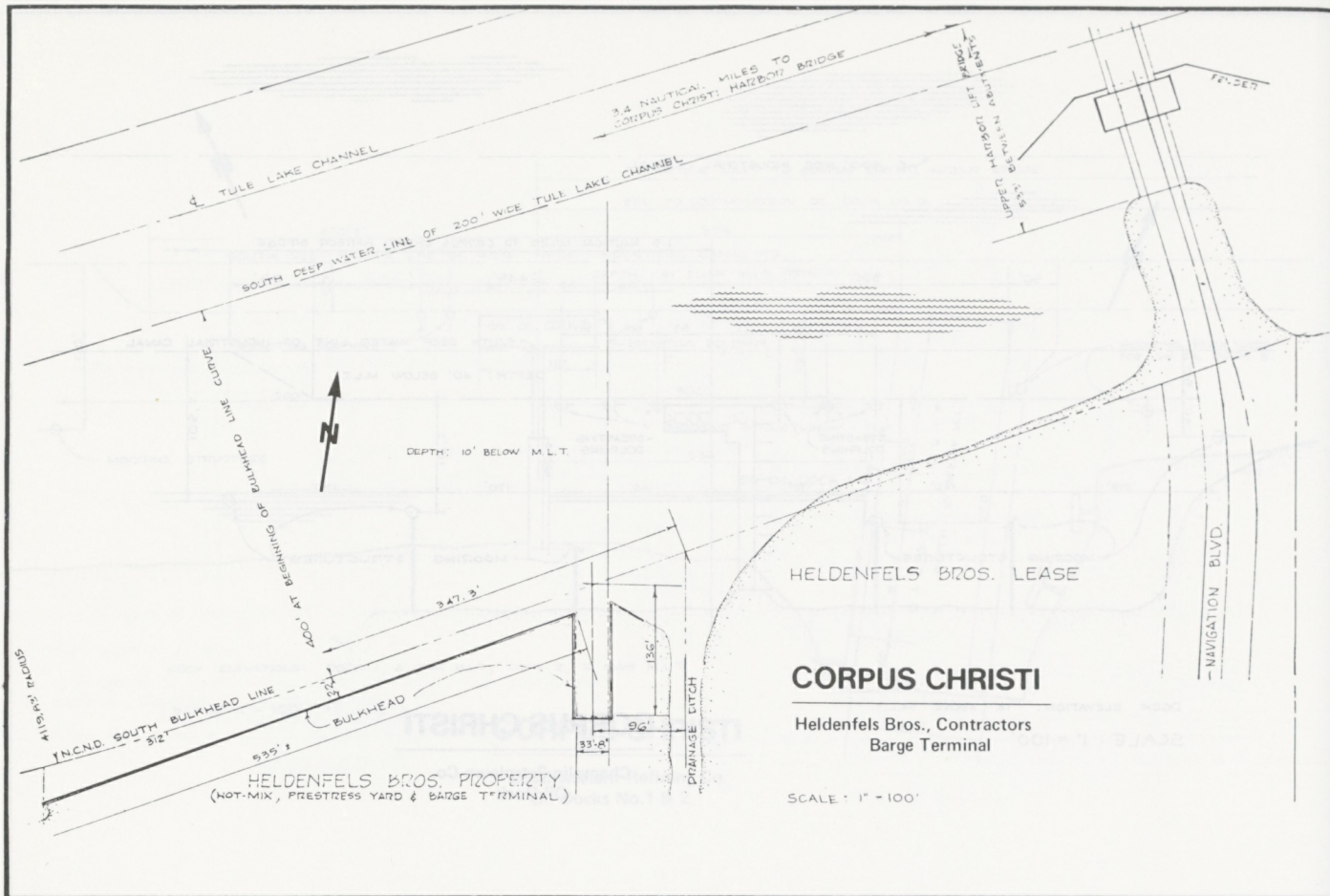
CORPUS CHRISTI

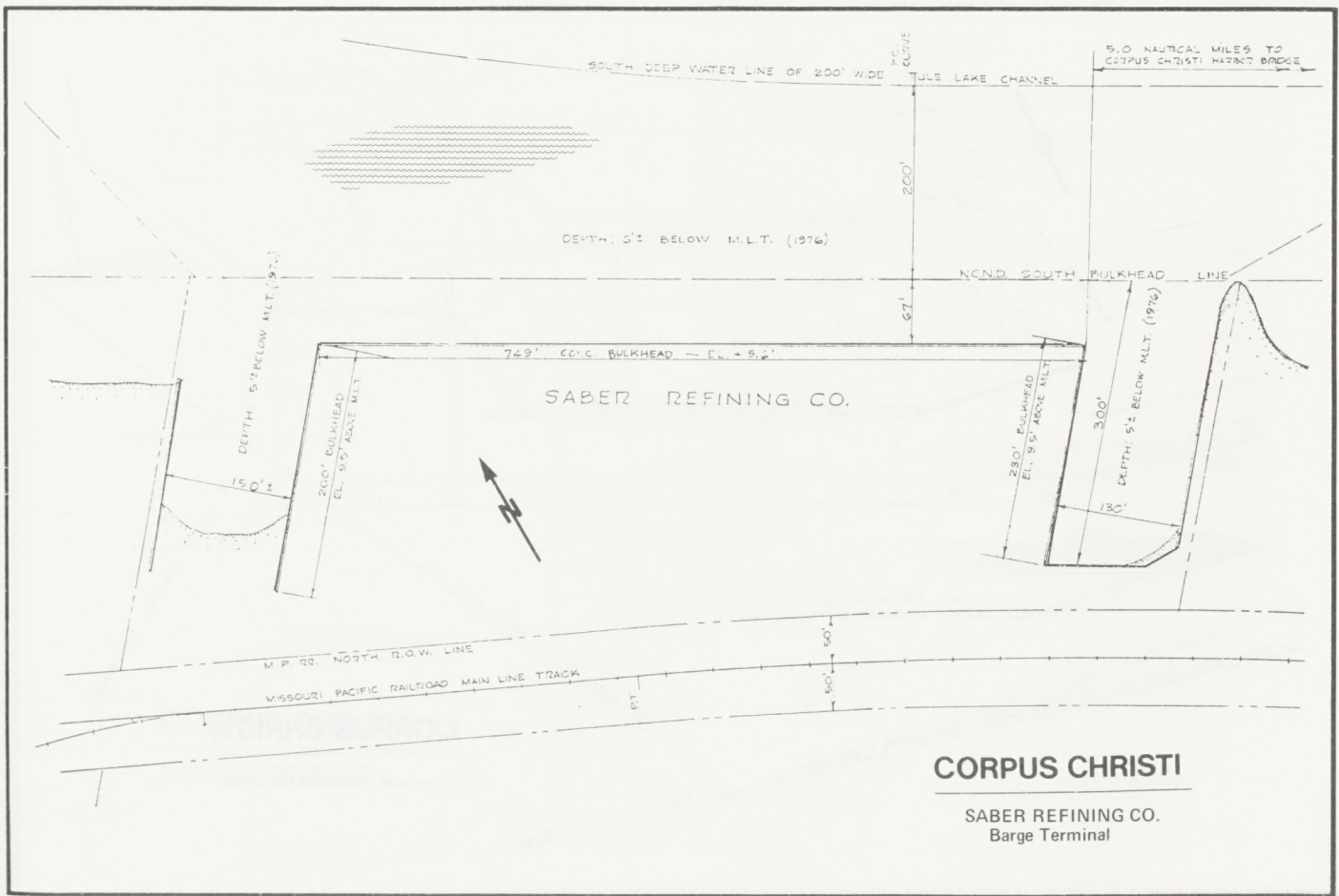
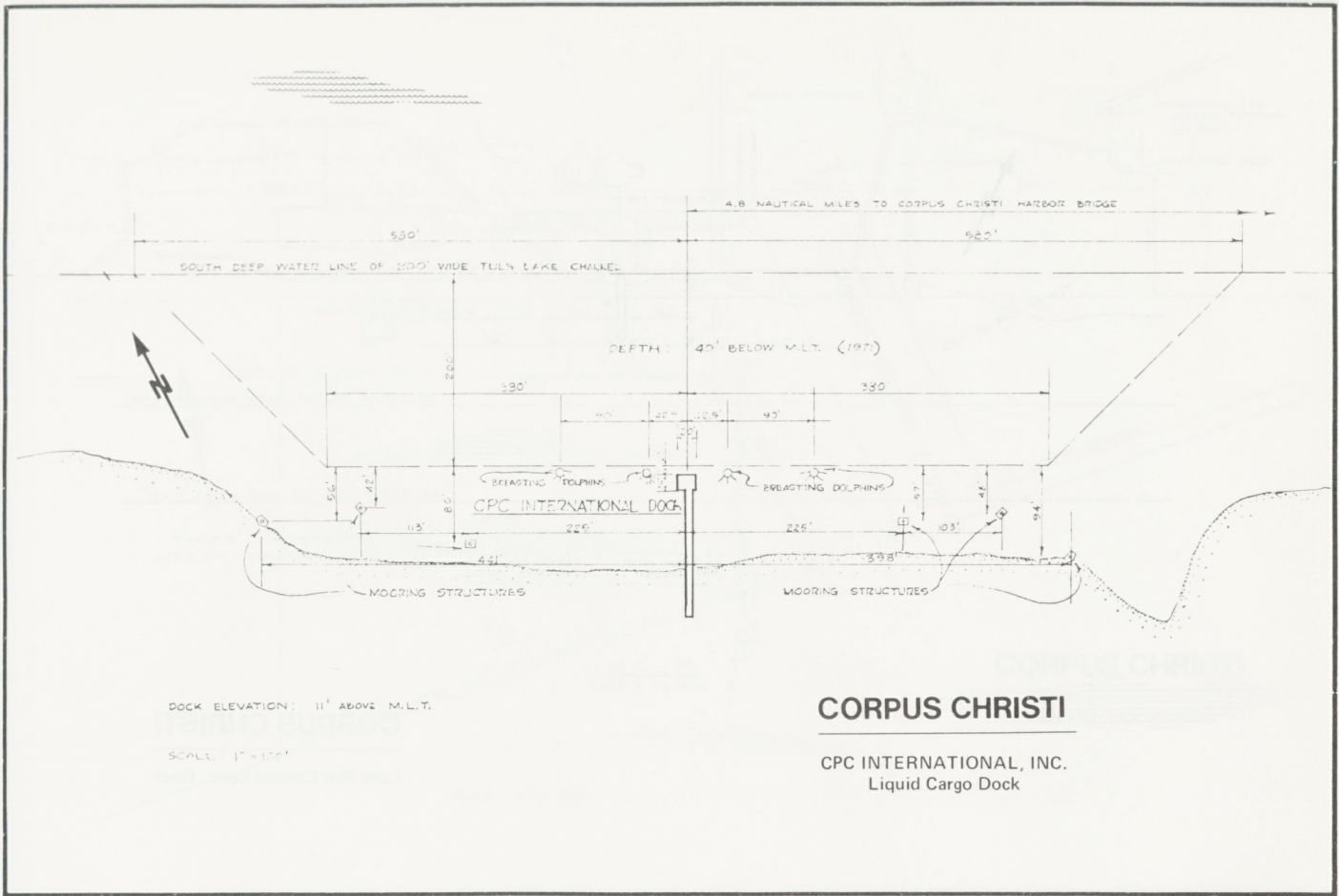
OIL DOCK No.11

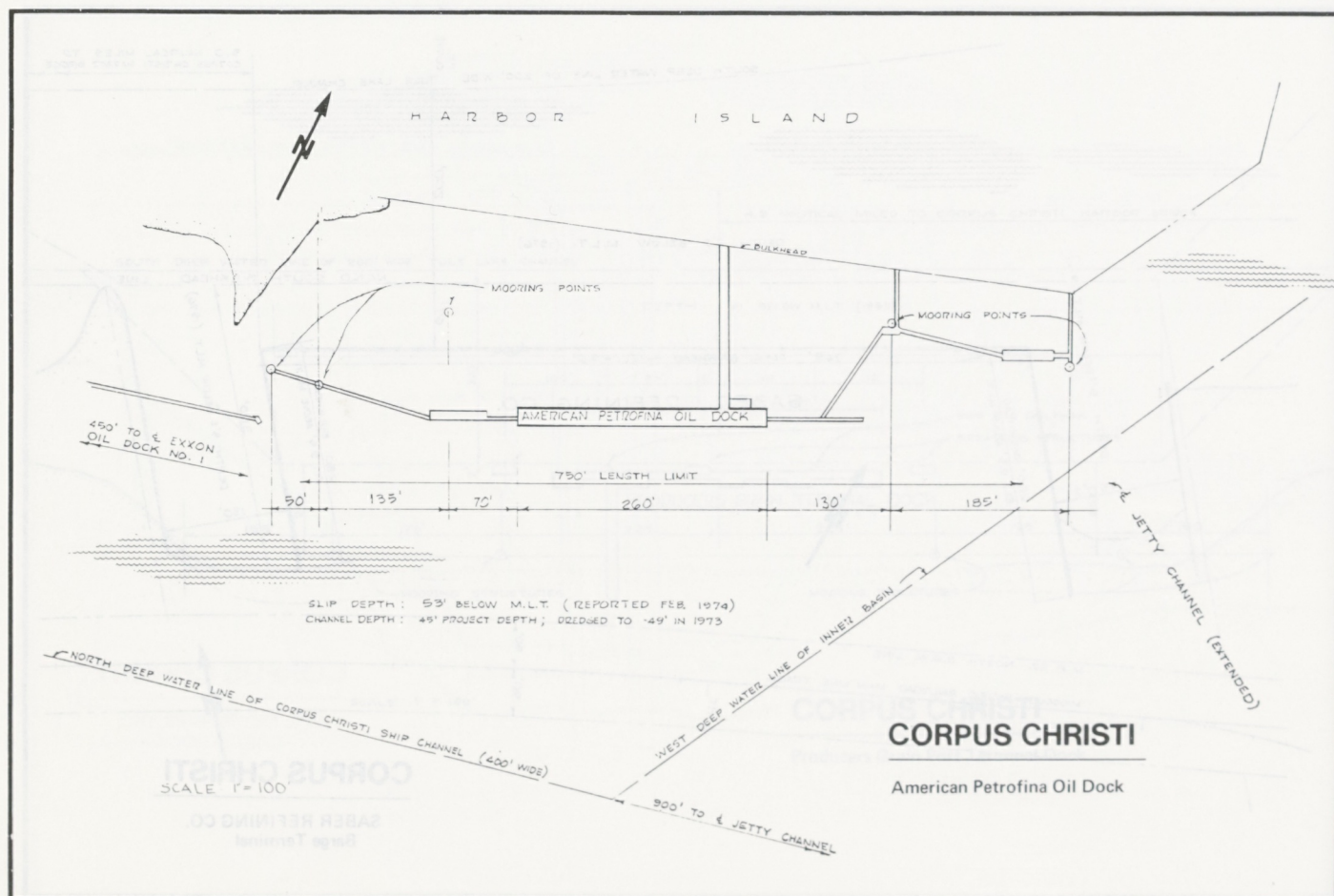
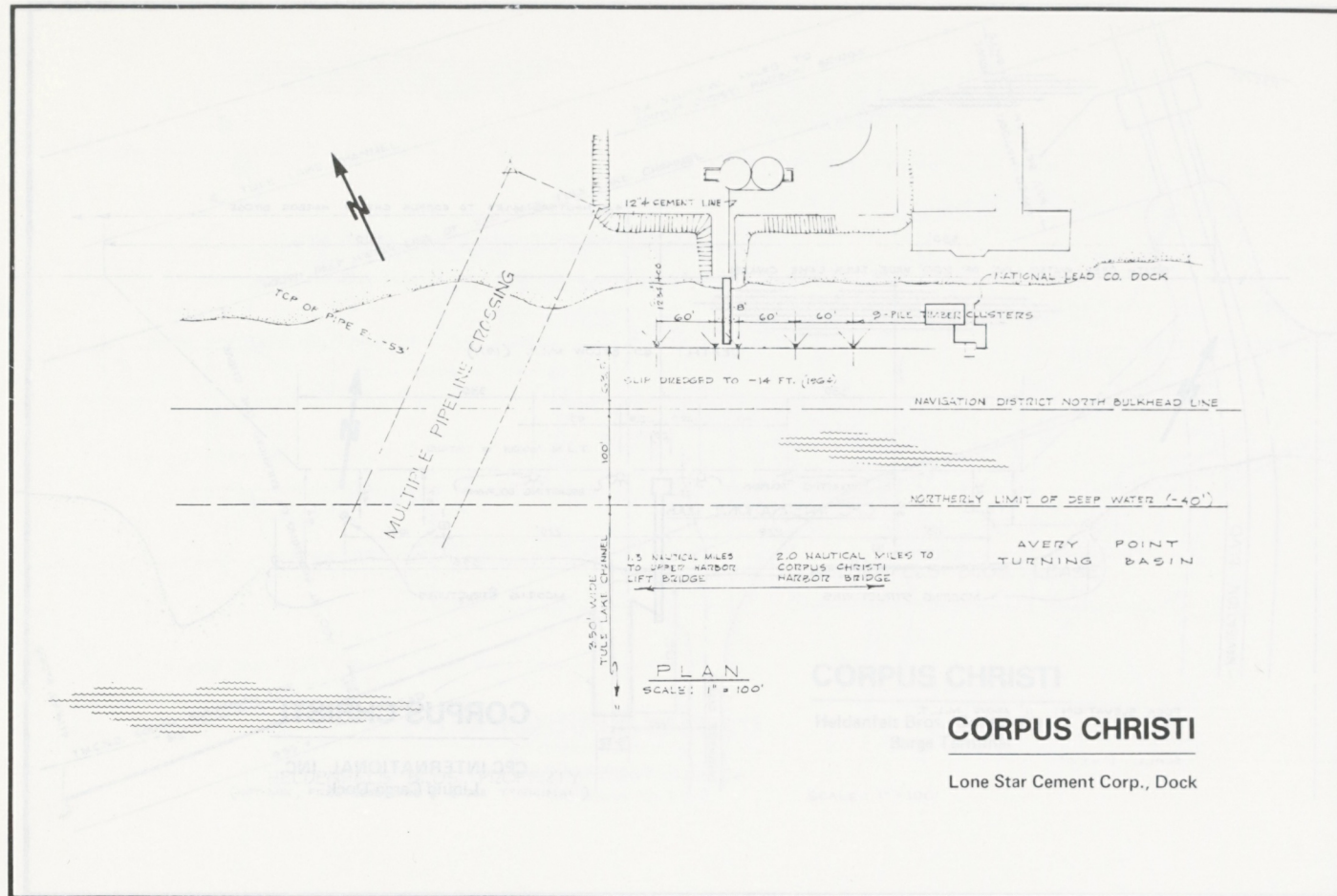


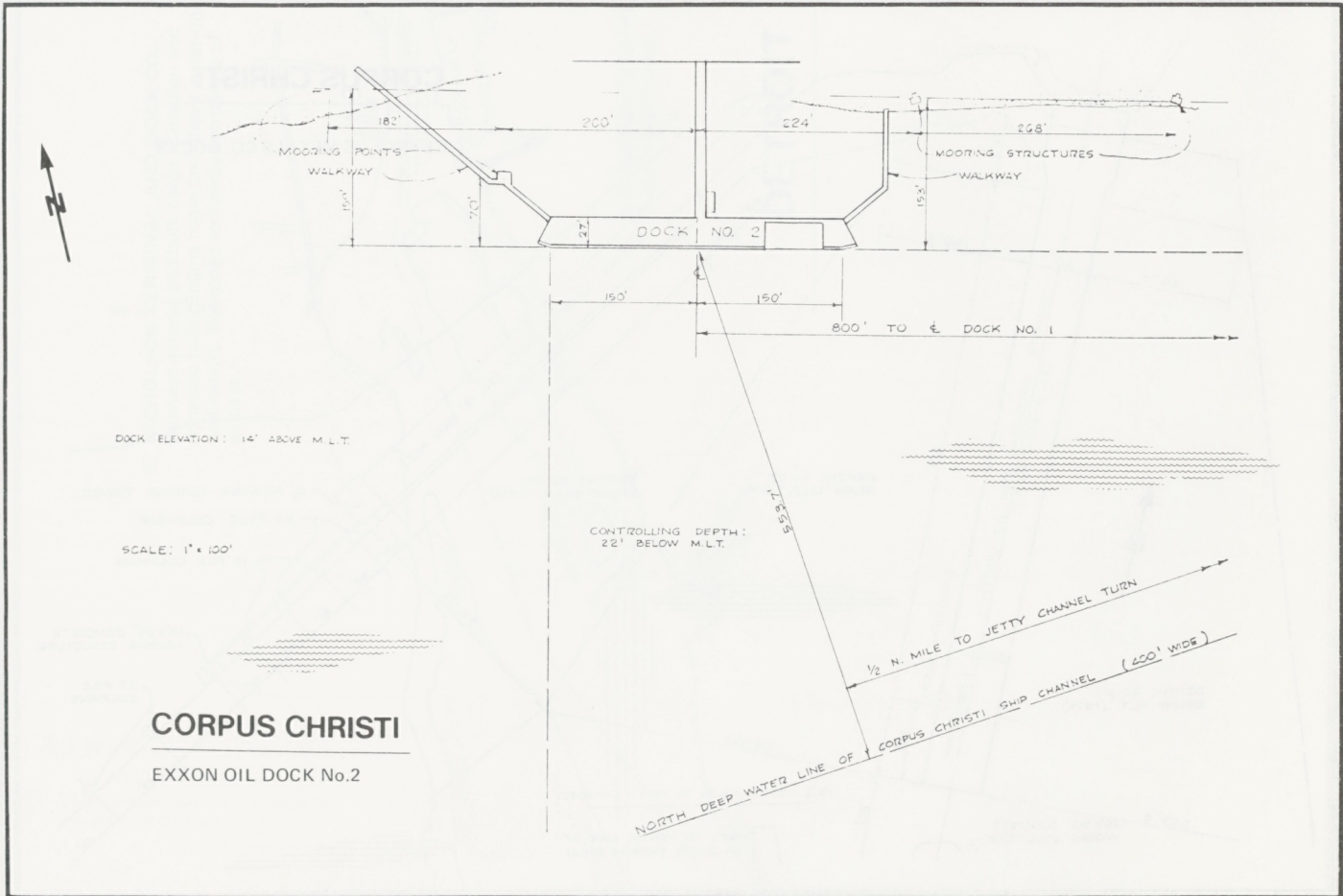
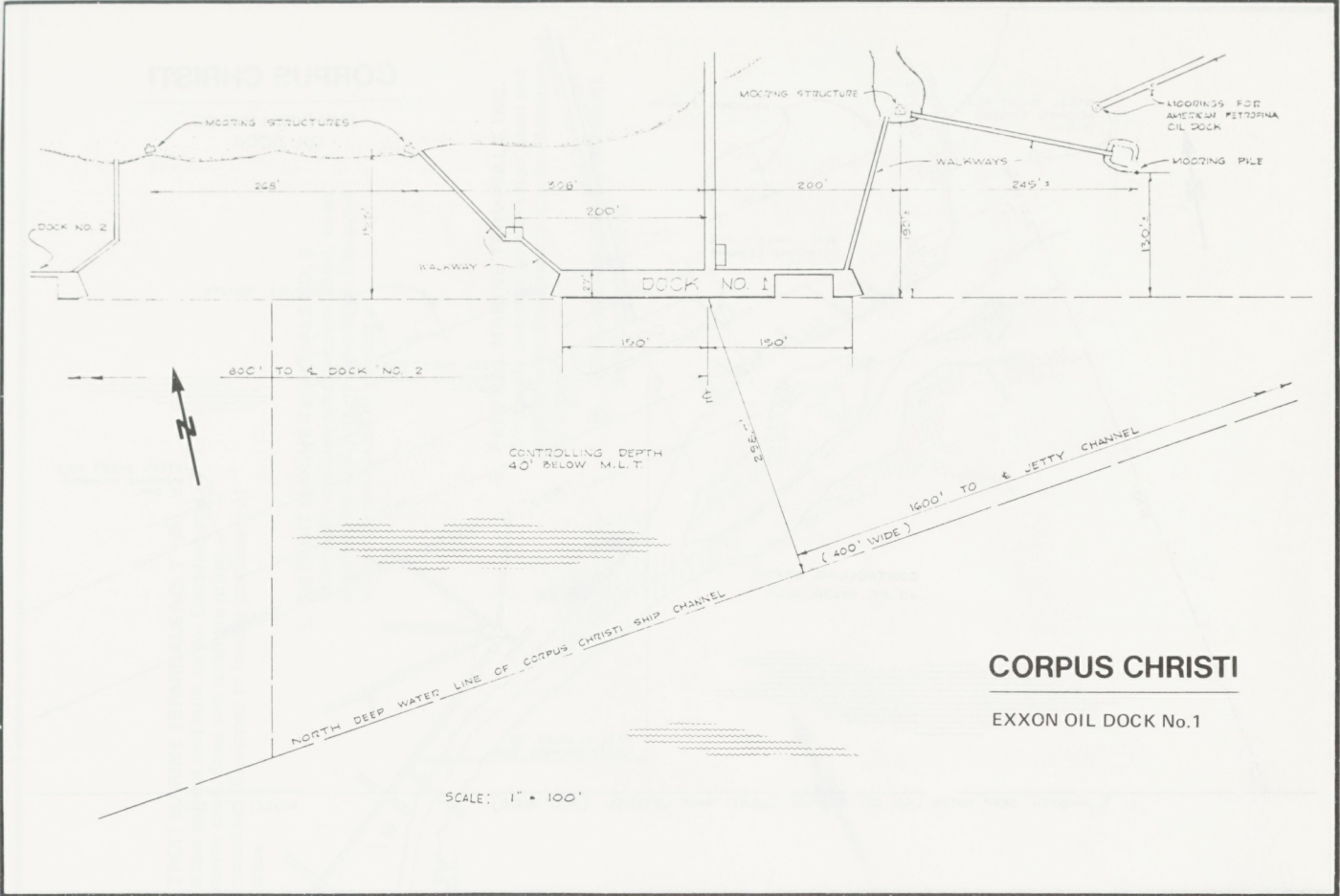




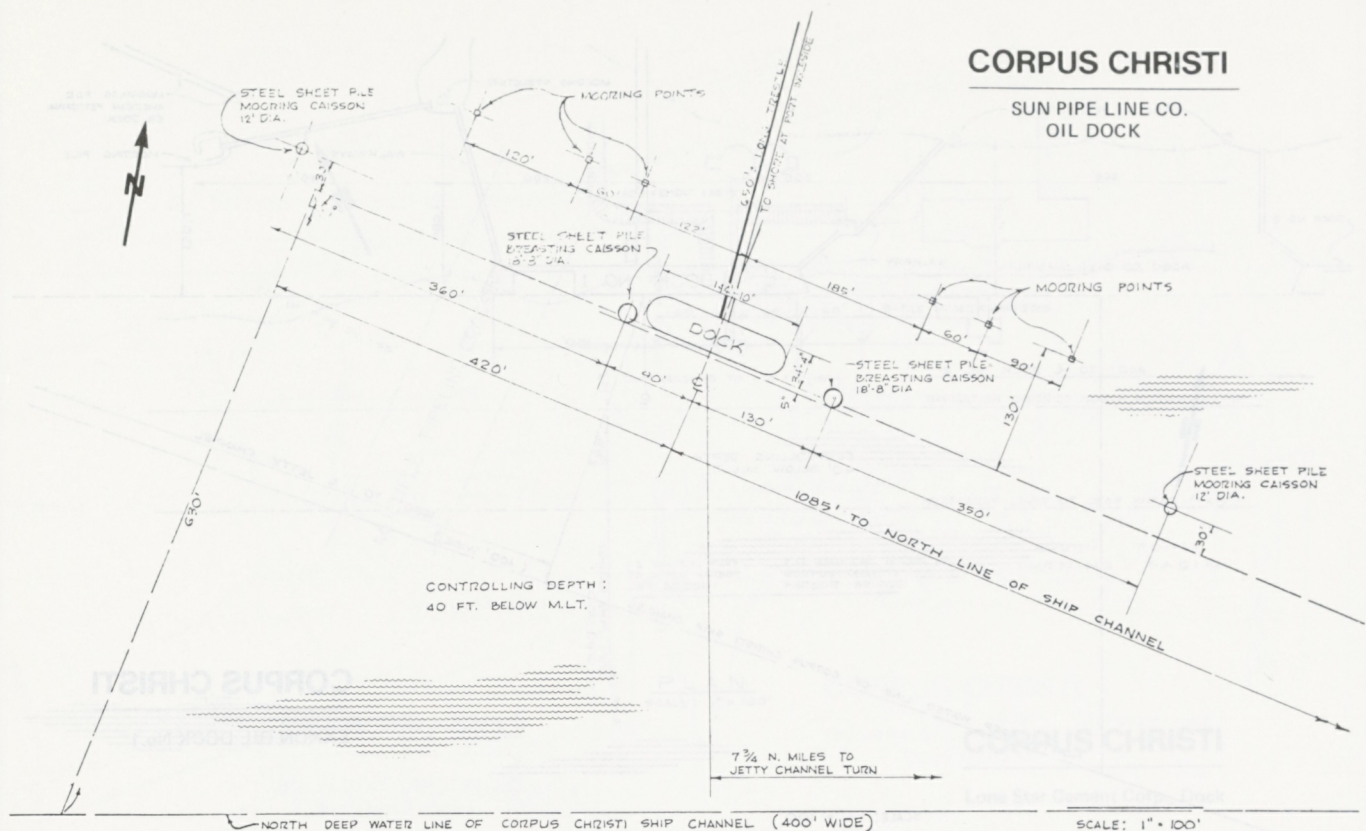






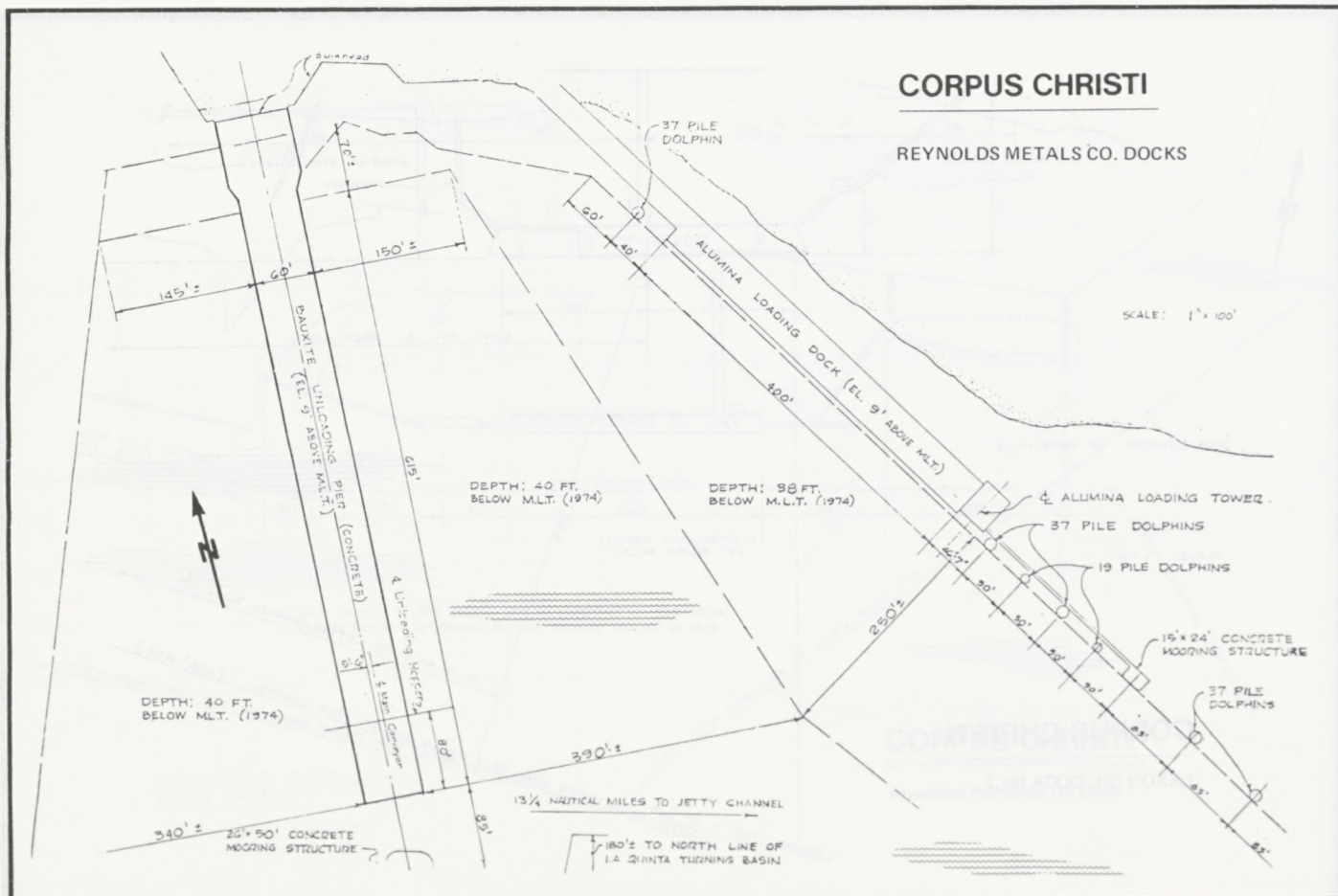


CORPUS CHRISTI

SUN PIPE LINE CO.
OIL DOCK

CORPUS CHRISTI

REYNOLDS METALS CO. DOCKS



3. **NICHOLSON TERMINAL AND DOCK CO.**
Overseas general and bulk cargo. Canadian and domestic bulk. Engine room and above water line hull repairs. Equipped to handle containers of all sizes.

2. **DETROIT MARINE TERMINALS NO. 1**
Overseas general and bulk cargo. Canadian and domestic bulk. Steel and scrap are prime commodities. Equipped to handle containers of all sizes.

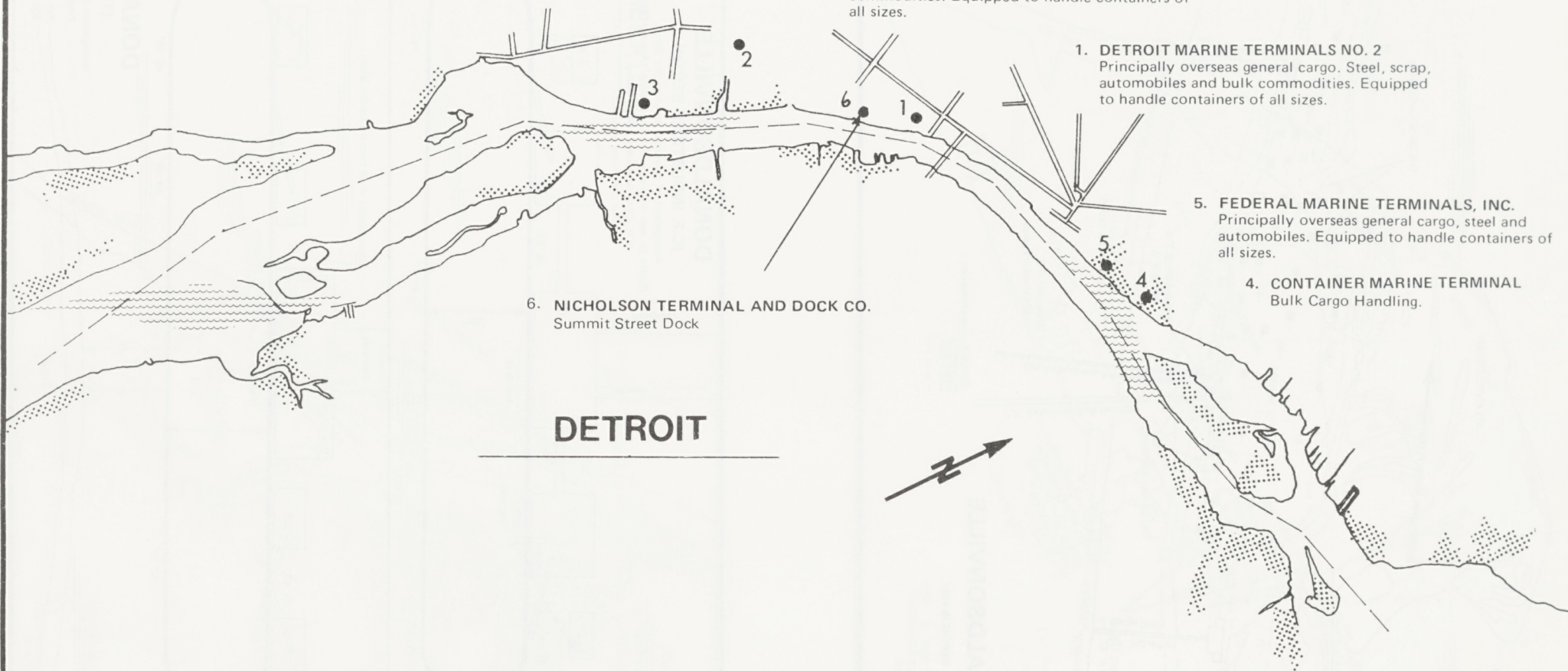
1. **DETROIT MARINE TERMINALS NO. 2**
Principally overseas general cargo. Steel, scrap, automobiles and bulk commodities. Equipped to handle containers of all sizes.

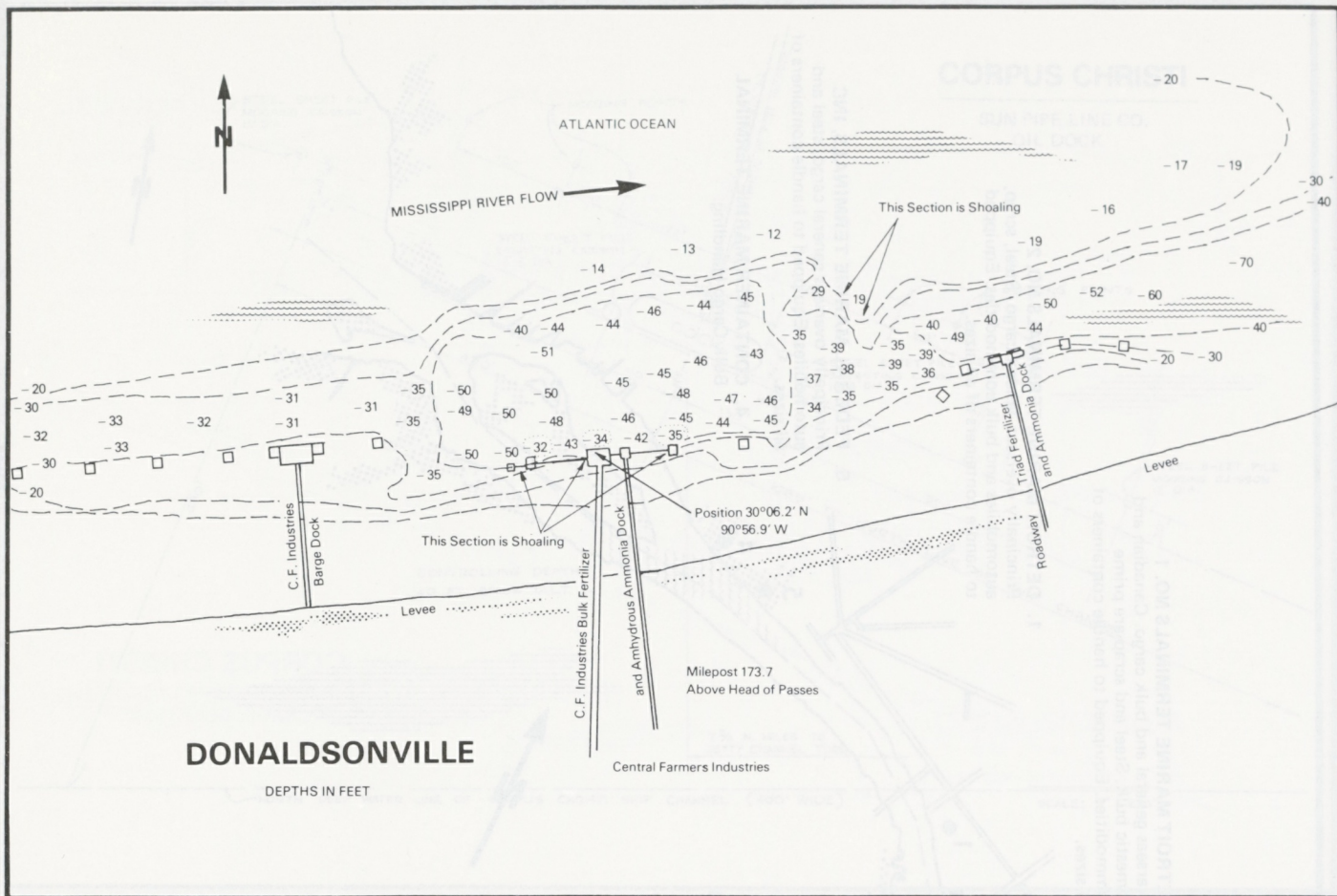
5. **FEDERAL MARINE TERMINALS, INC.**
Principally overseas general cargo, steel and automobiles. Equipped to handle containers of all sizes.

4. **CONTAINER MARINE TERMINAL**
Bulk Cargo Handling.

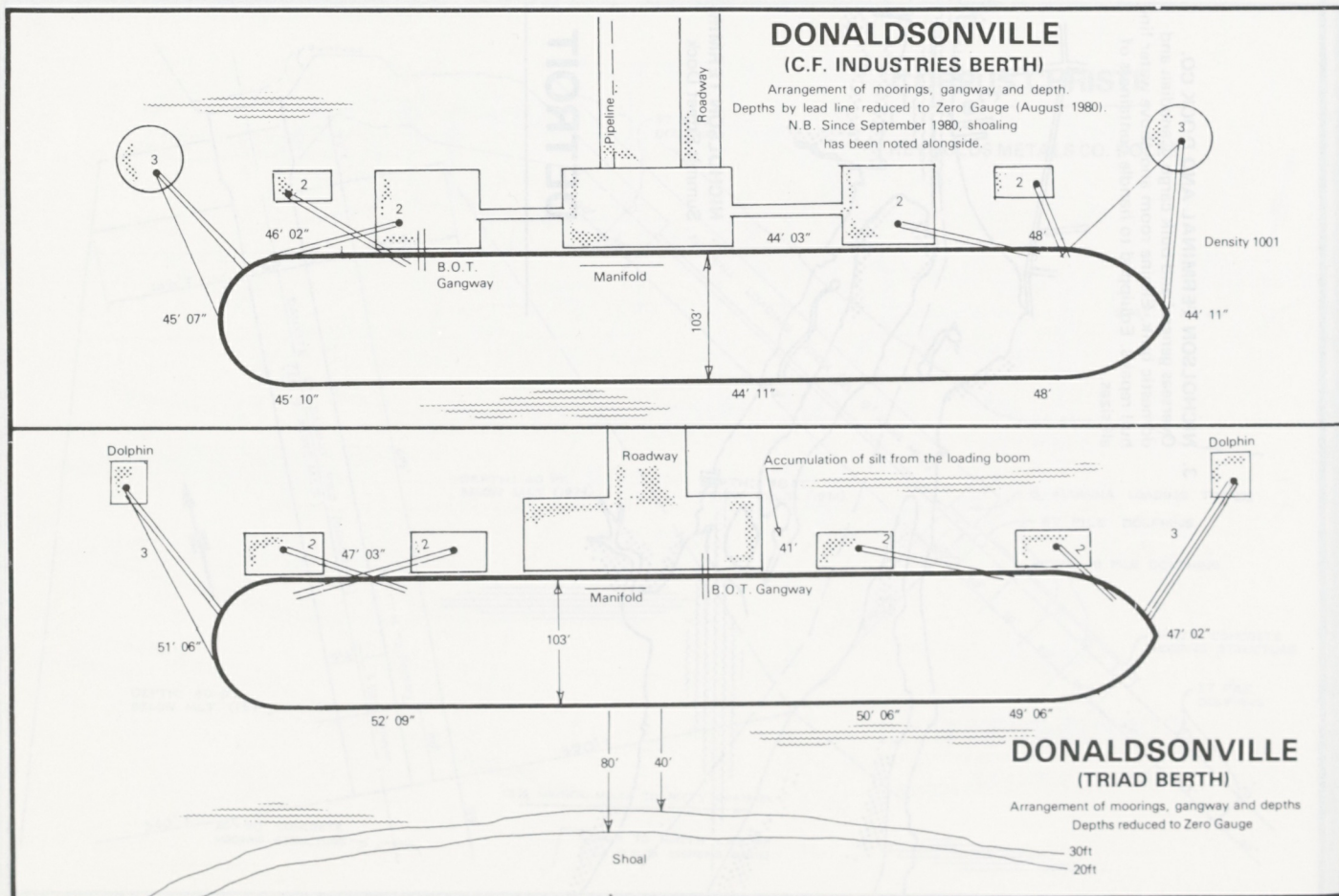
6. **NICHOLSON TERMINAL AND DOCK CO.**
Summit Street Dock

DETROIT

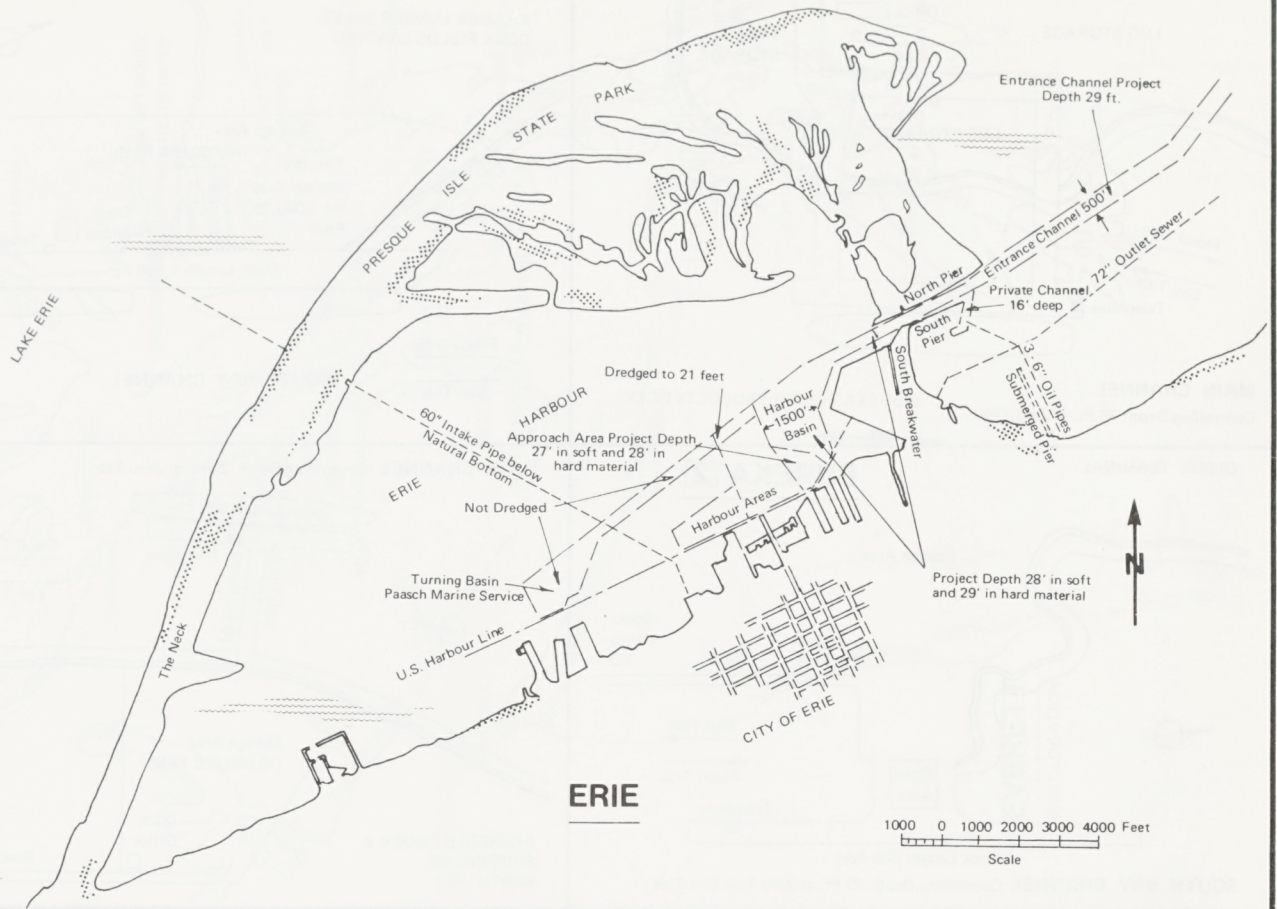




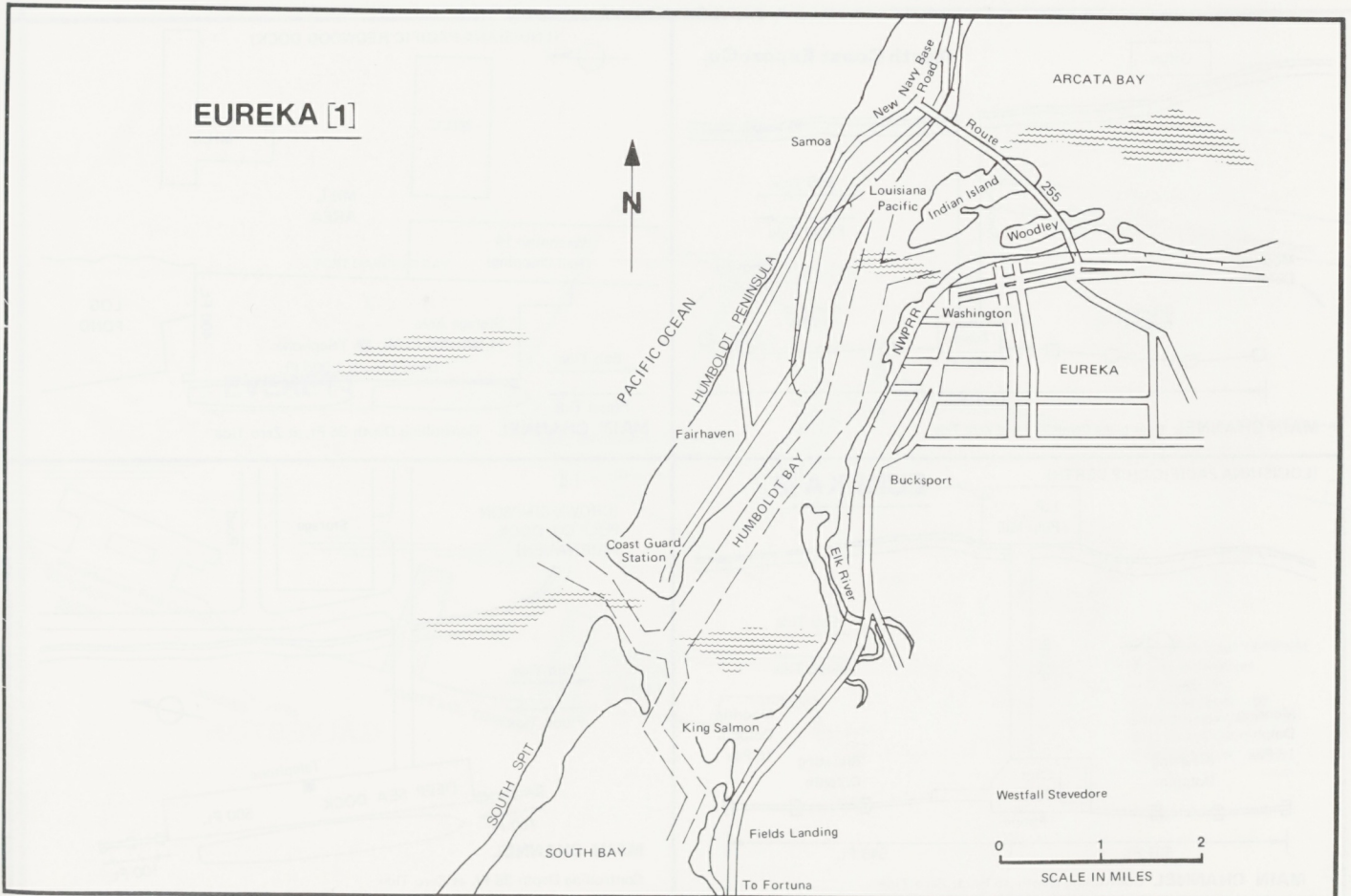
"Plan supplied by Ship's Master"

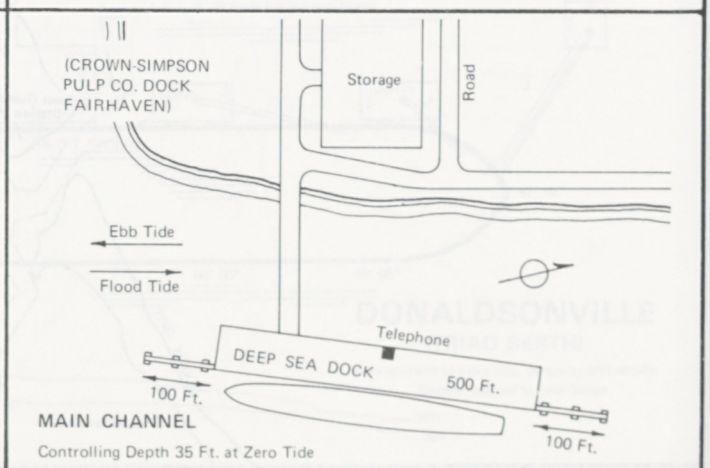
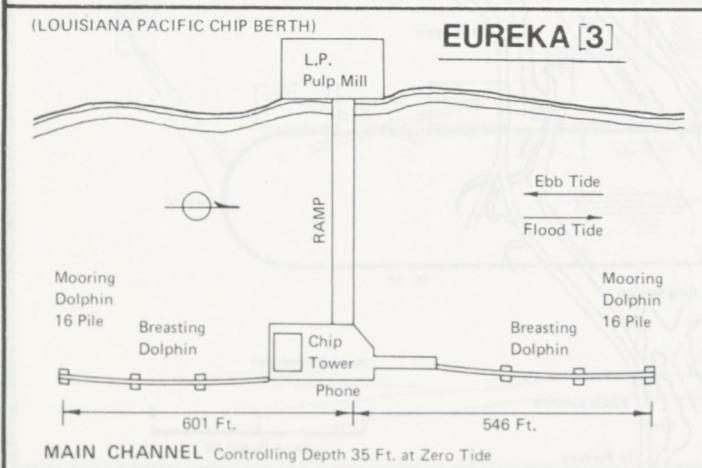
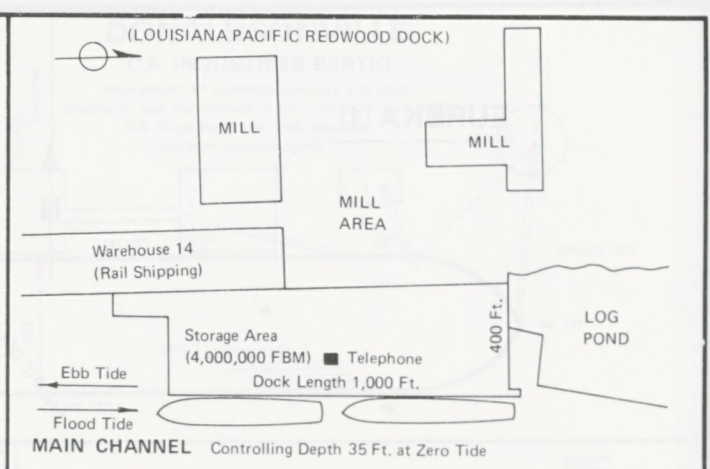
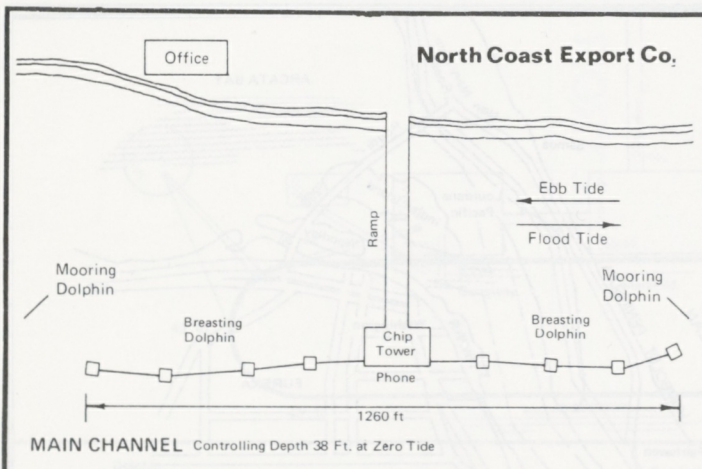
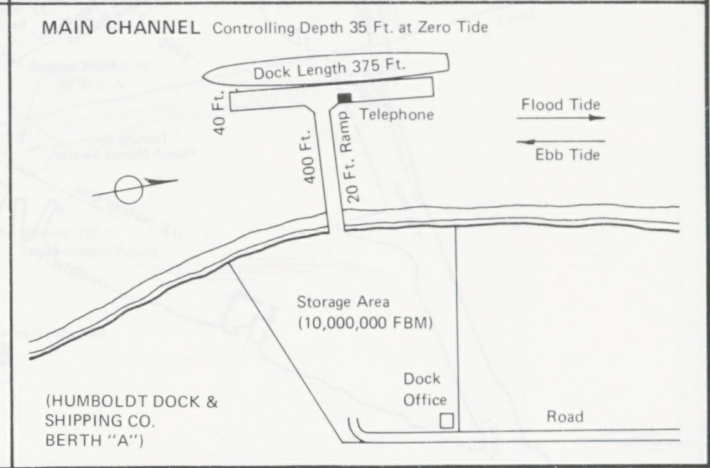
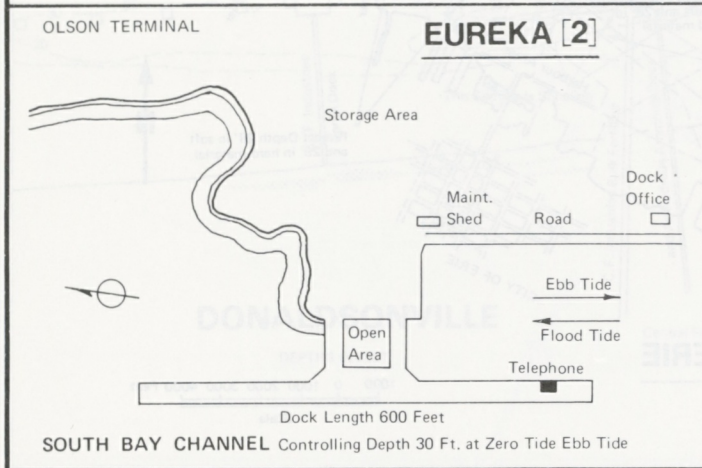
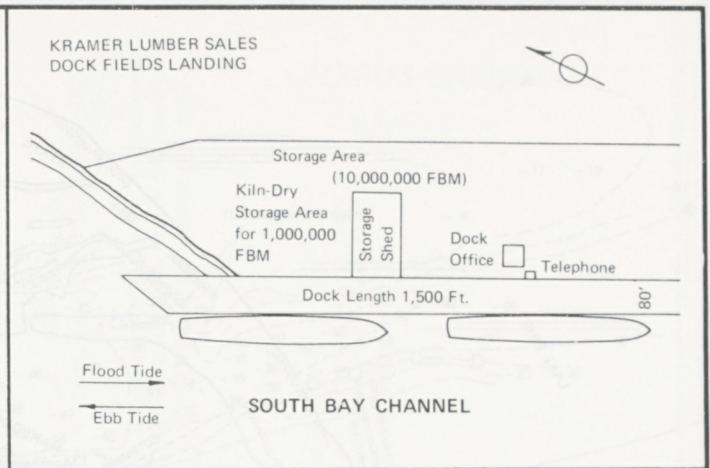
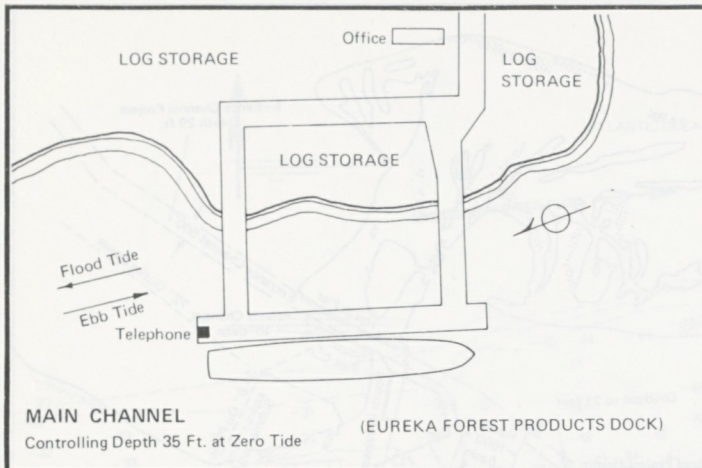


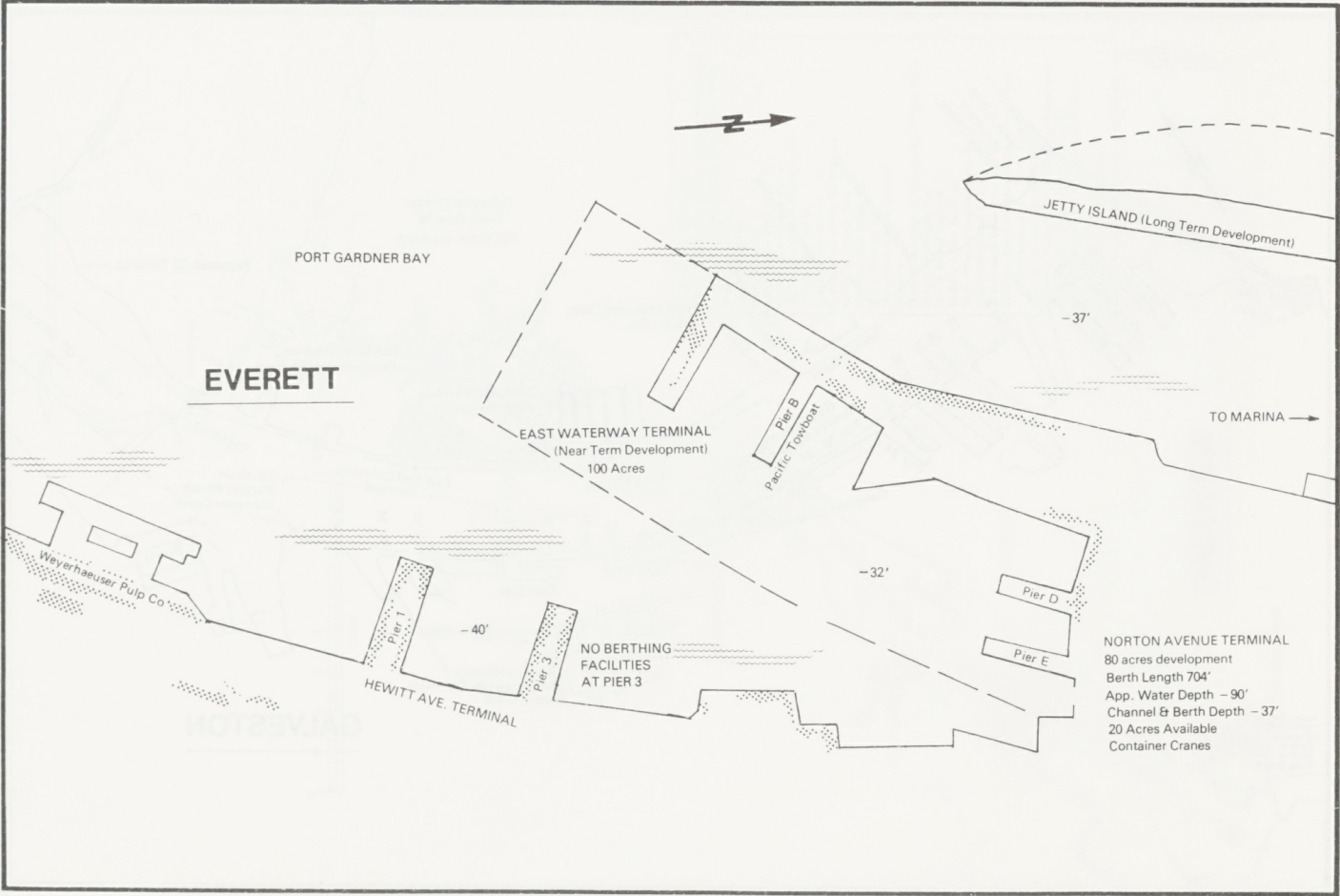
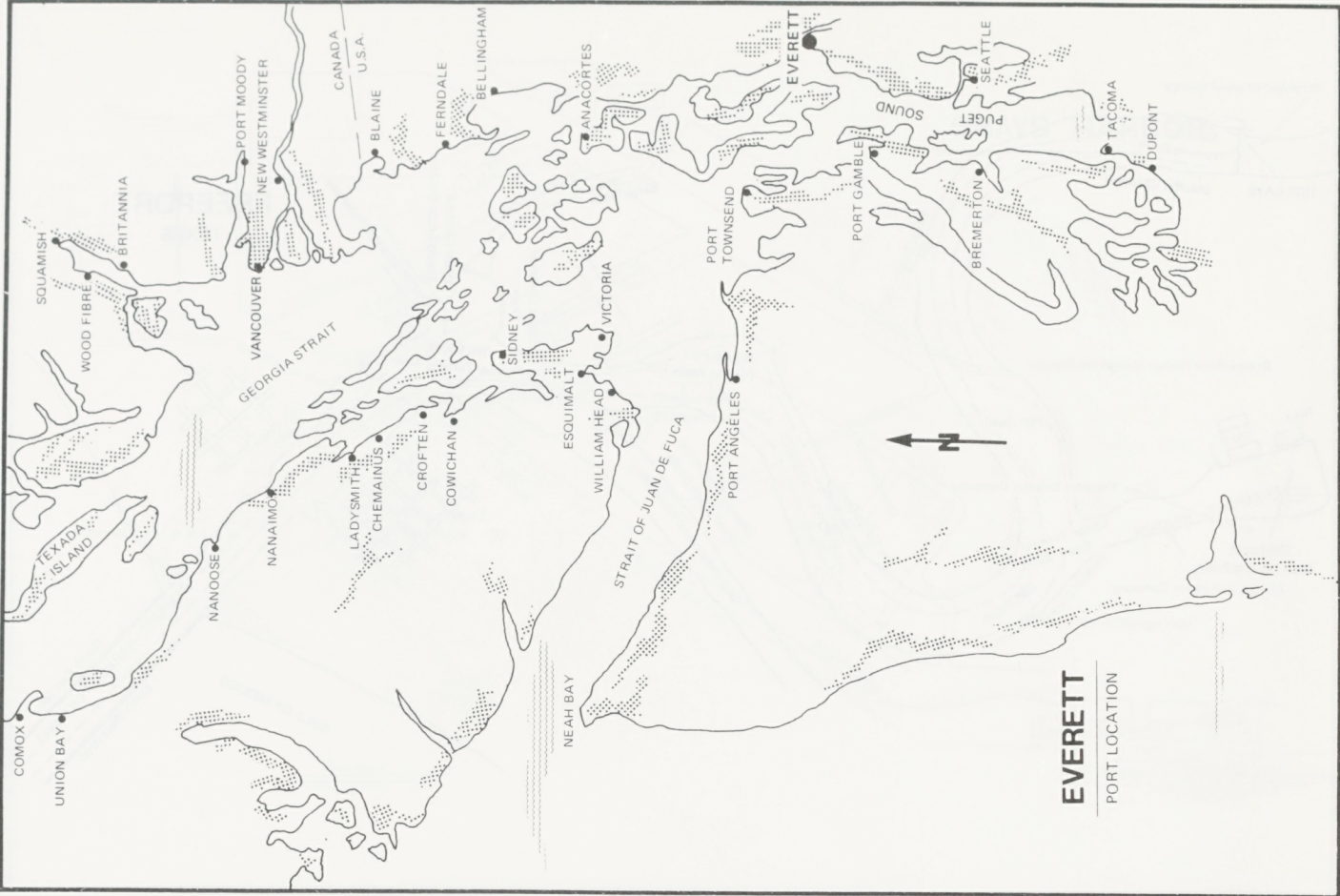
"Plan supplied by Ship's Master"

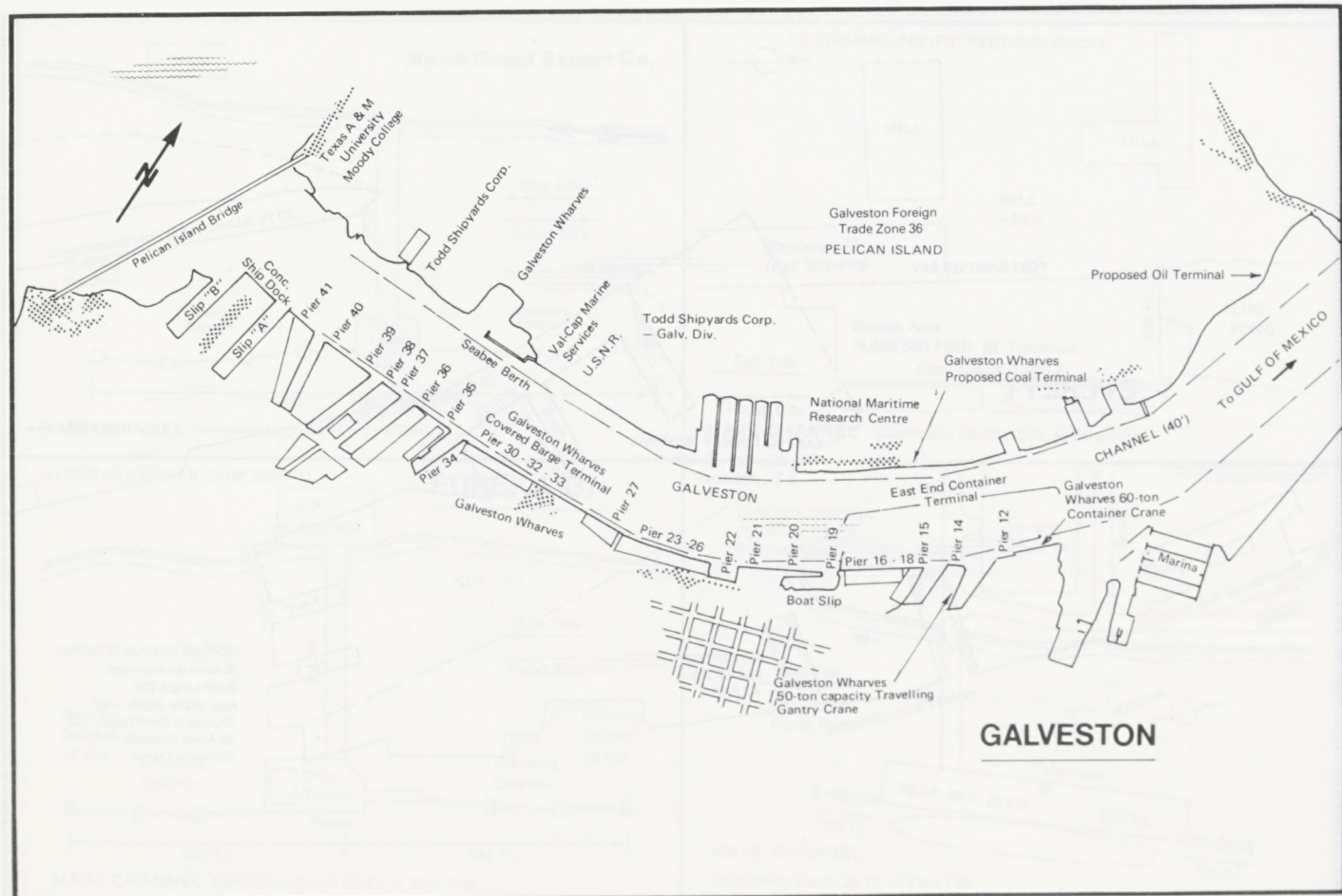
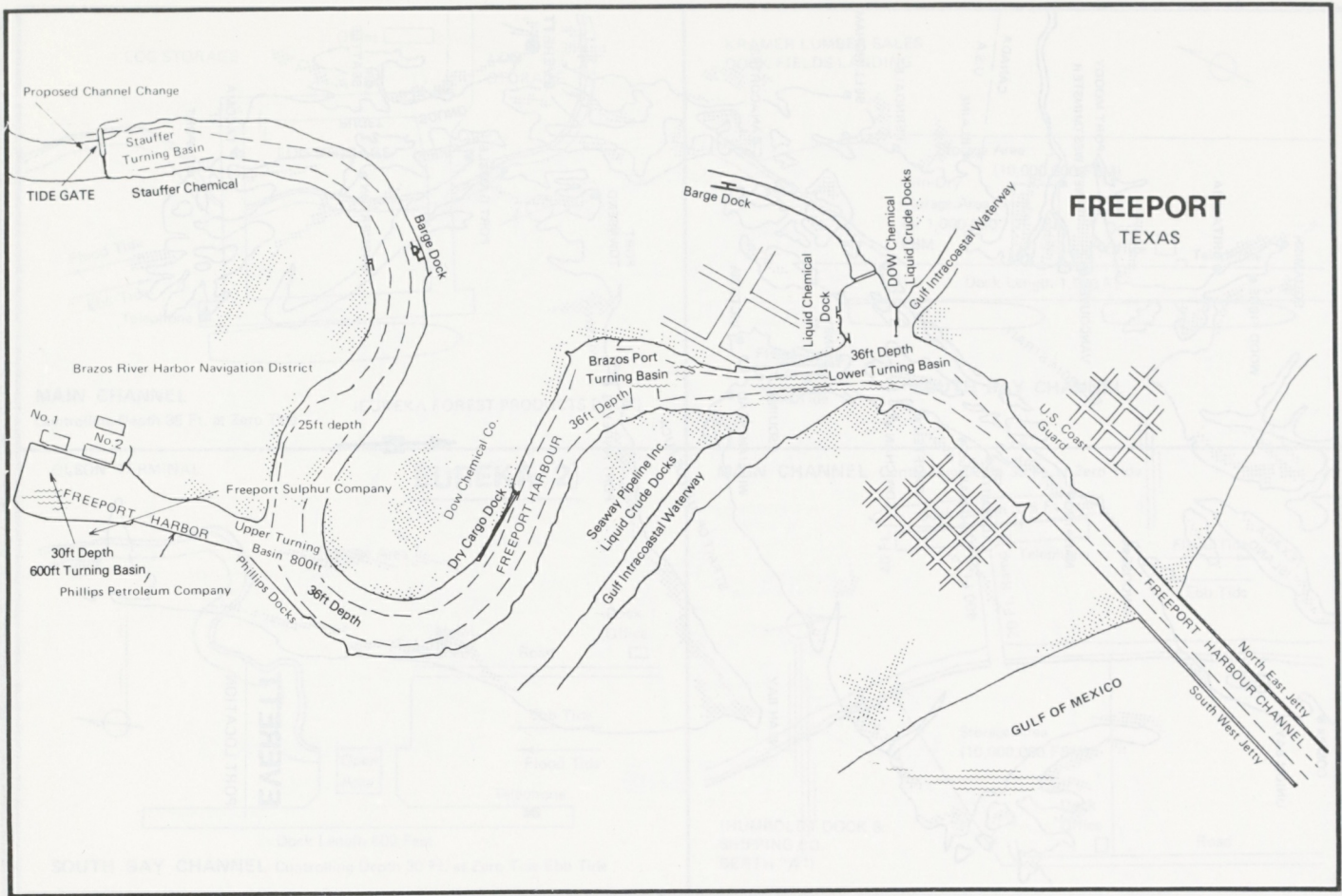


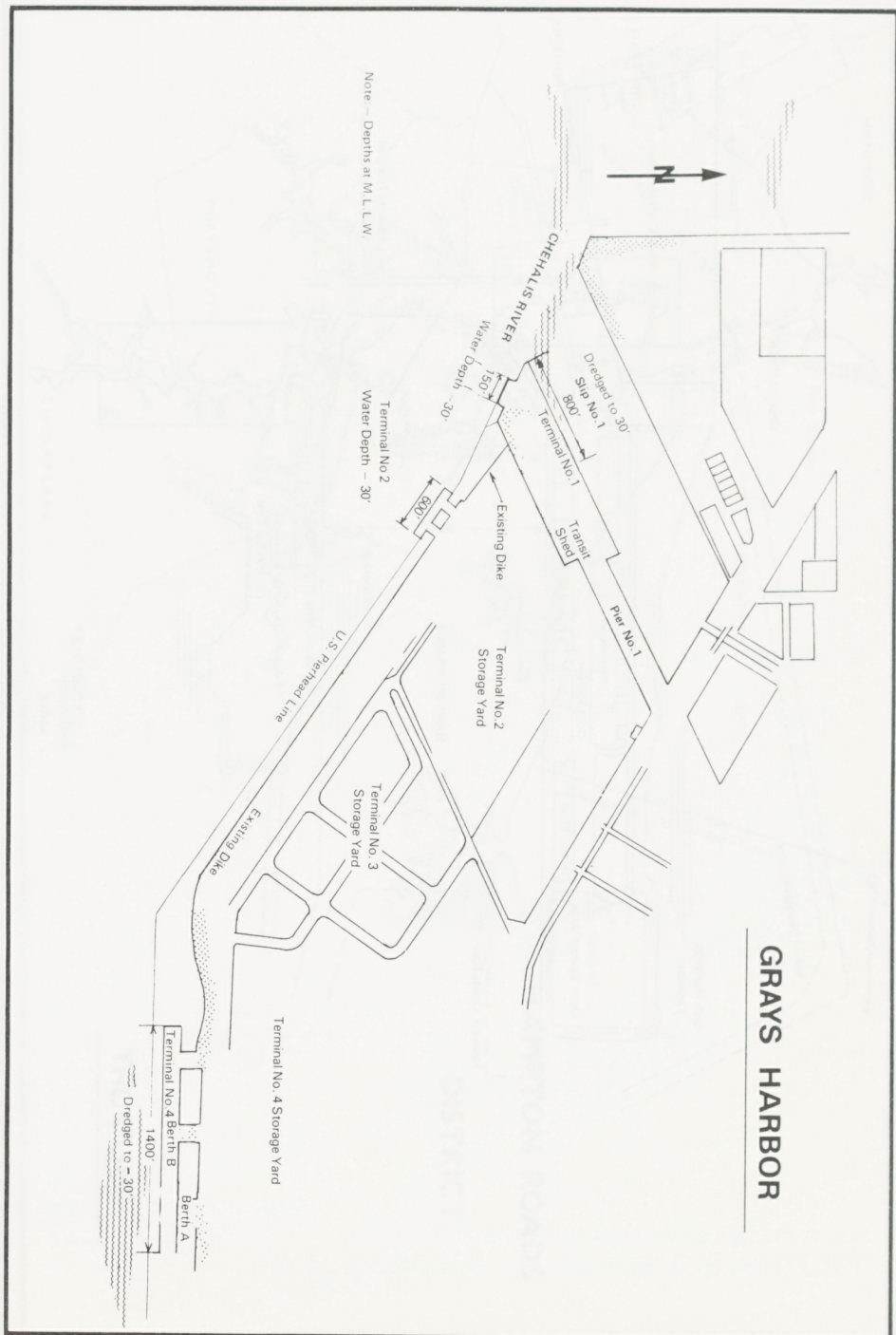
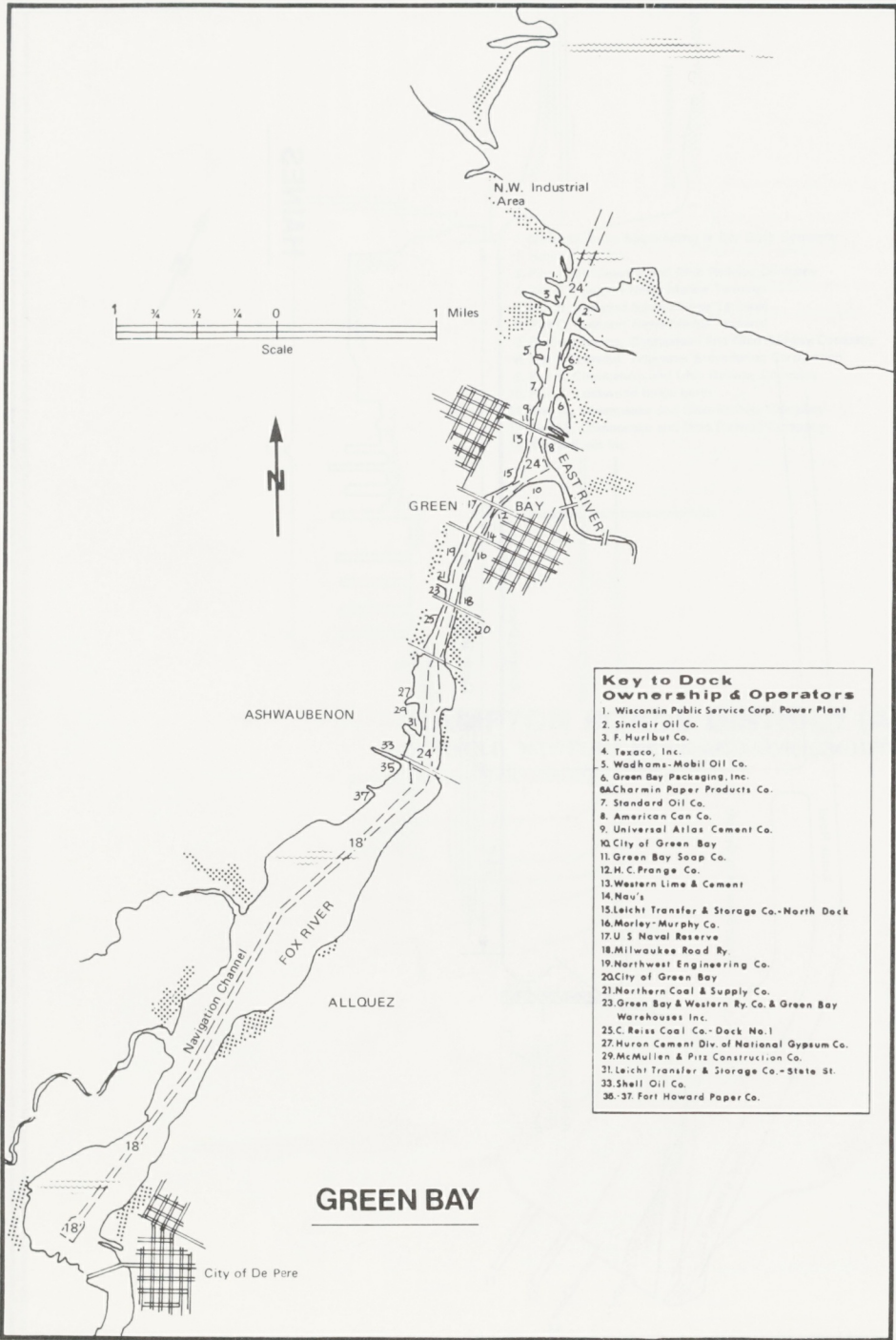
EUREKA [1]

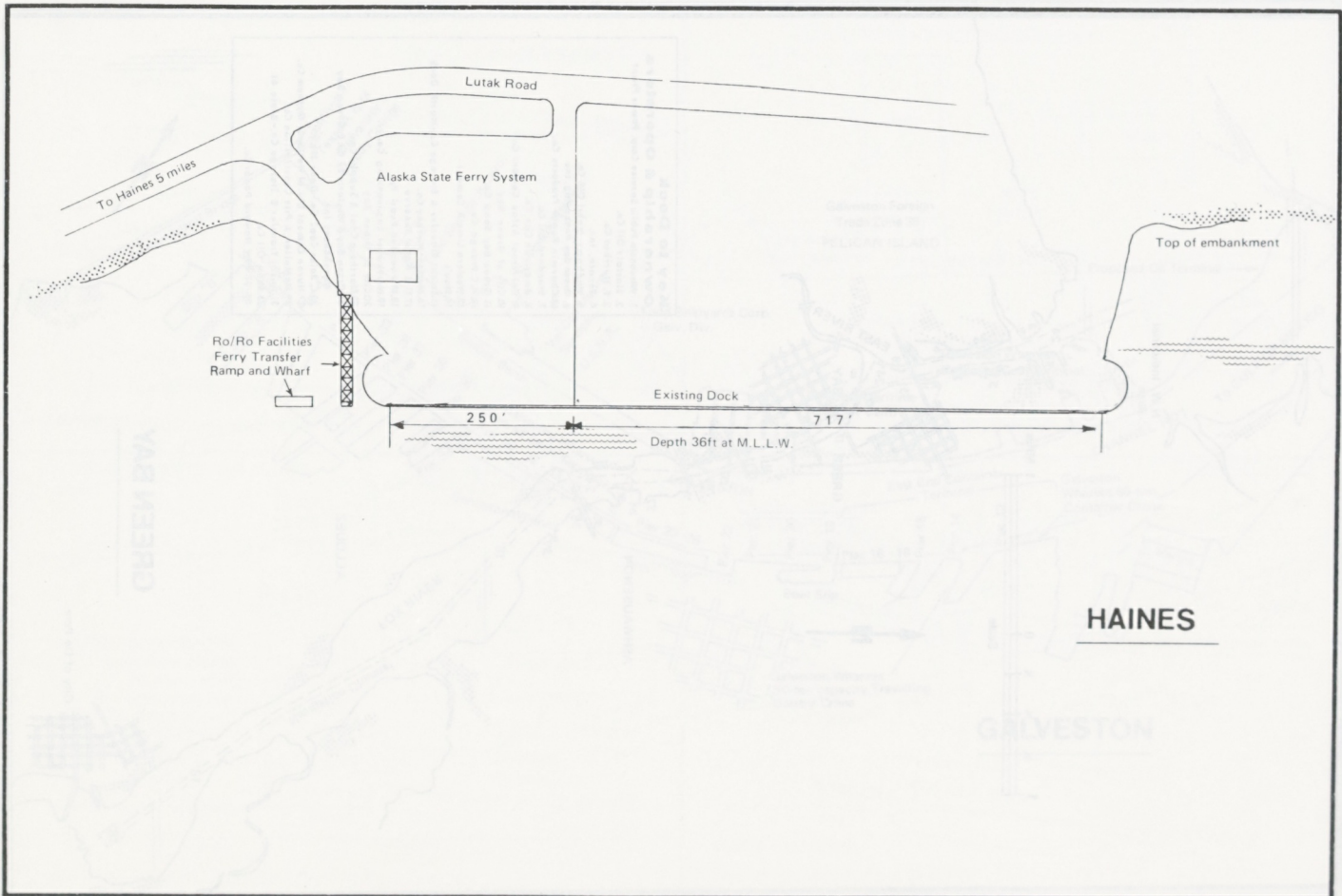
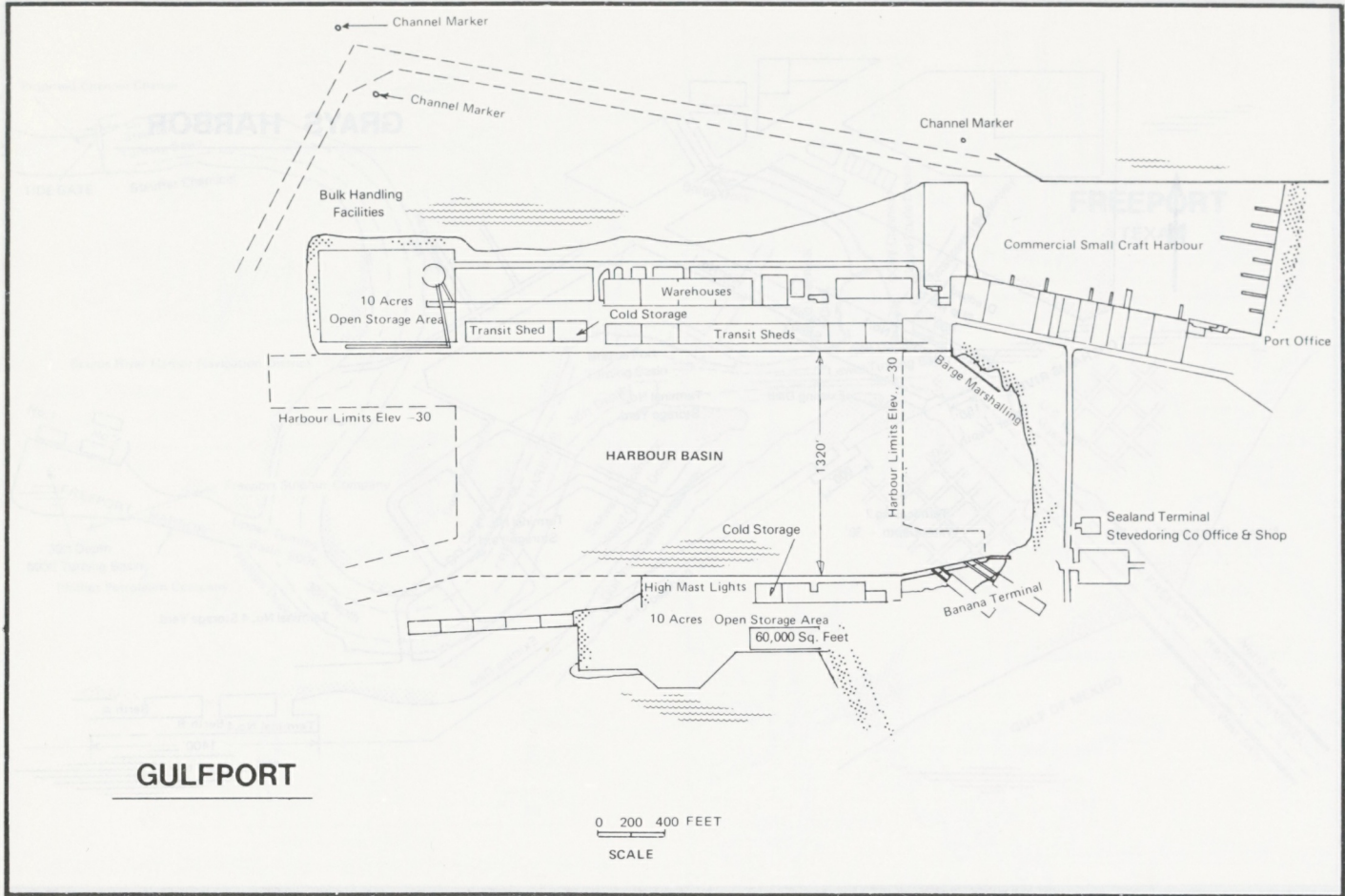


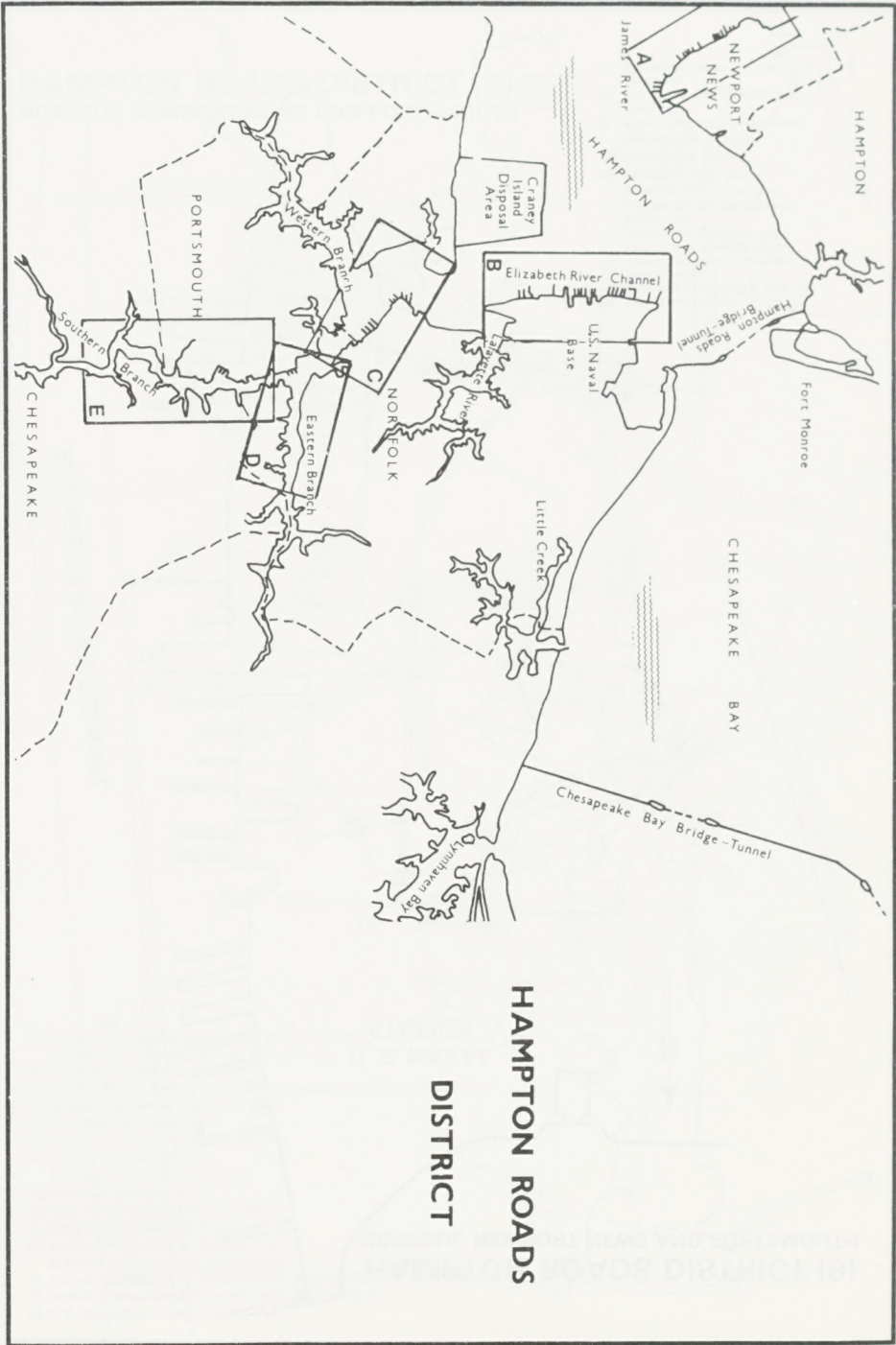
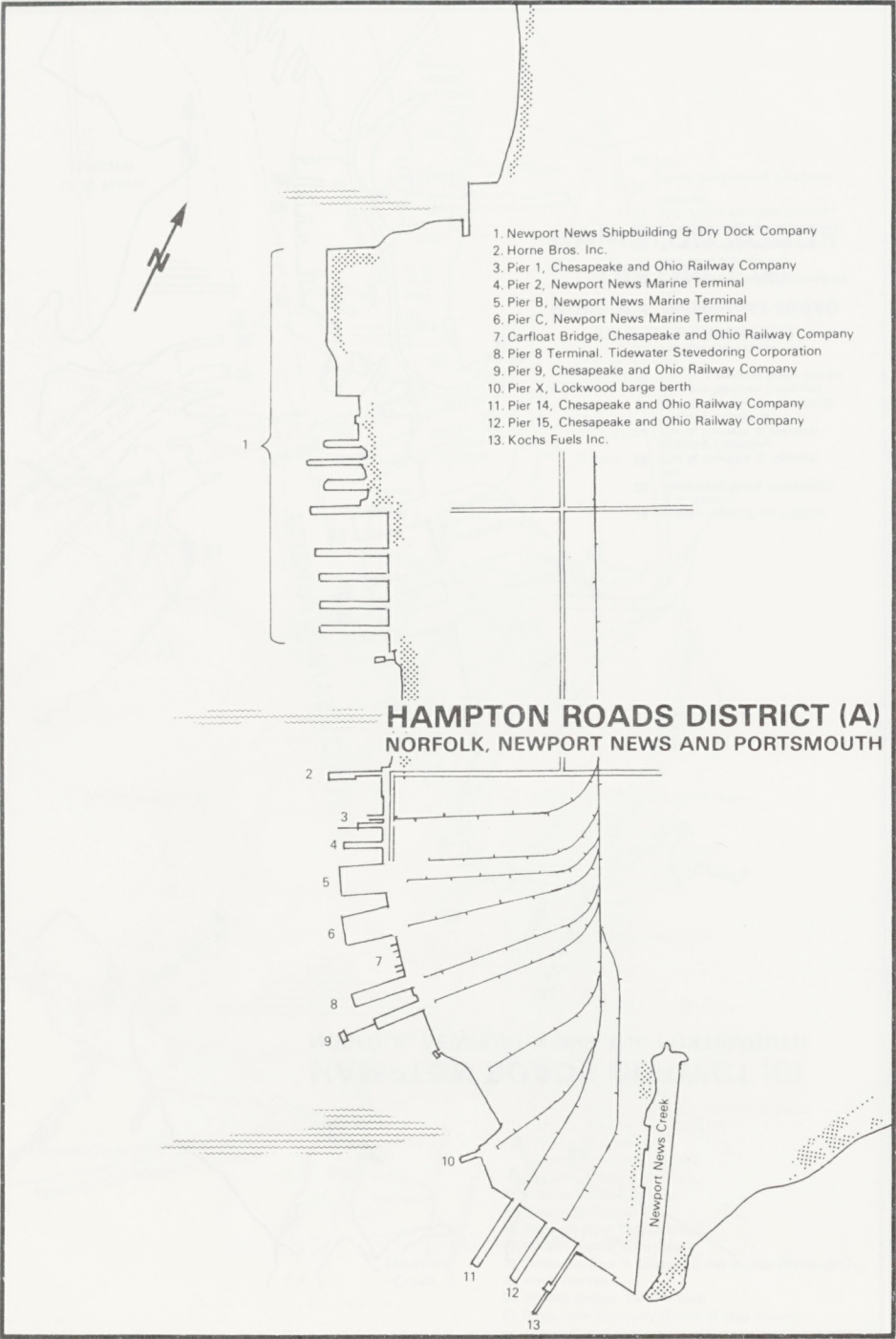




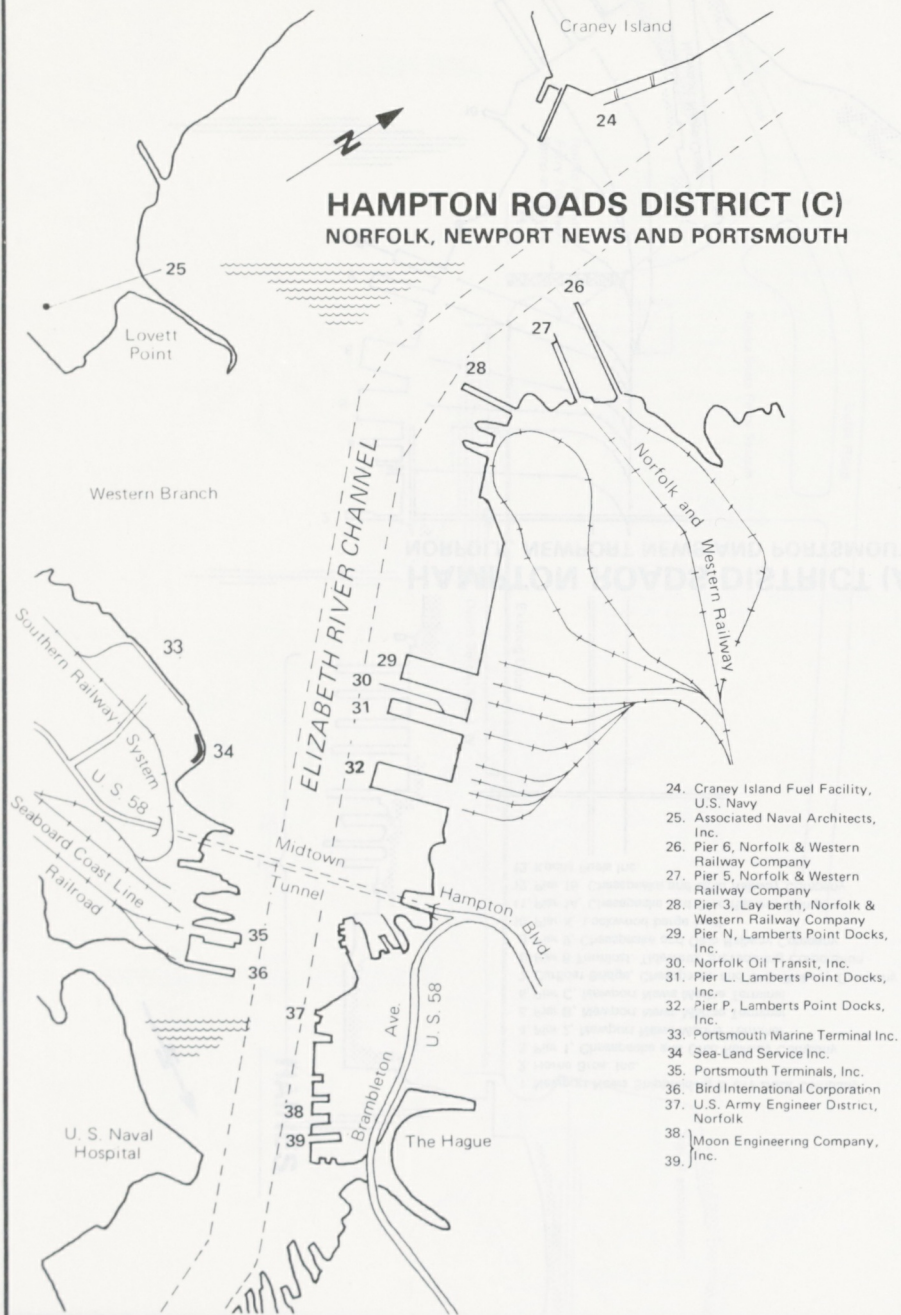




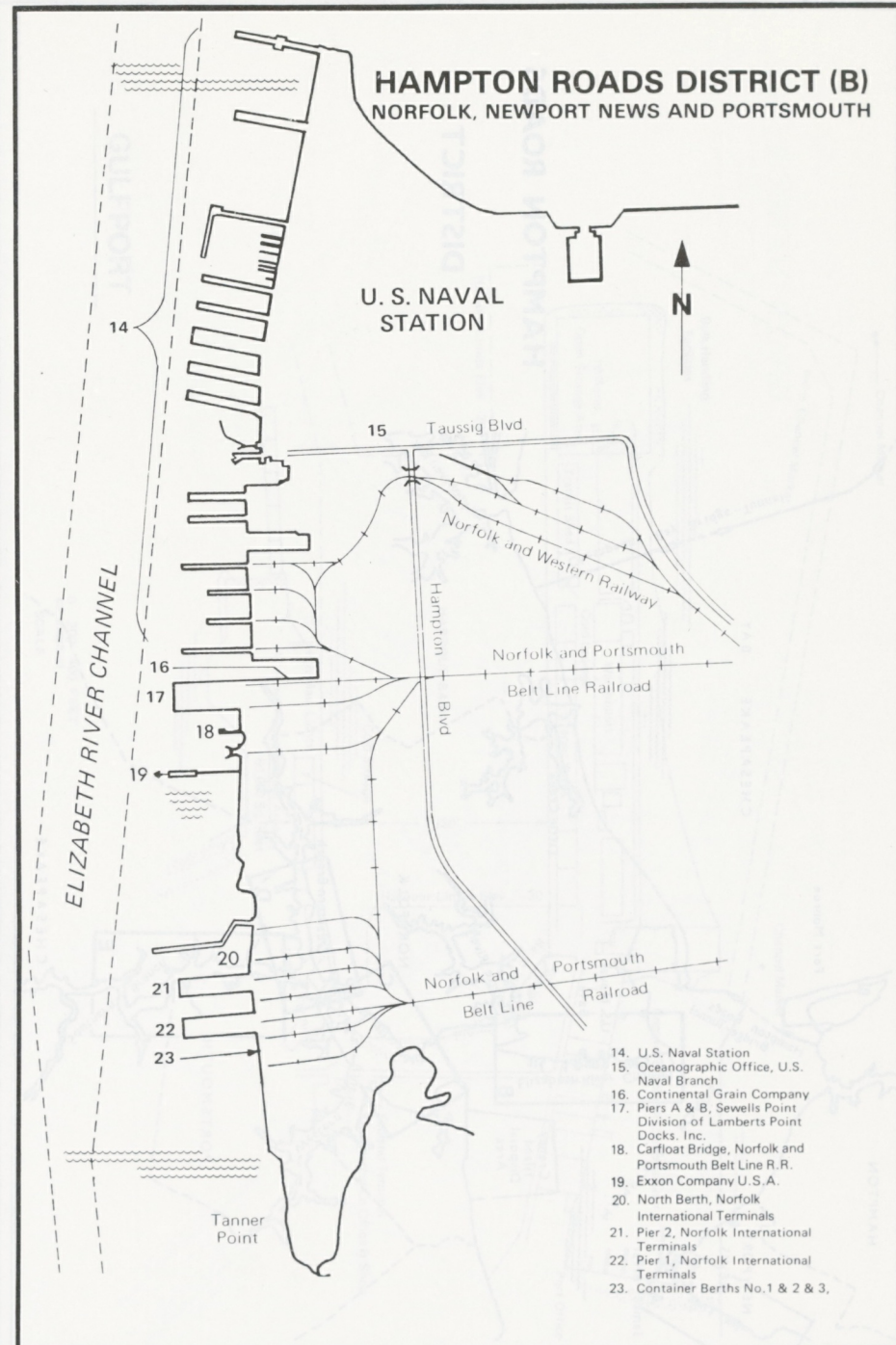


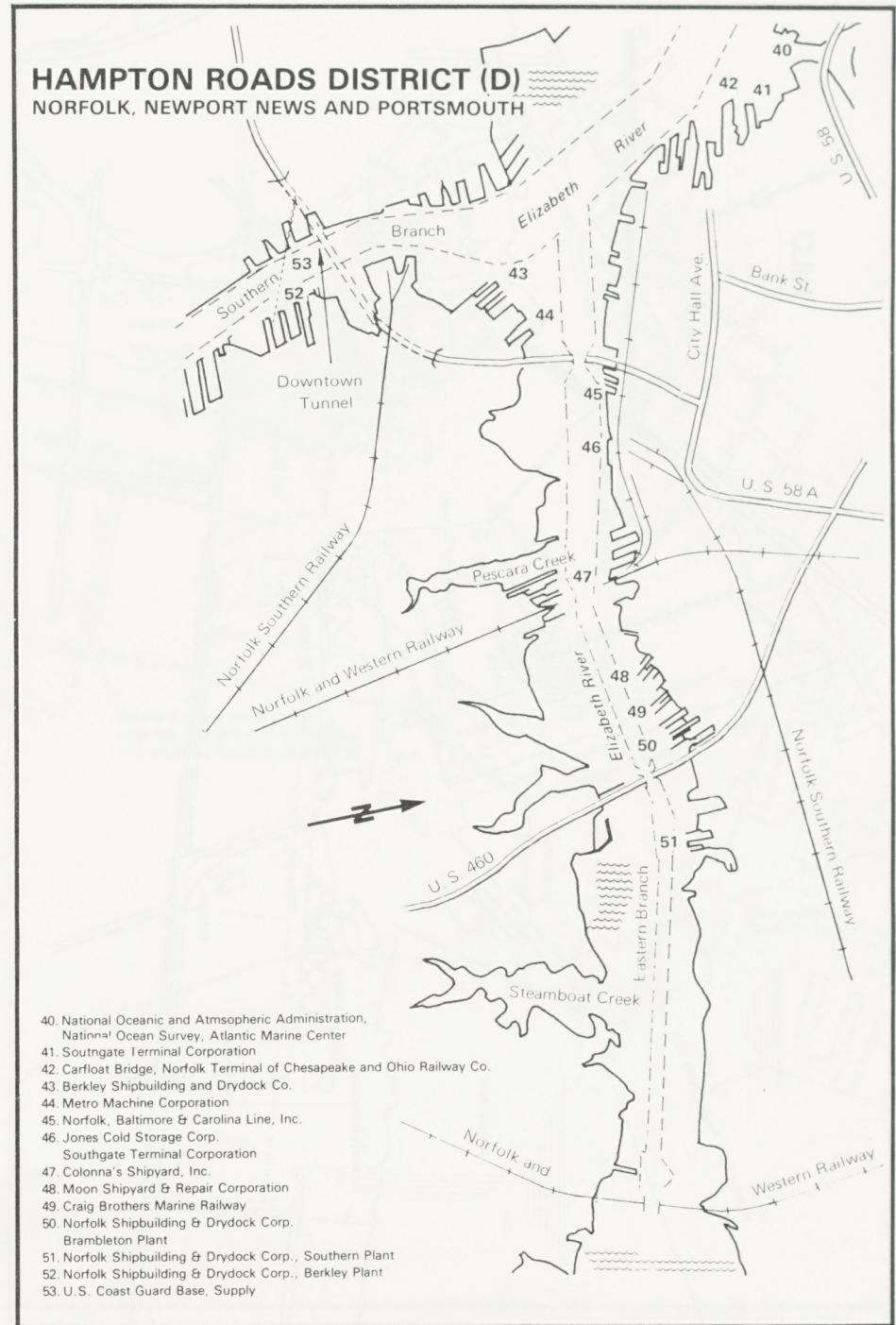
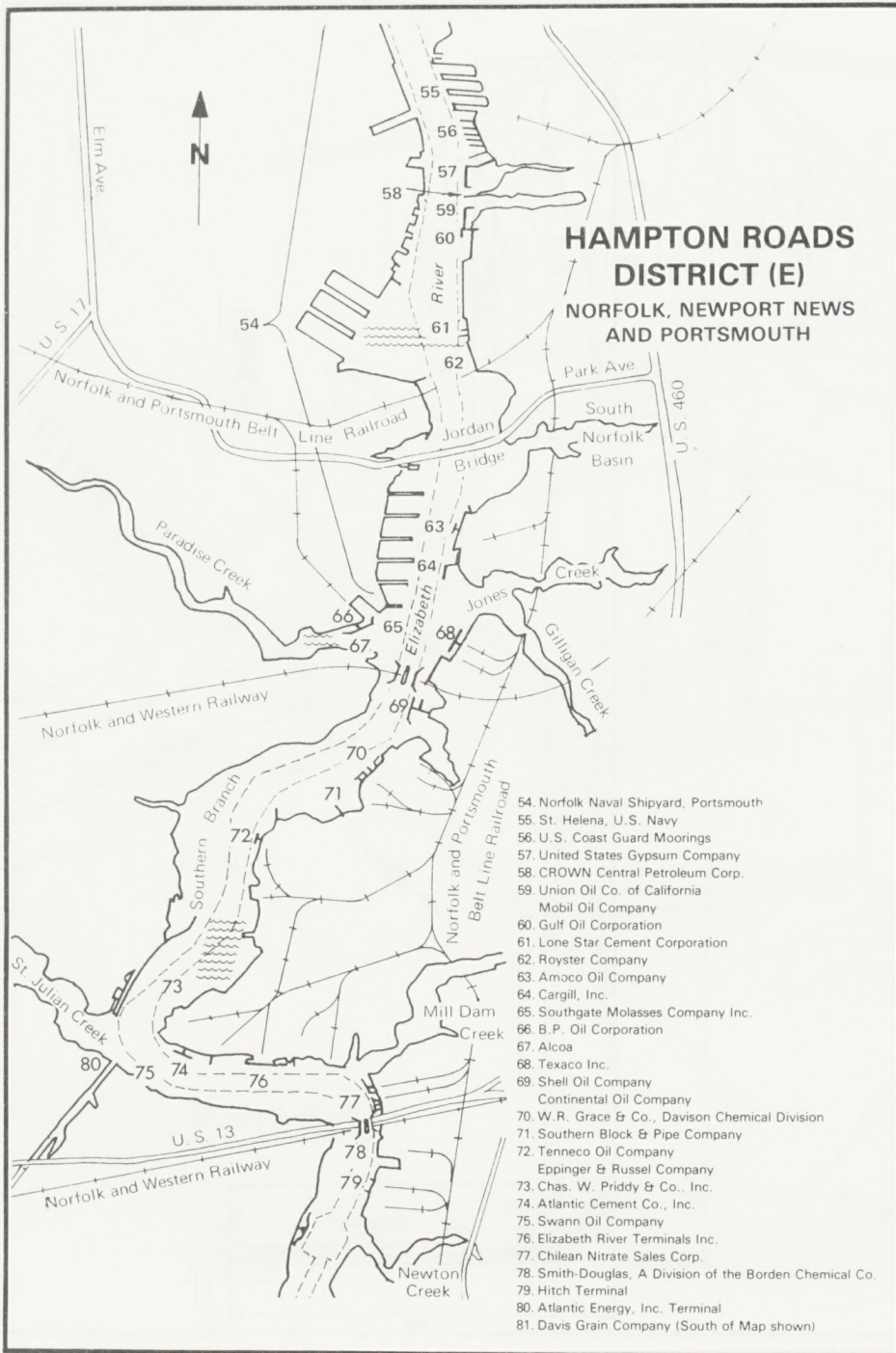


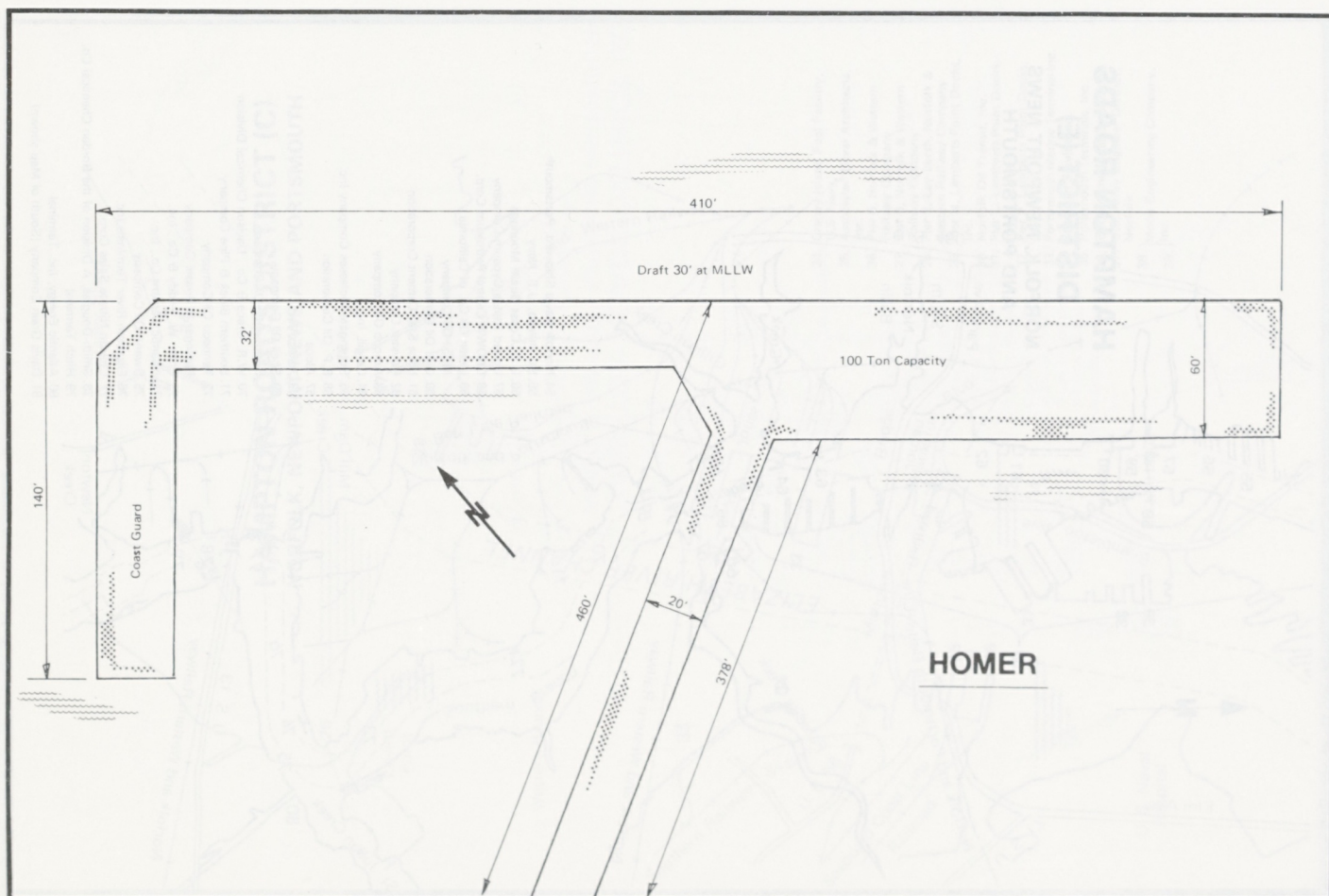
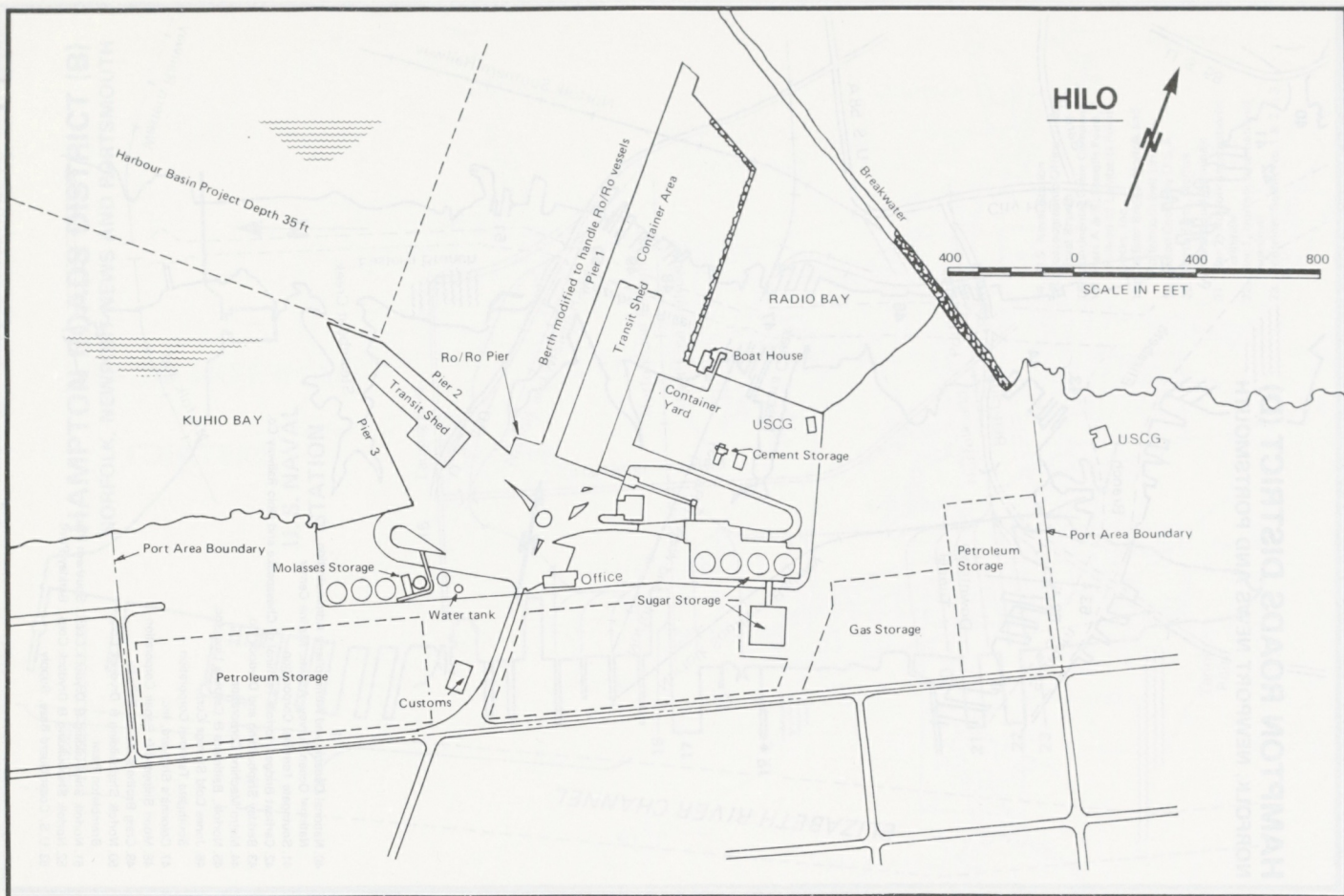
HAMPTON ROADS DISTRICT (C) NORFOLK, NEWPORT NEWS AND PORTSMOUTH

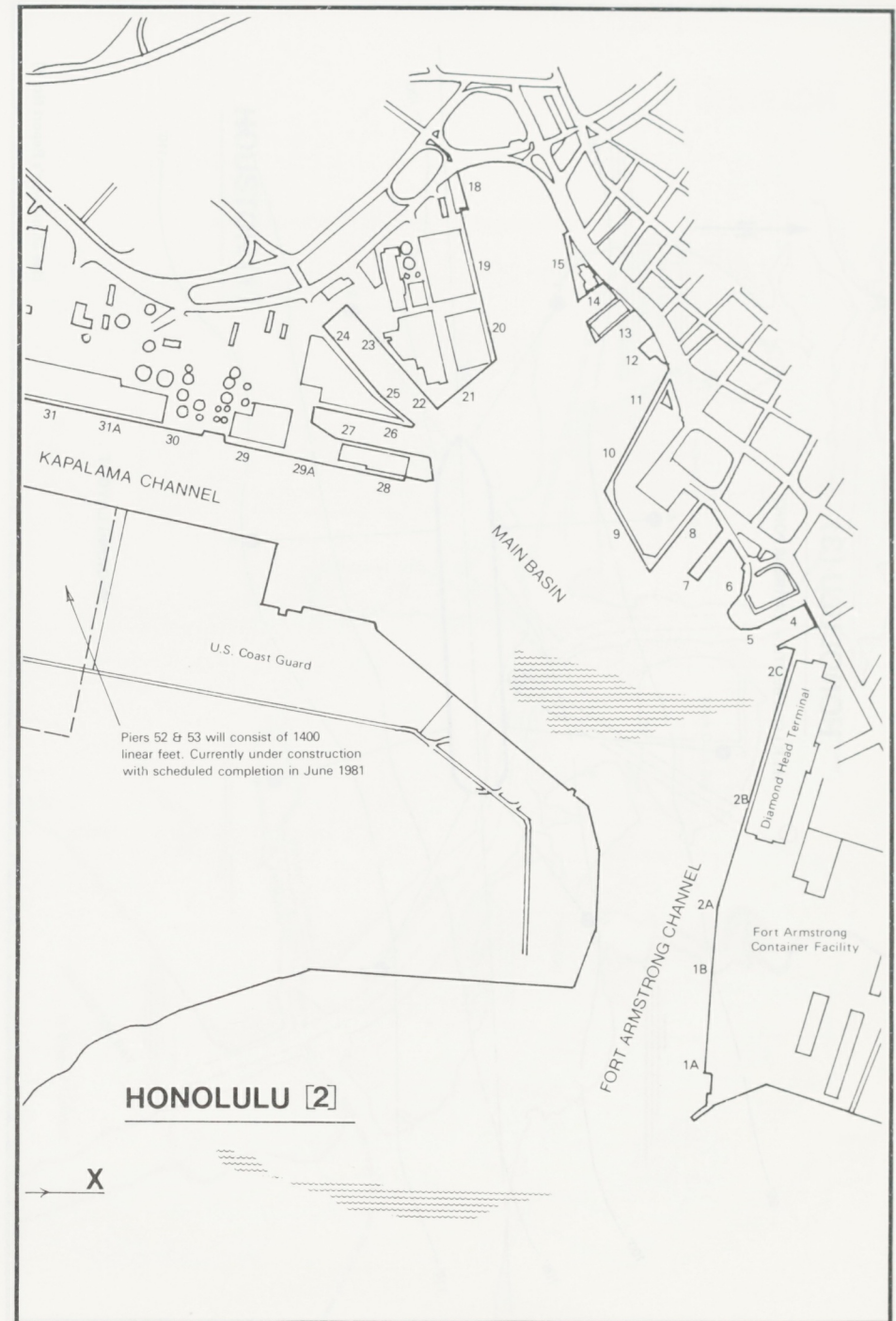
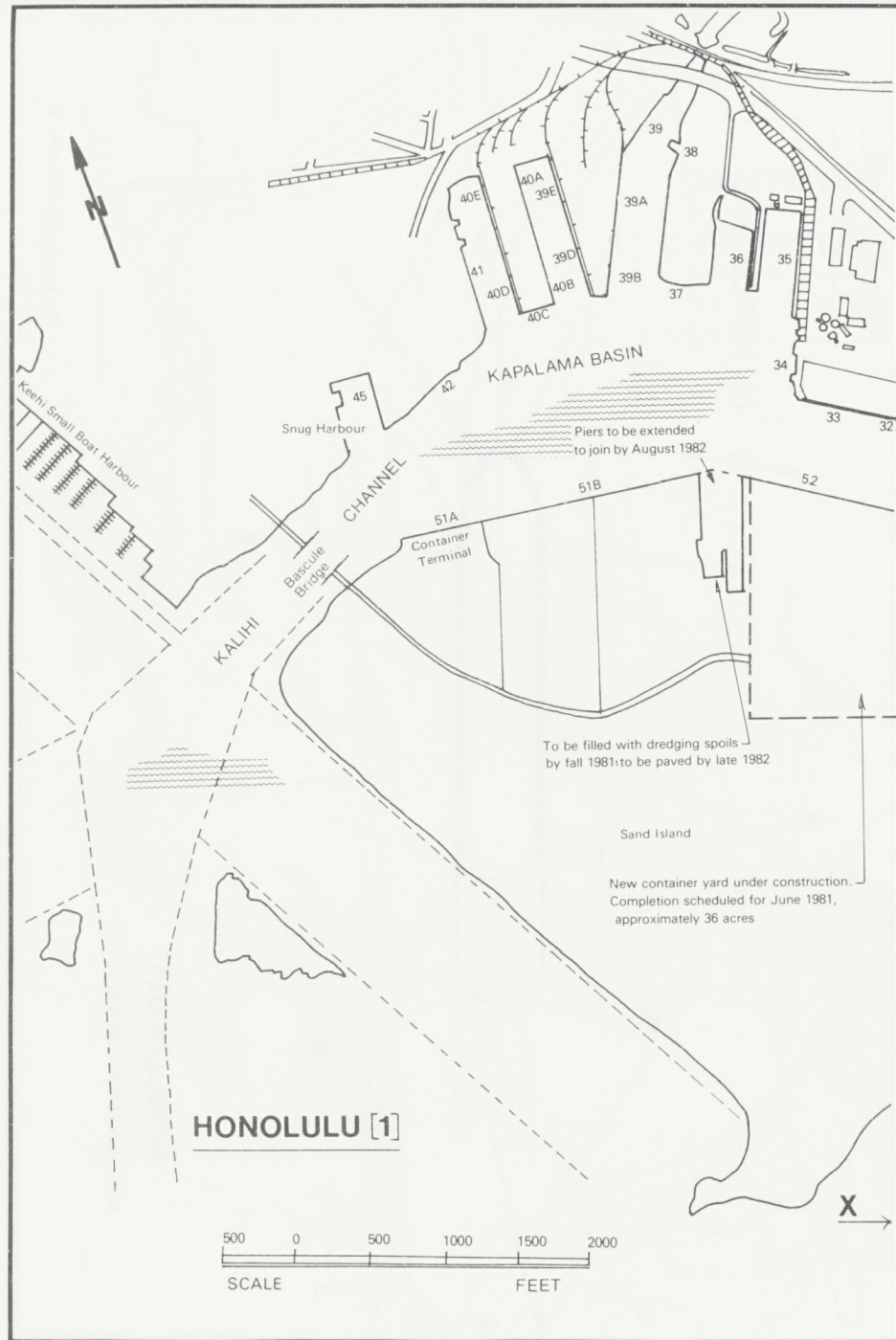


HAMPTON ROADS DISTRICT (B) NORFOLK, NEWPORT NEWS AND PORTSMOUTH



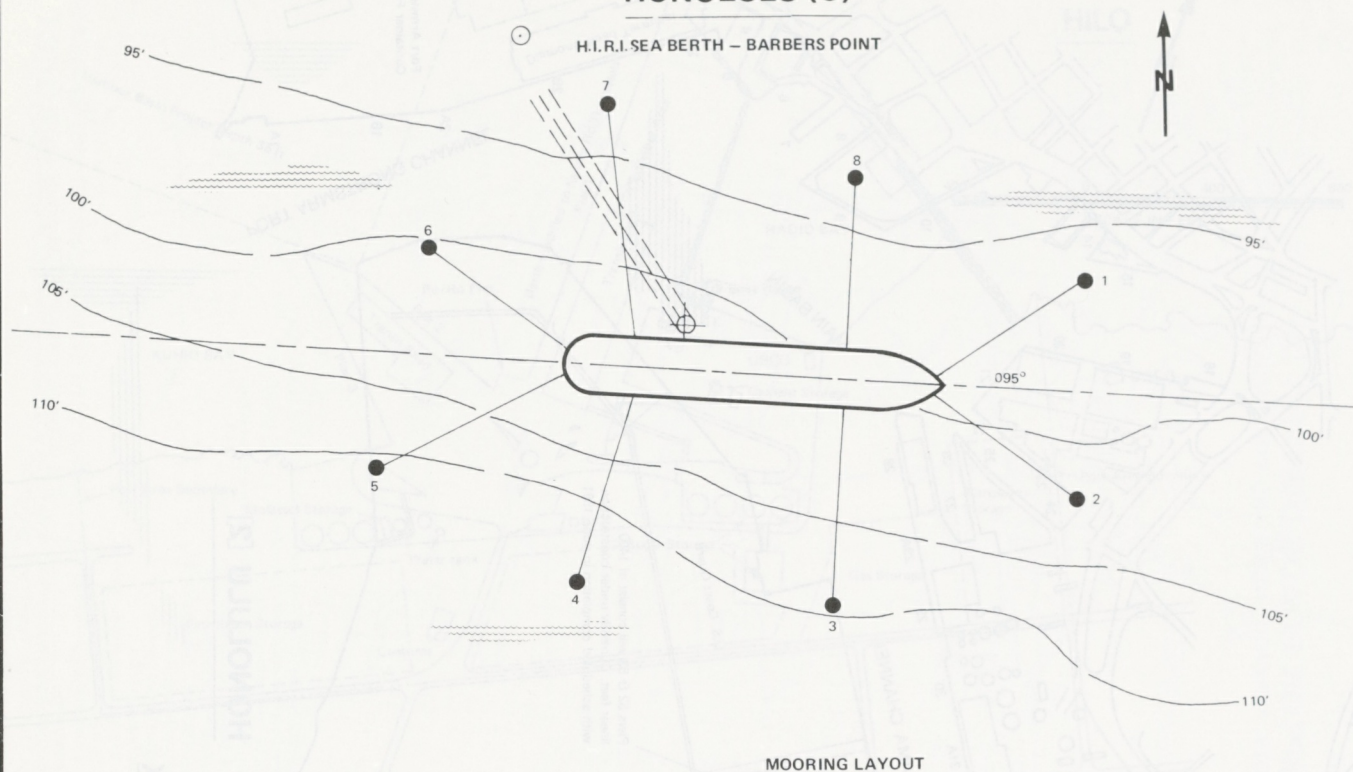




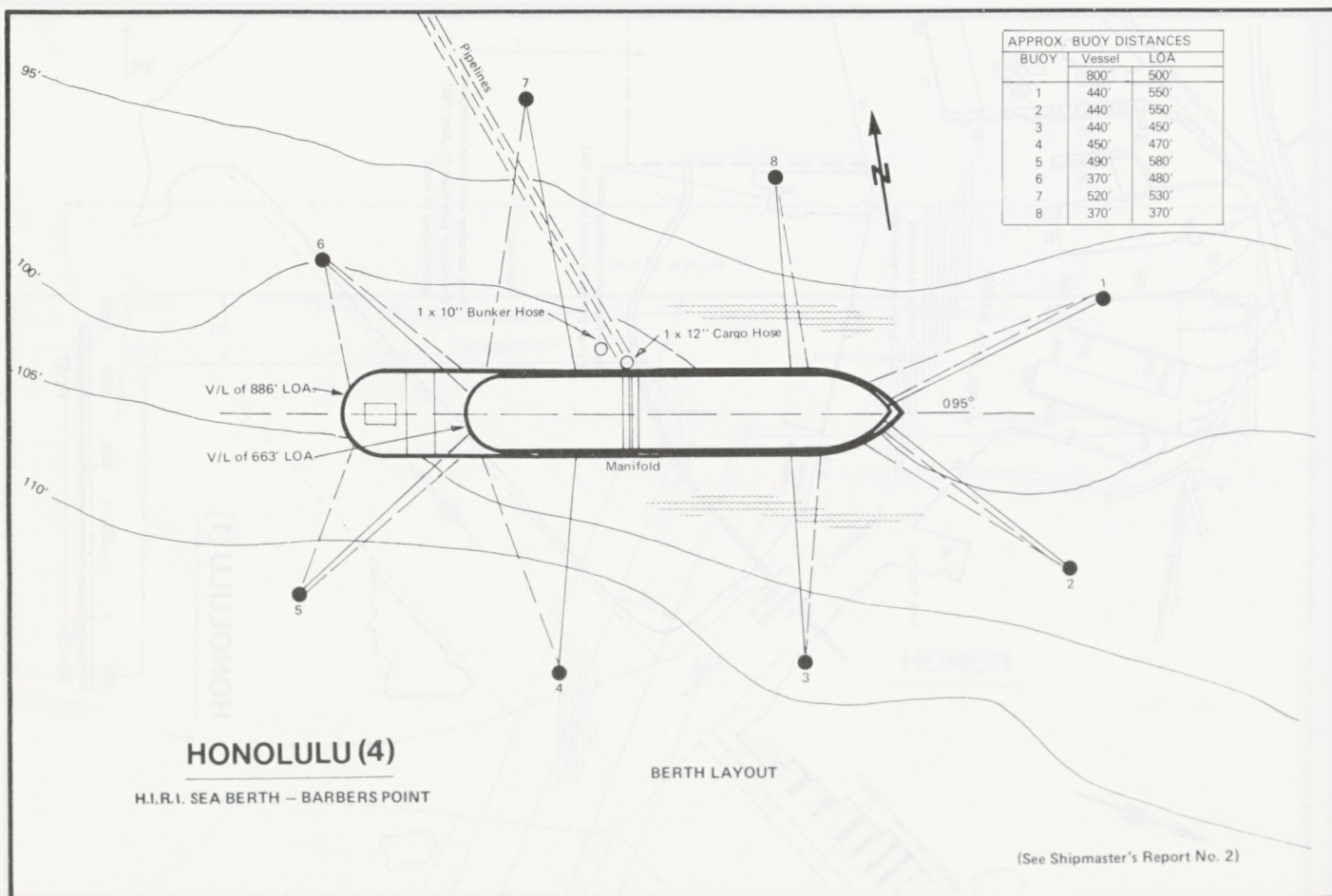


HONOLULU (3)

H.I.R.I. SEA BERTH – BARBERS POINT



(See Shipmaster's Report No. 1)

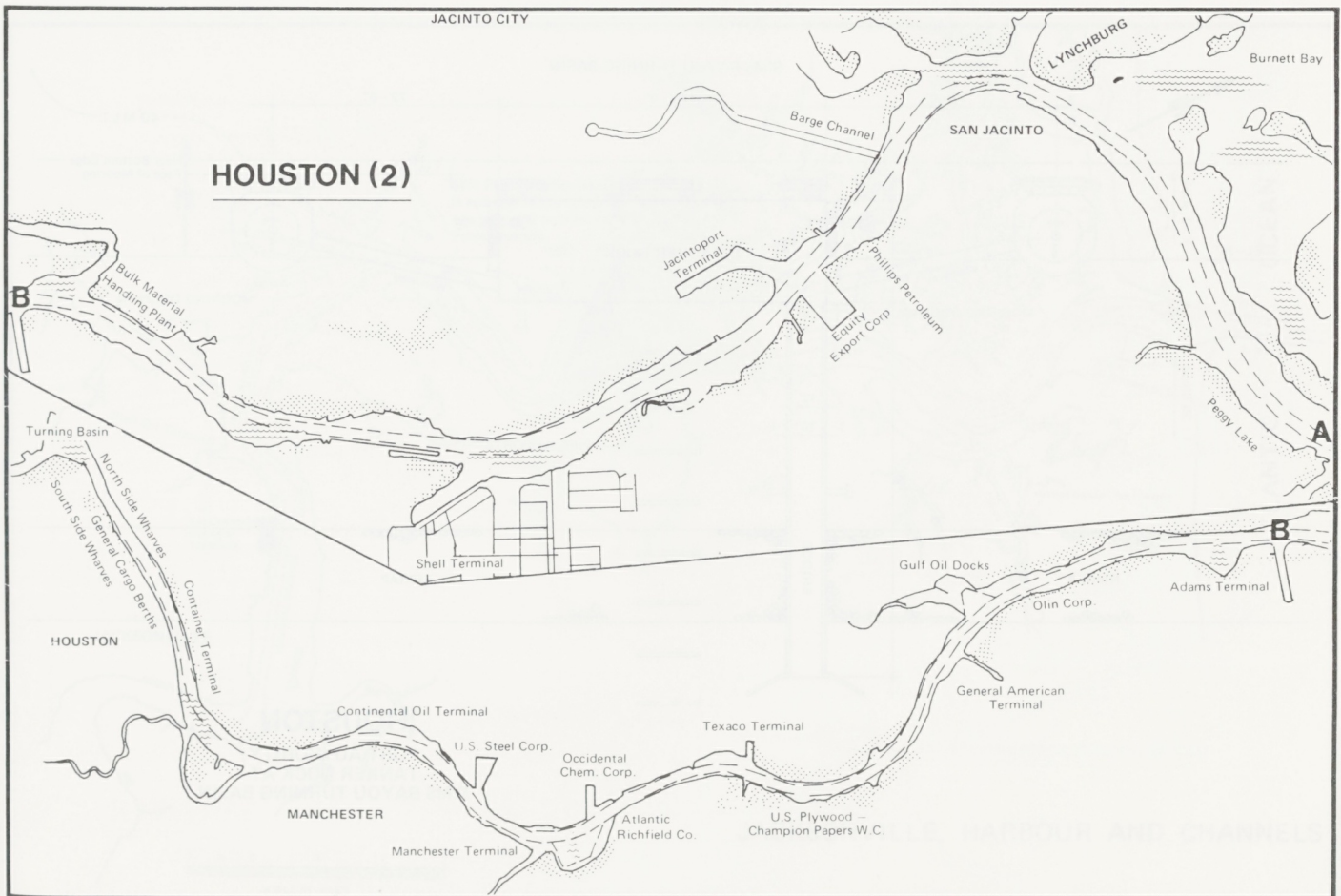
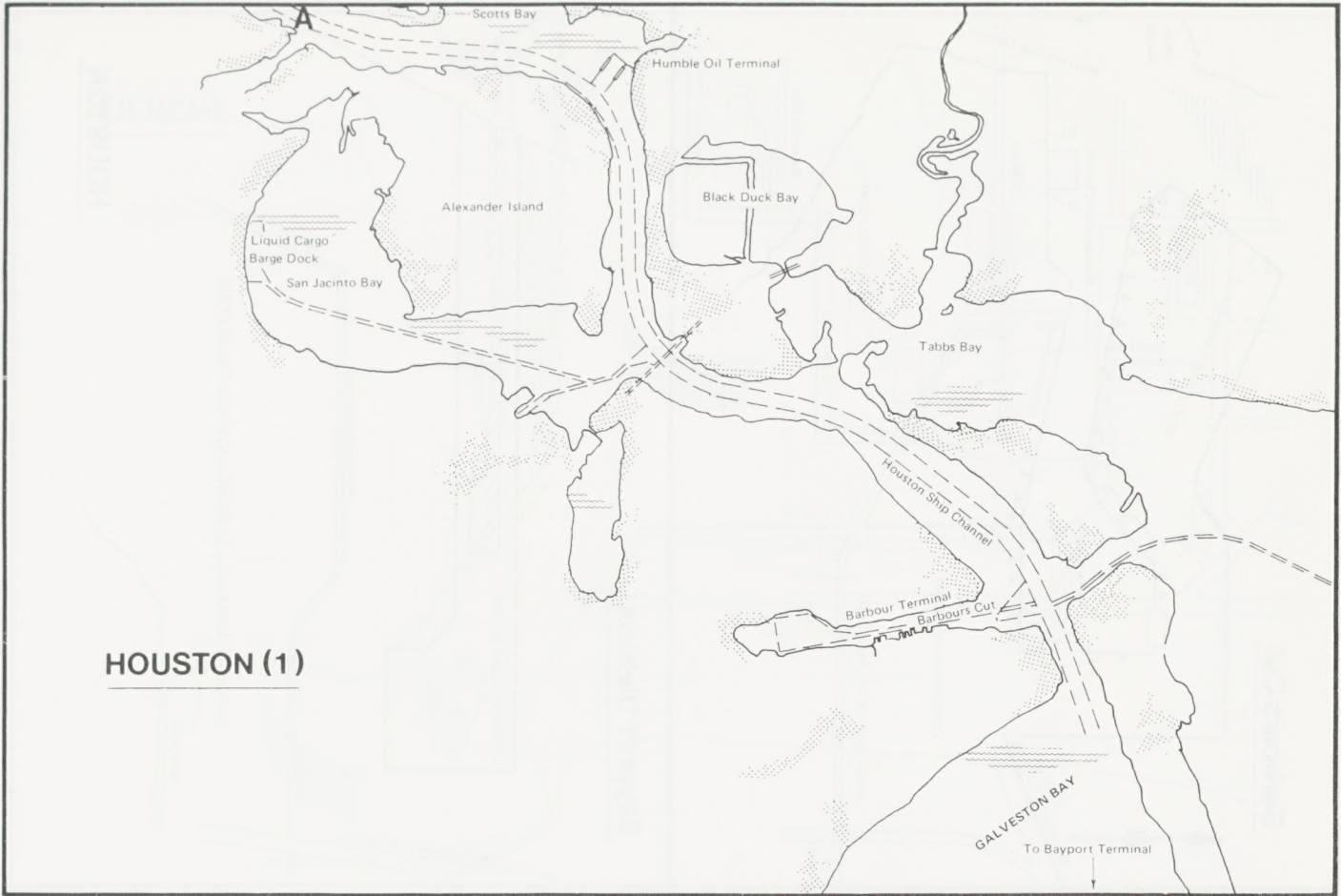


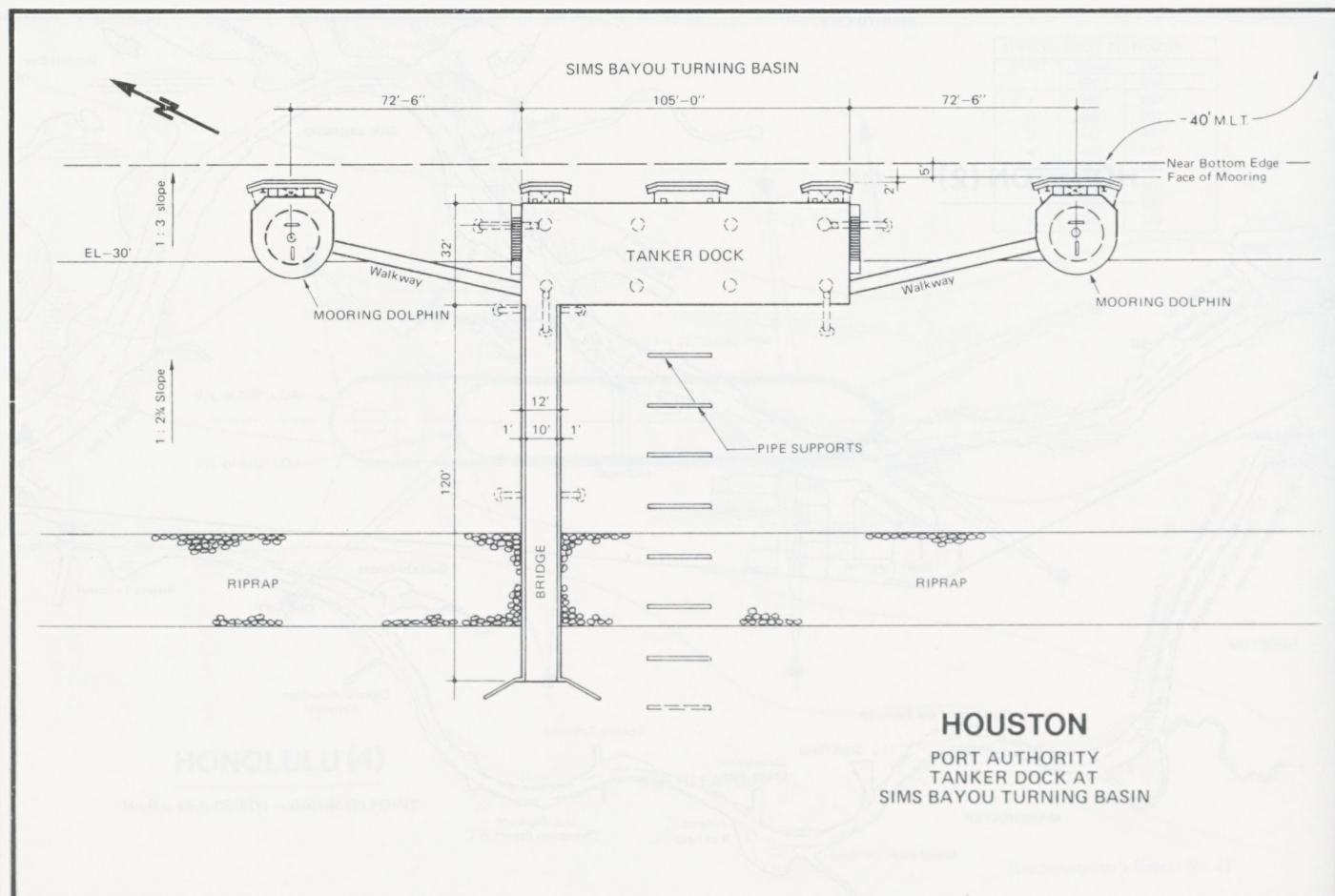
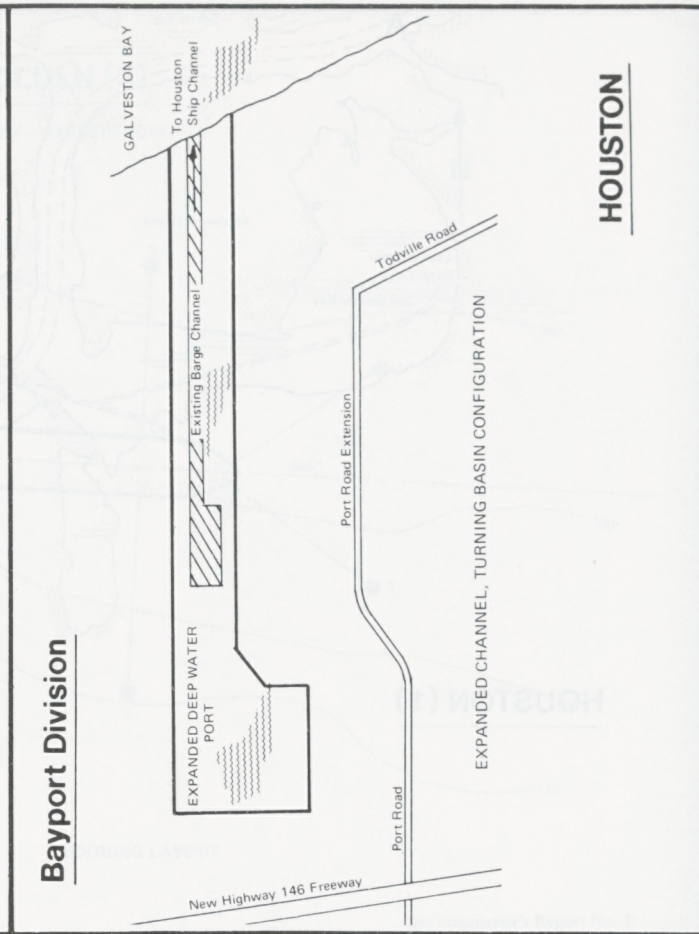
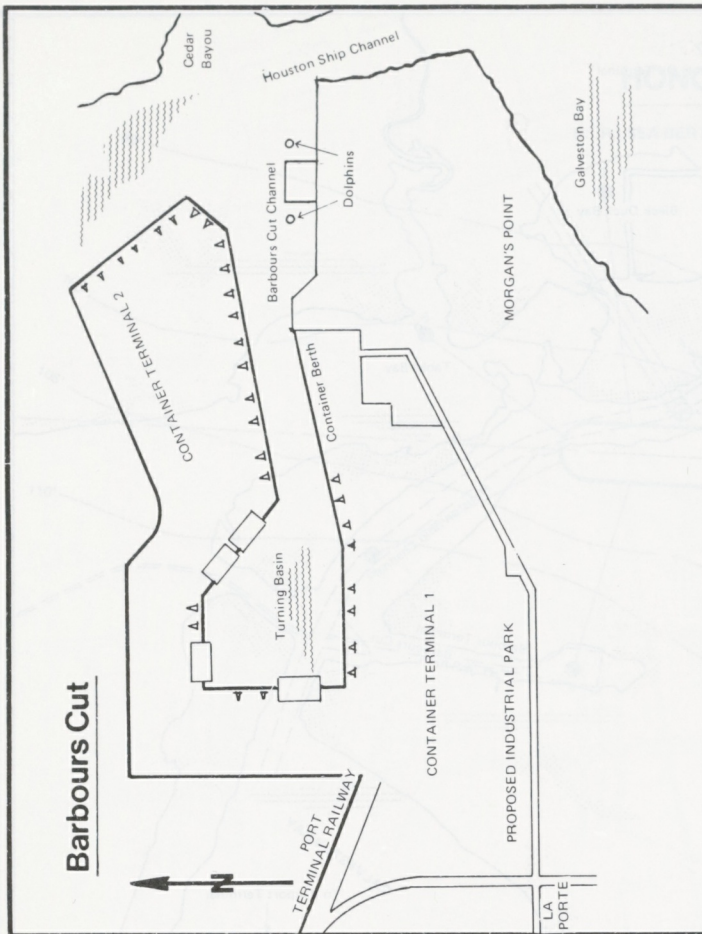
HONOLULU (4)

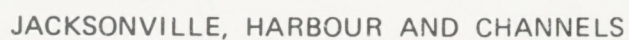
H.I.R.I. SEA BERTH – BARBERS POINT

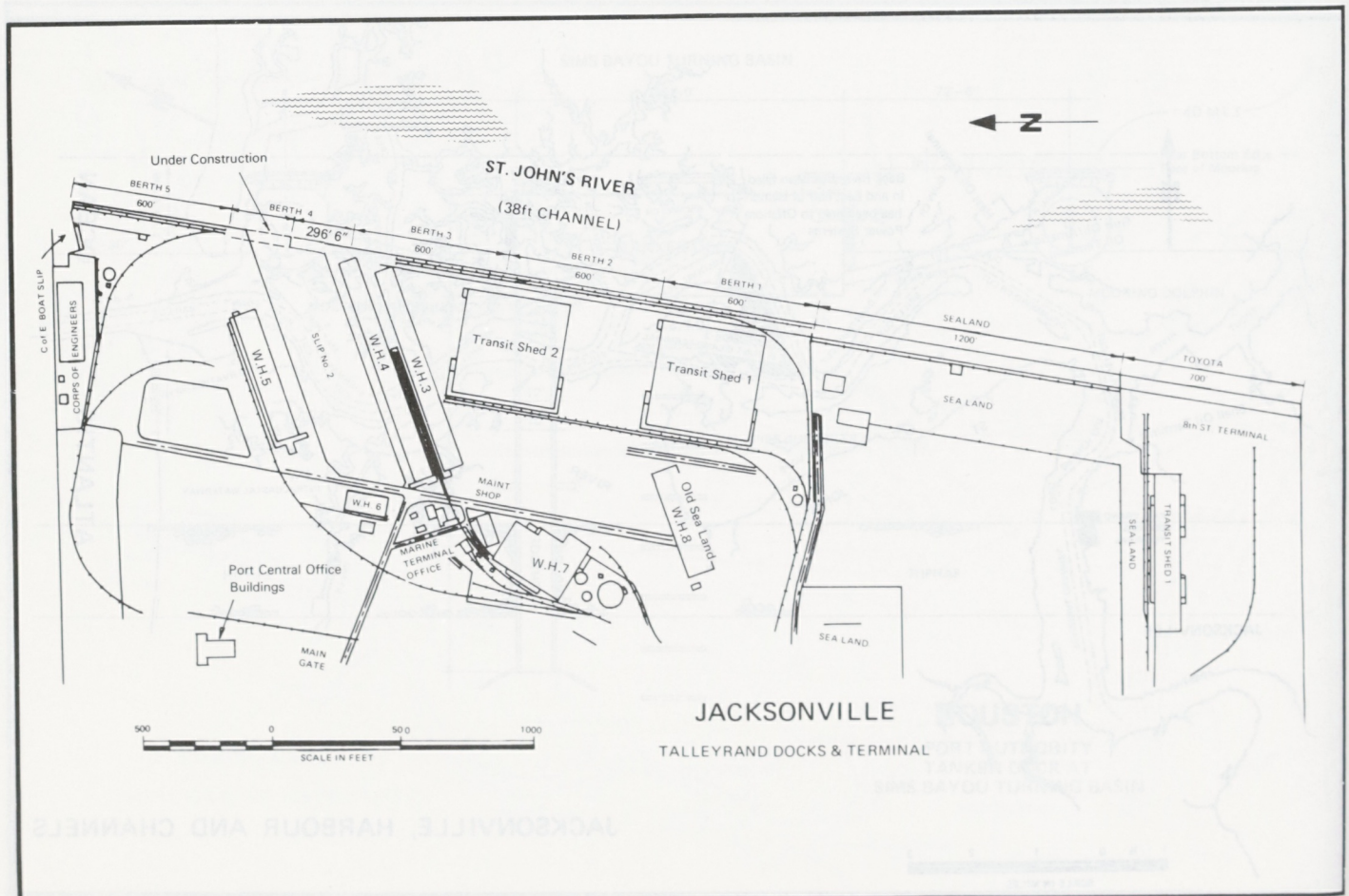
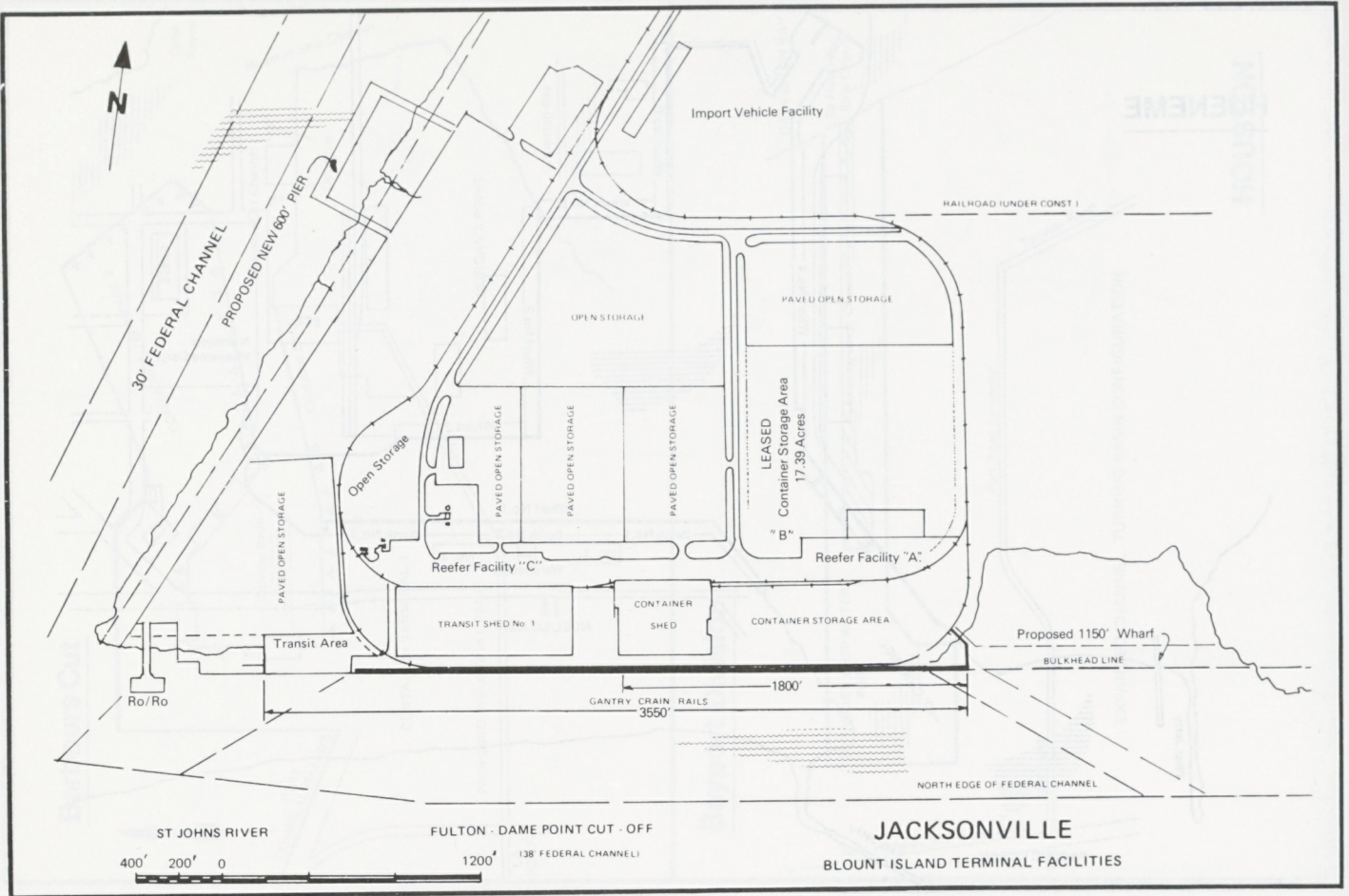
BERTH LAYOUT

(See Shipmaster's Report No. 2)

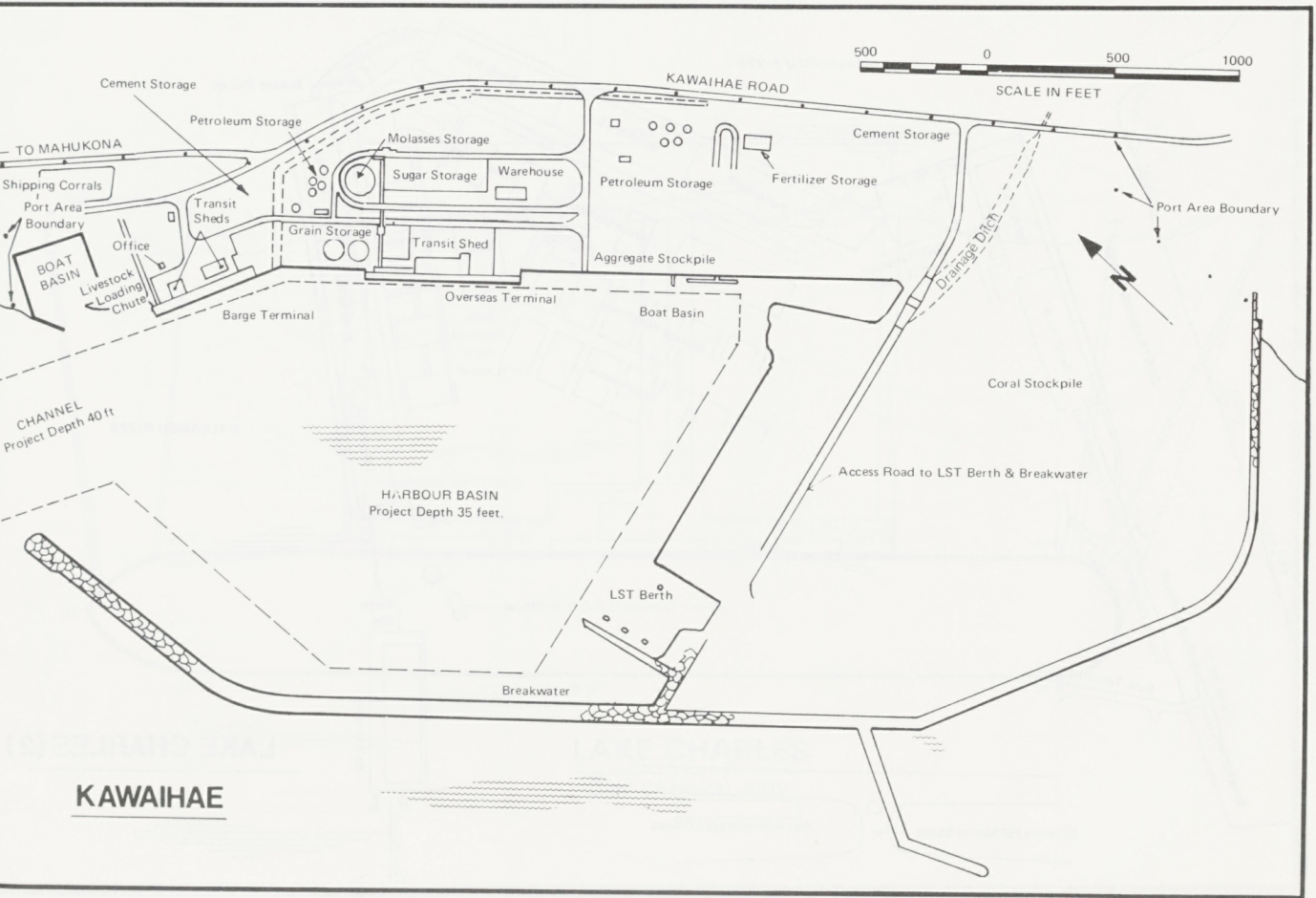
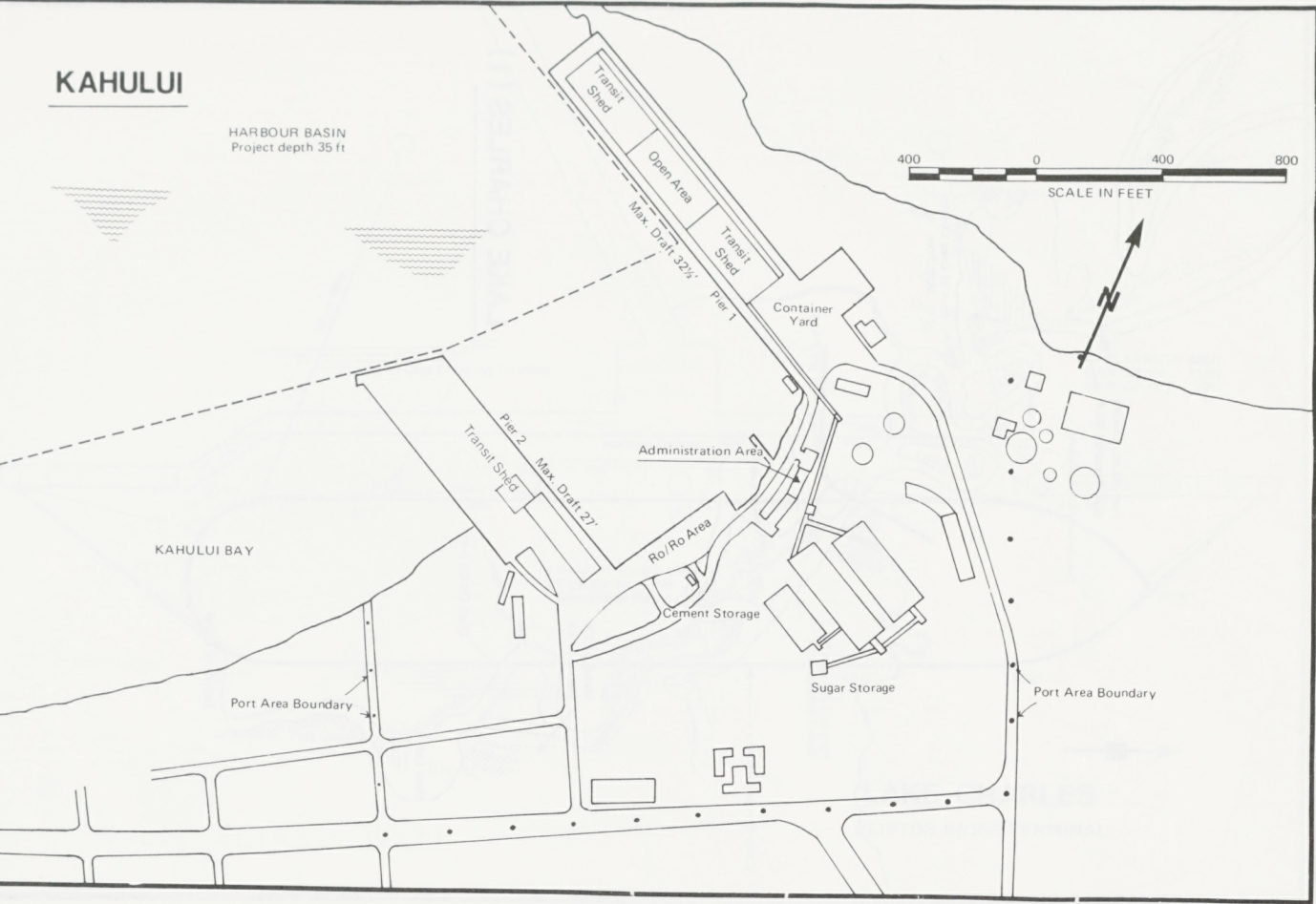




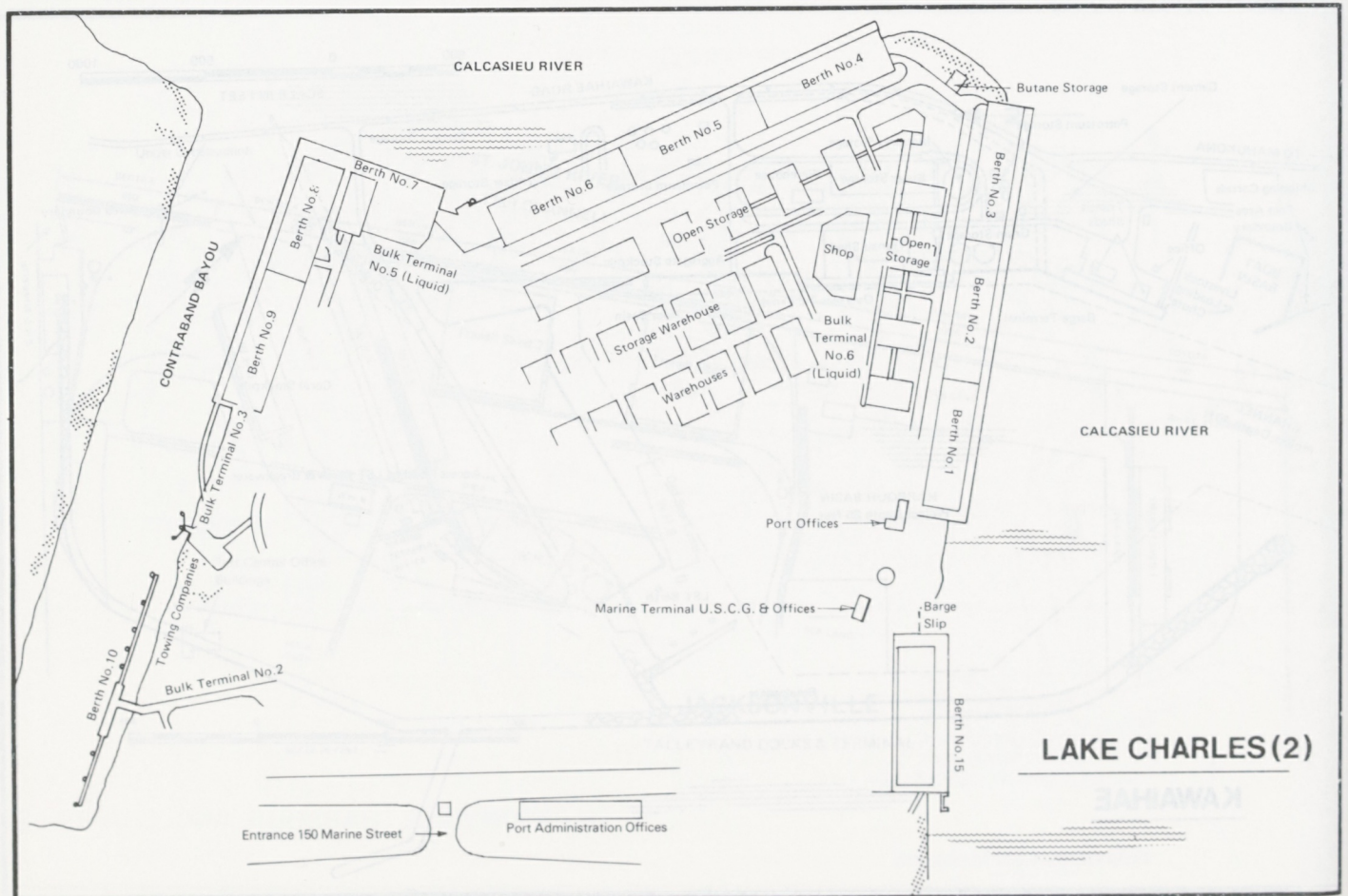
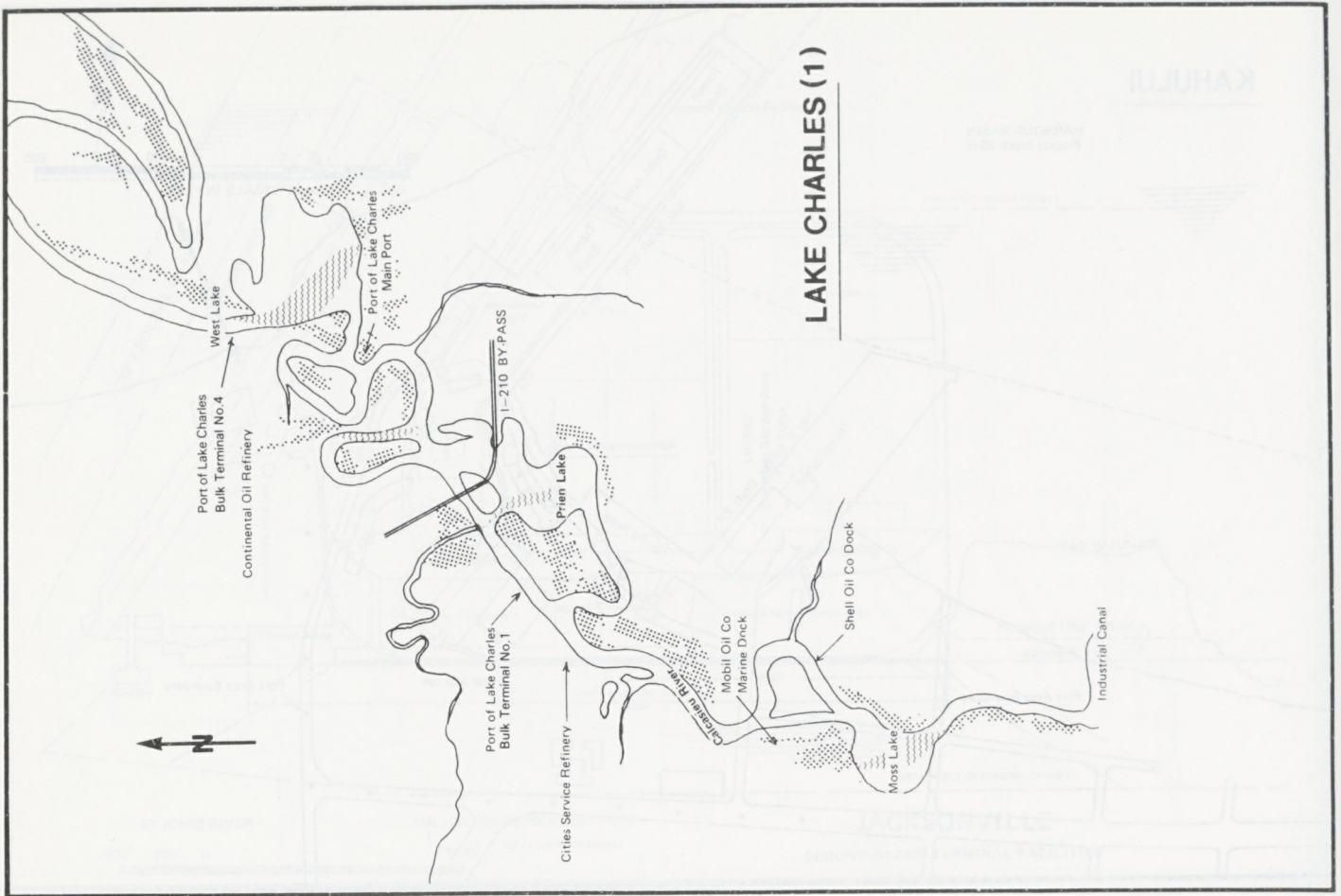


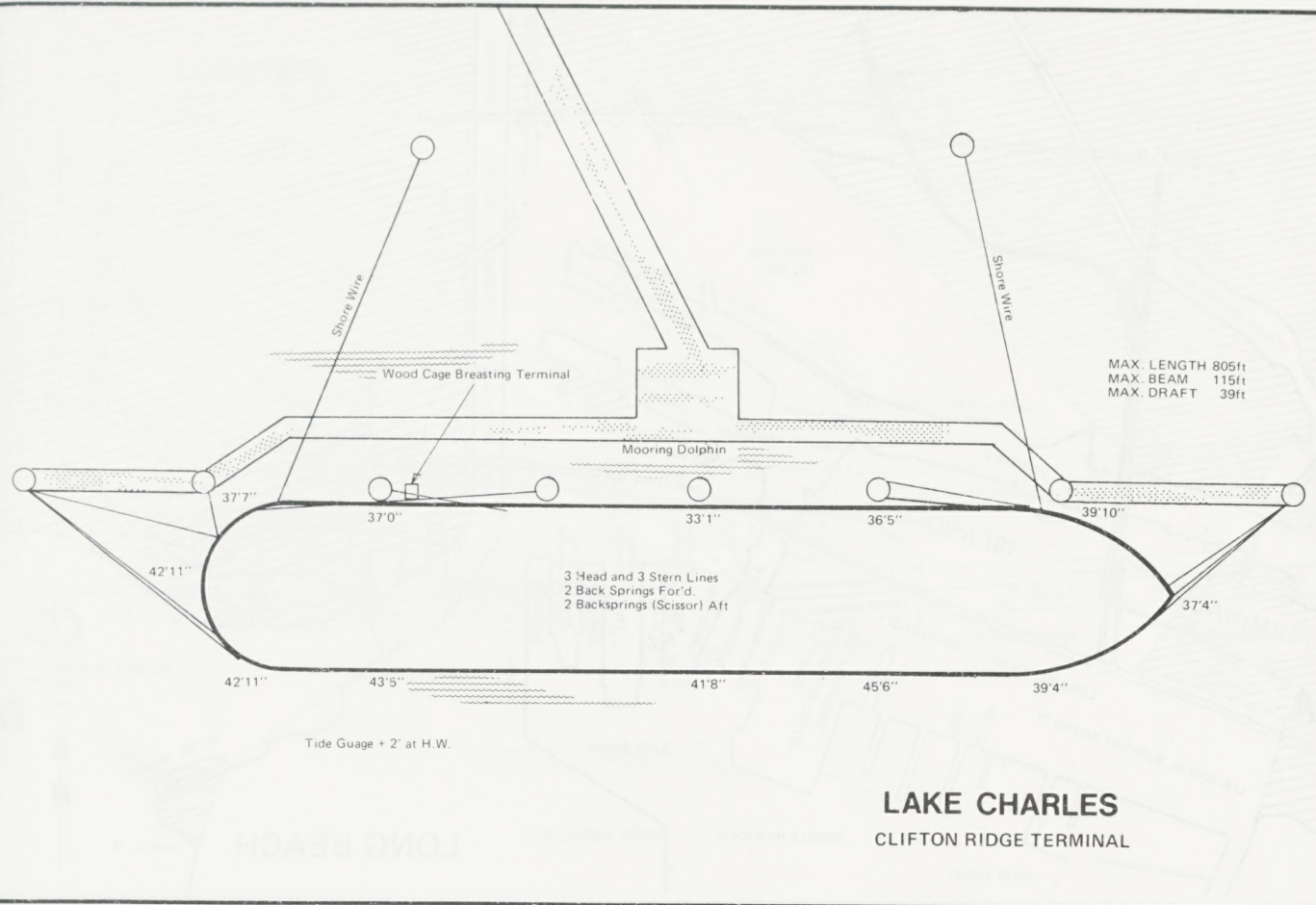


KAHULUI

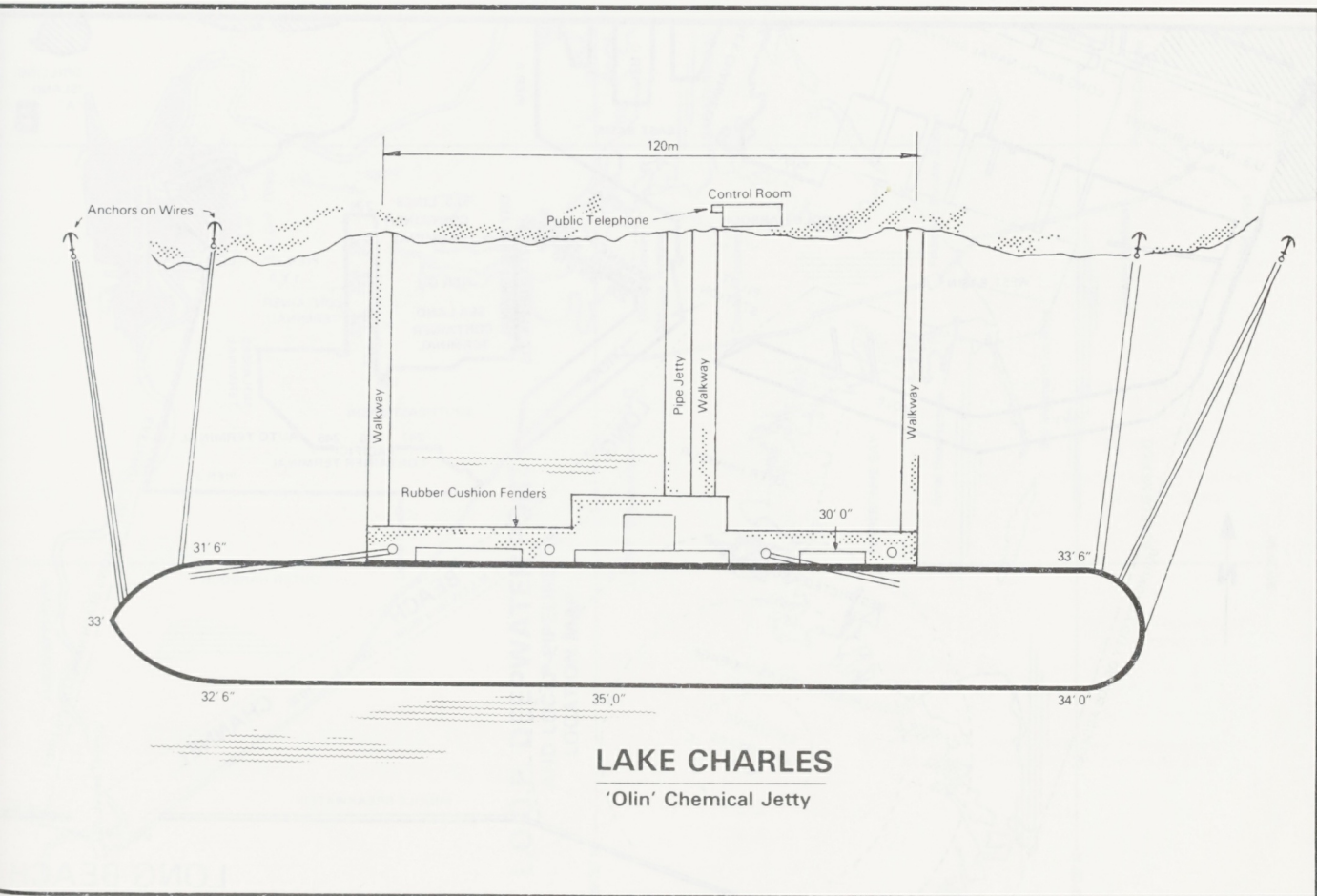


KAWAIIHAE

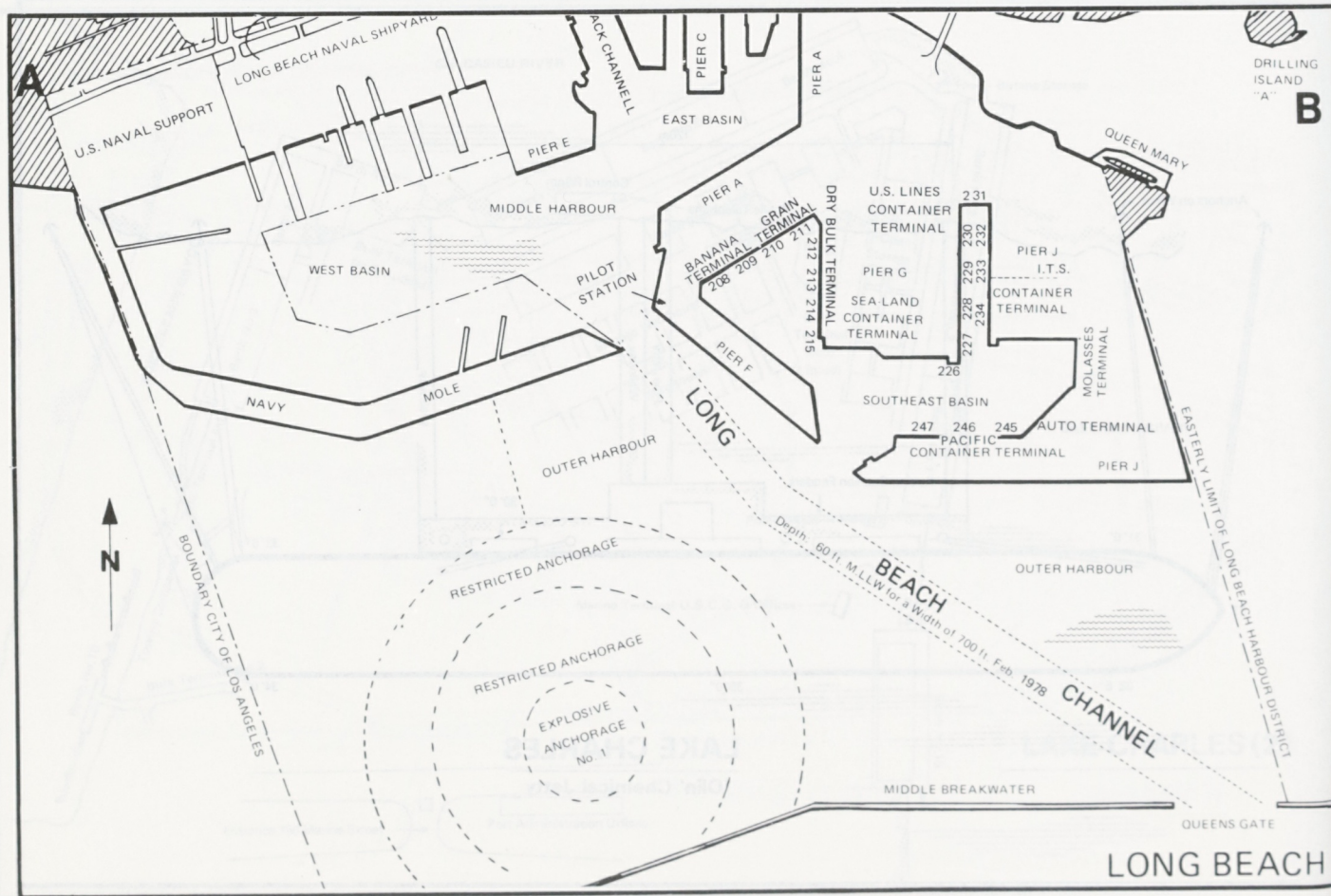
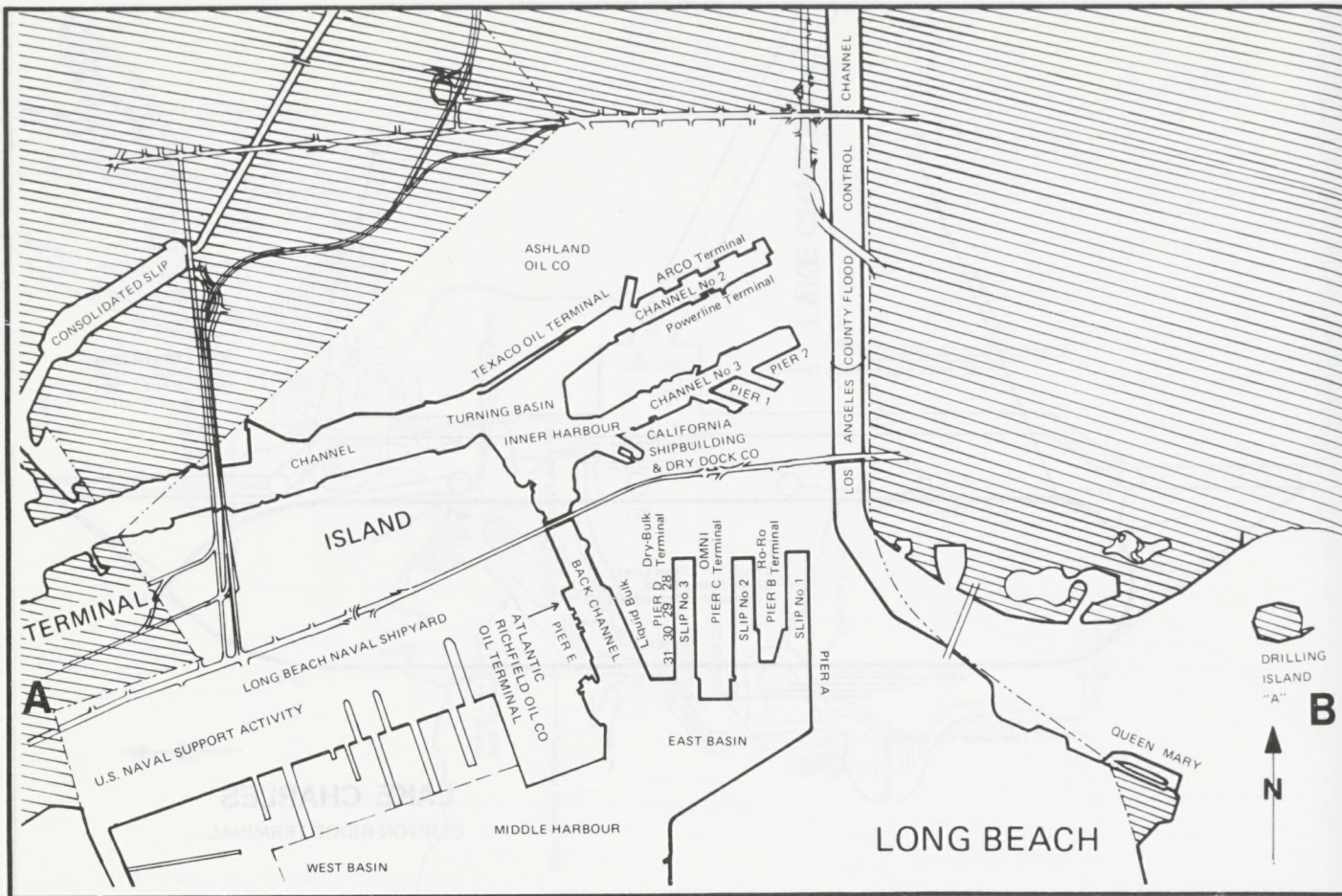


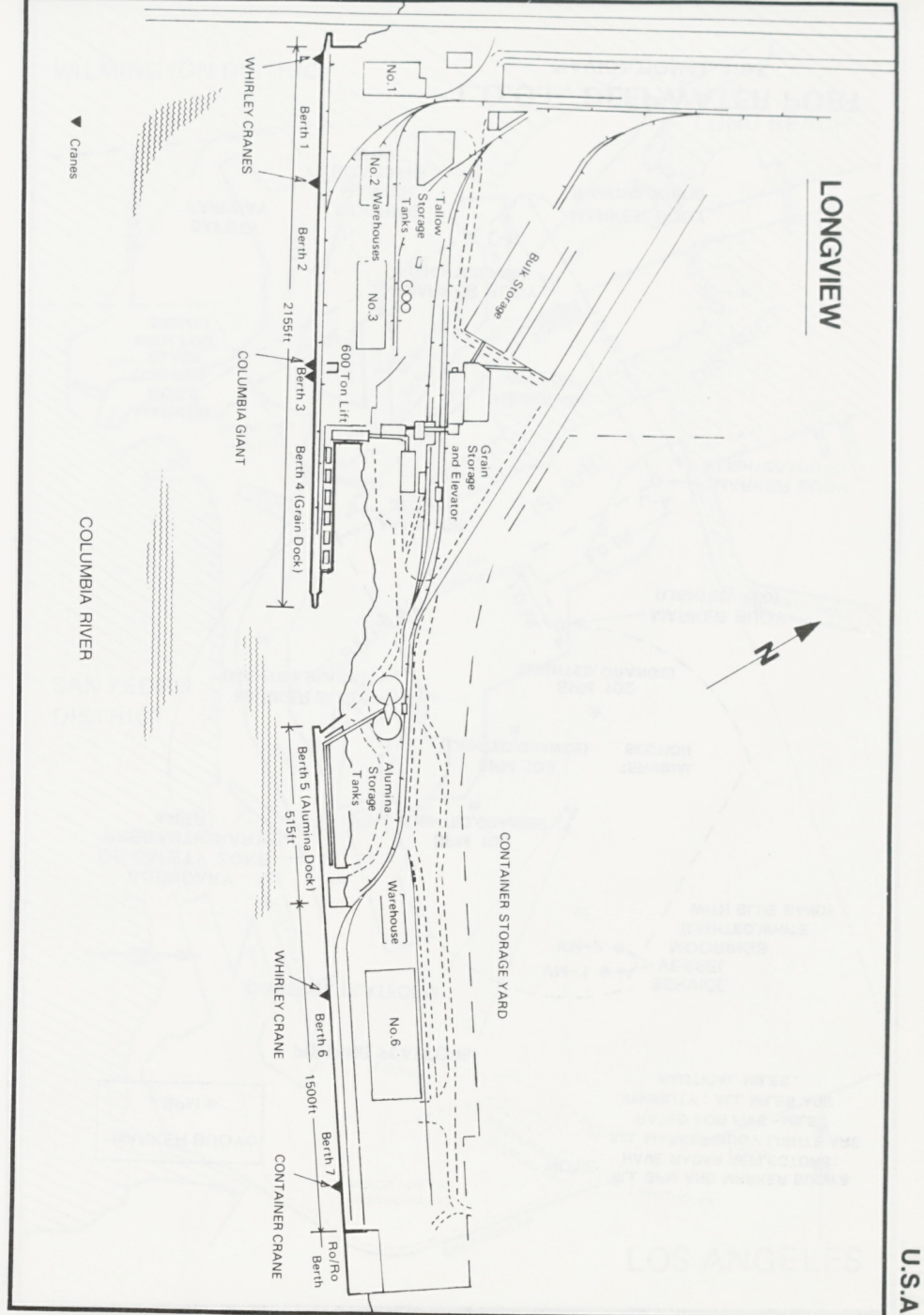
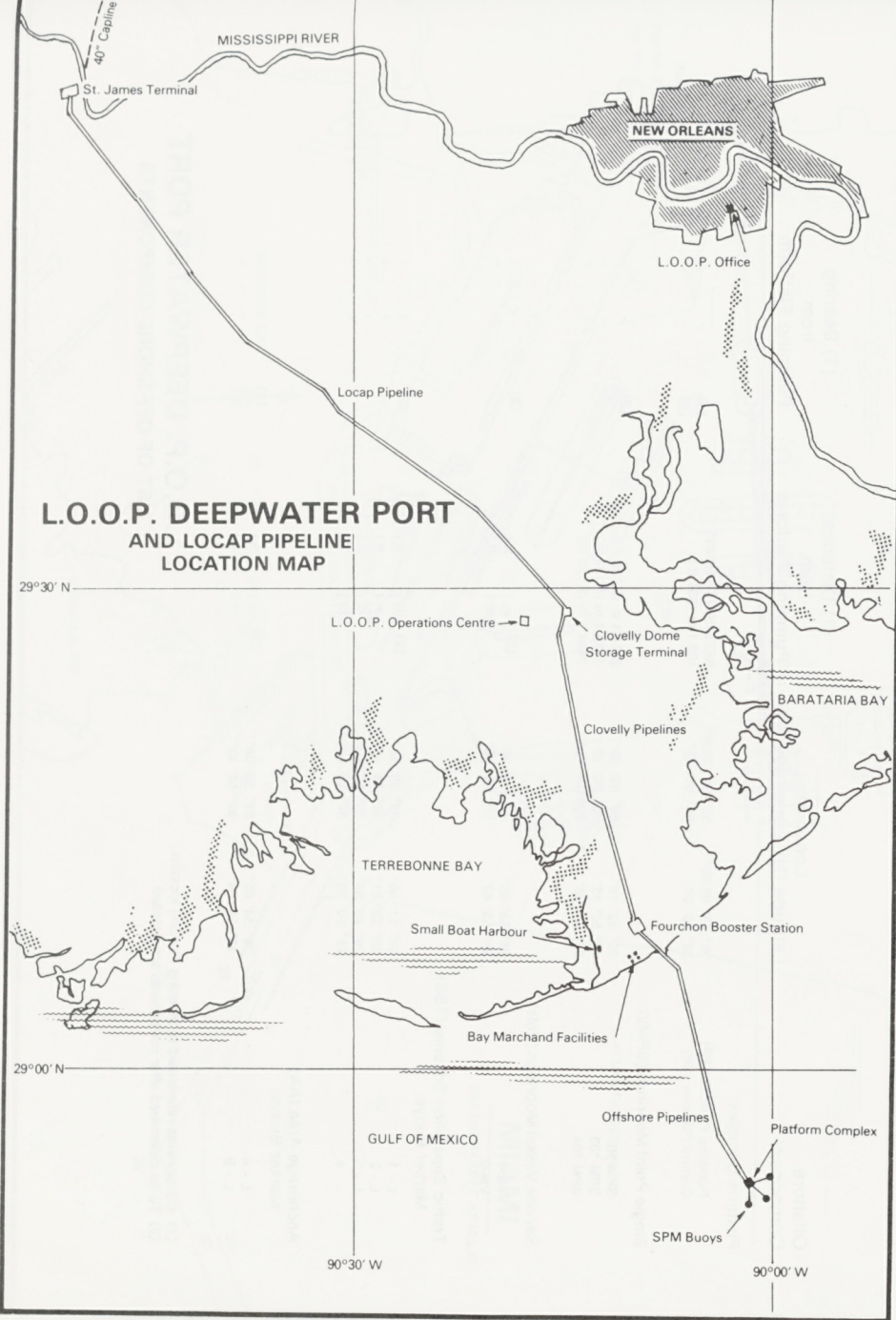


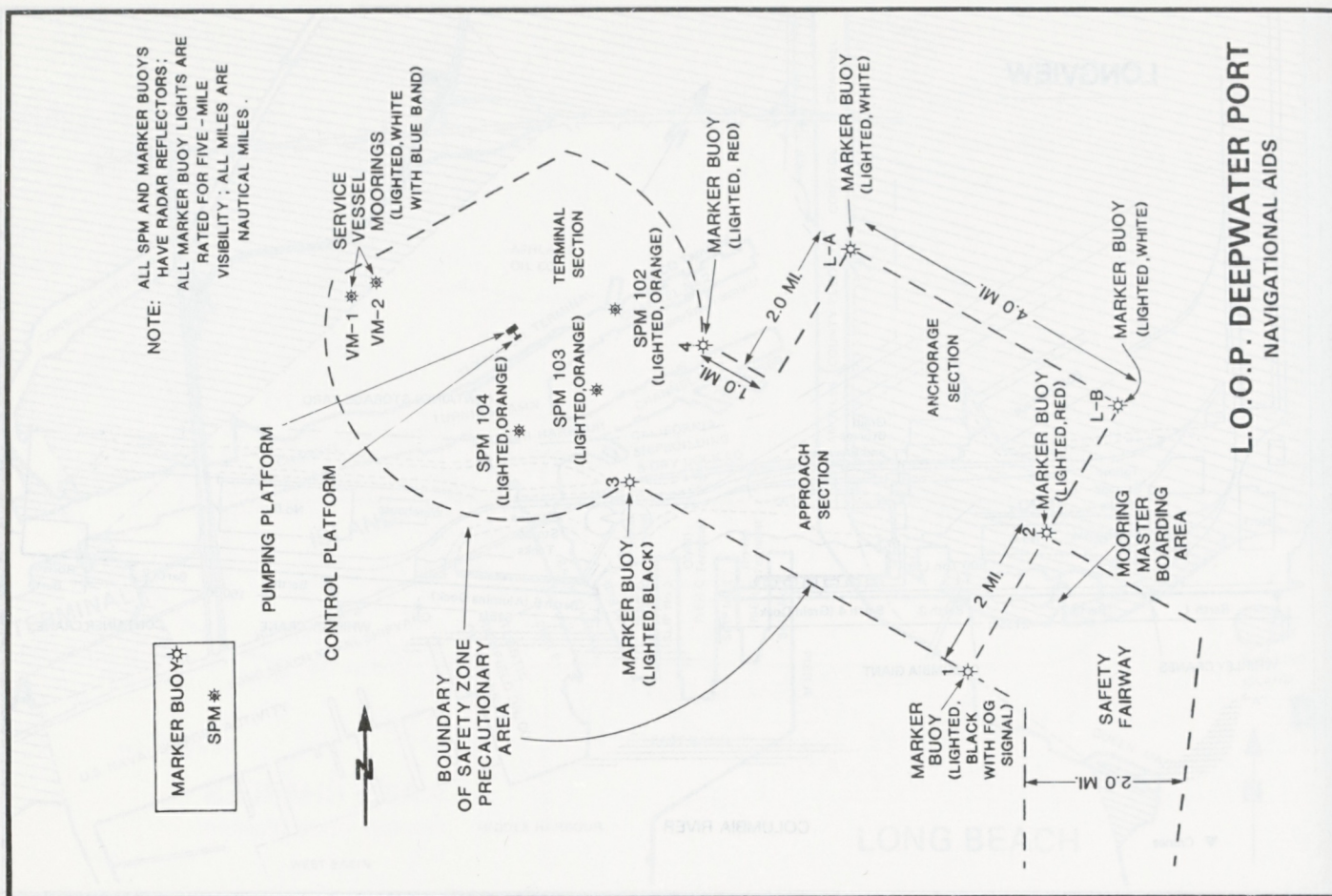
"Plan supplied by Ship's Master"



"Plan supplied by Ship's Master"







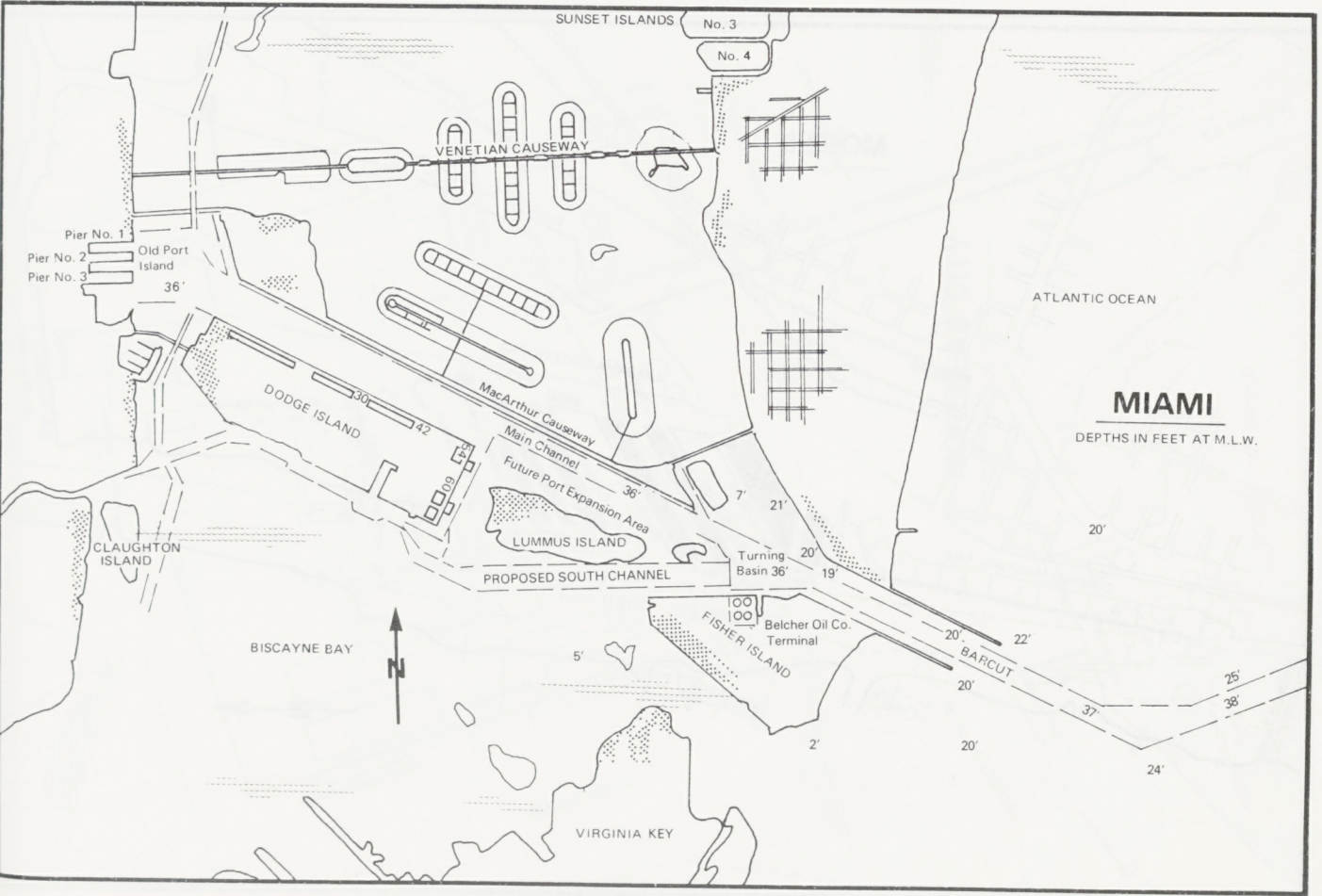
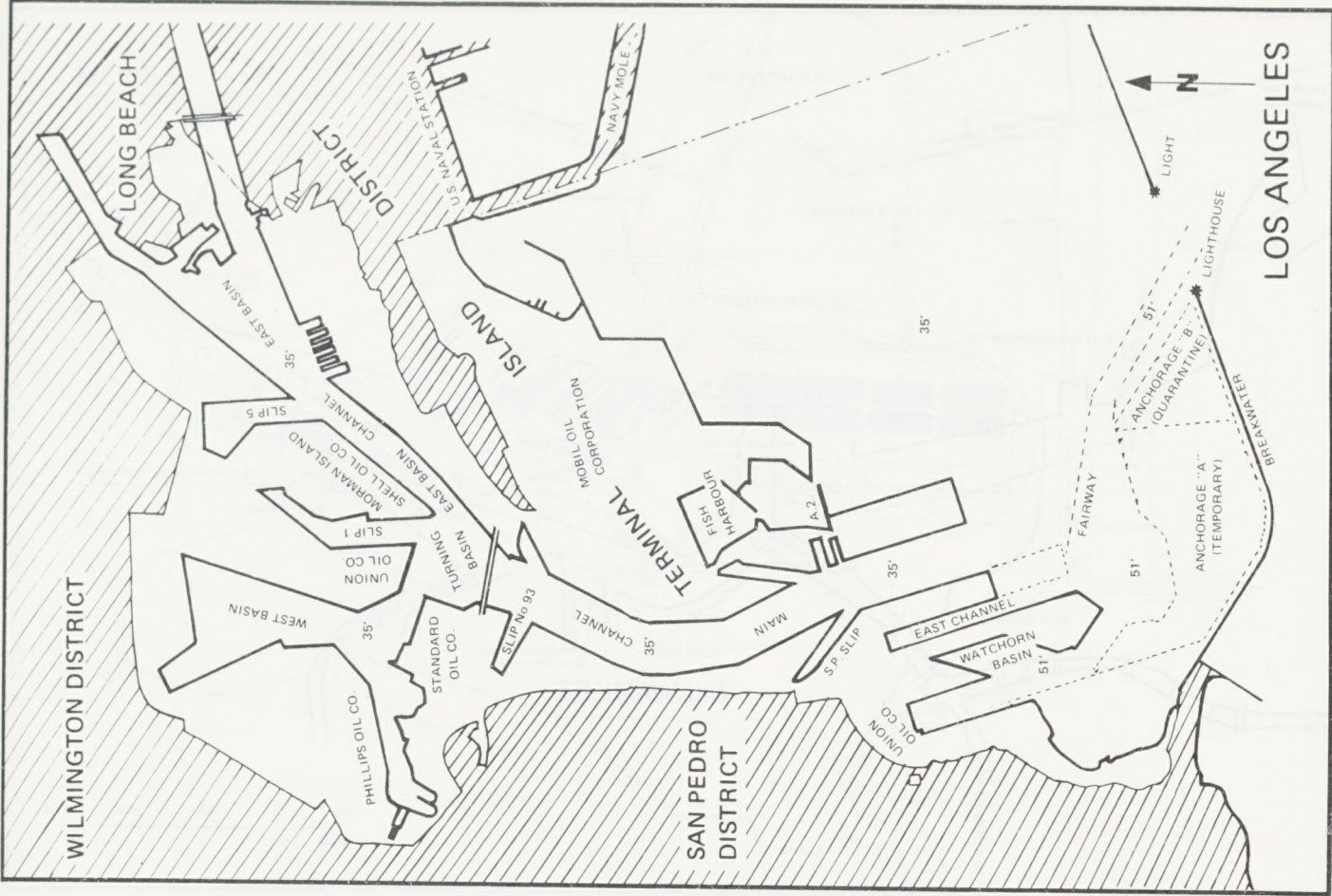
Offshore Component	Location		(1) Distance from Pumping Platform	(1) Bearing from Pumping Platform
	Latitude (N)	Longitude (W)		
Platform Complex:				
Pumping Platform (PP)	28° 53' 06.00"	90° 01' 30.00"	REFERENCE POINT	
Control Platform (CP)	28° 53' 04"	90° 01' 28"	102.1 m (335 ft.)	(1) --- (2) ° ' "
Single Point Moorings (SPMs)				
SPM 102	28° 53' 16"	89° 59' 59"	2484.1 m (8,150 ft.)	(2) ° ' "
SPM 103	28° 52' 15"	90° 00' 19"	2484.1 m (8,150 ft.)	° ' "
SPM 104	28° 51' 45"	90° 01' 25"	2484.1 m (8,150 ft.)	° ' "
Service Vessel Moorings (VMs)				
VM-1	28° 53' 46"	90° 03' 30"	(2) m (ft.)	(2) ° ' "
VM-2	28° 53' 42"	90° 03' 53"	m (ft.)	° ' "
Traffic Separation Scheme (TSS)				
Marker Buoys:				
L - 1	28° 51' 08"	89° 59' 55"	(2) m (ft.)	(2) ° ' "
L - 2	28° 52' 51"	89° 58' 46"	m (ft.)	° ' "
L - 3	28° 48' 36"	89° 55' 00"	m (ft.)	° ' "
L - 4	28° 50' 20"	89° 53' 51"	m (ft.)	° ' "
Anchorage Area (AA)				
Marker Buoys:				
L - A	28° 54' 05"	89° 56' 38"	(2) m (ft.)	(2) ° ' "
L - B	28° 52' 04"	89° 52' 42"	m (ft.)	° ' "

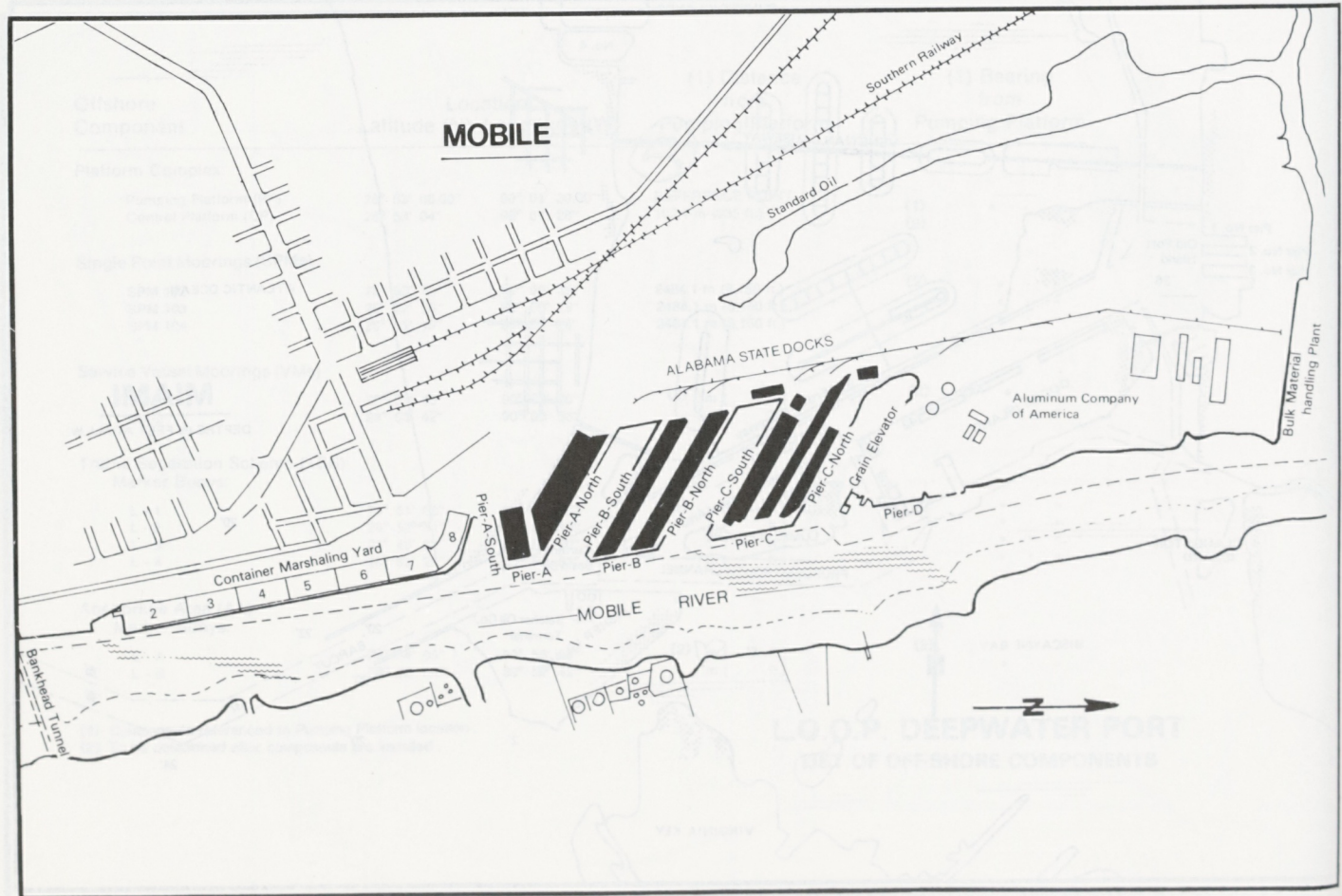
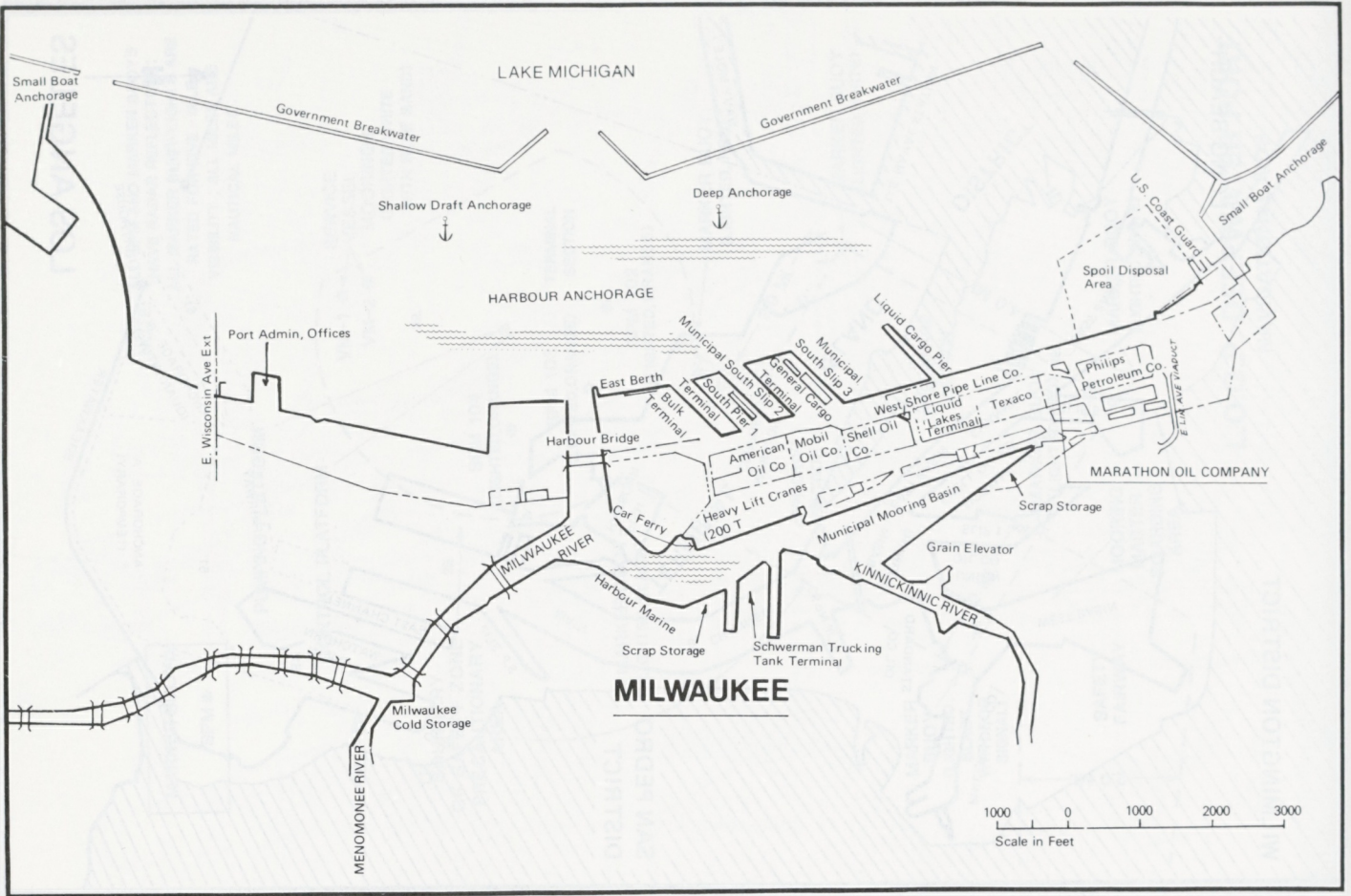
(1) Components referenced to Pumping Platform location.
(2) To be determined after components are installed.

L.O.O.P. DEEPWATER PORT

LIST OF OFF-SHORE COMPONENTS

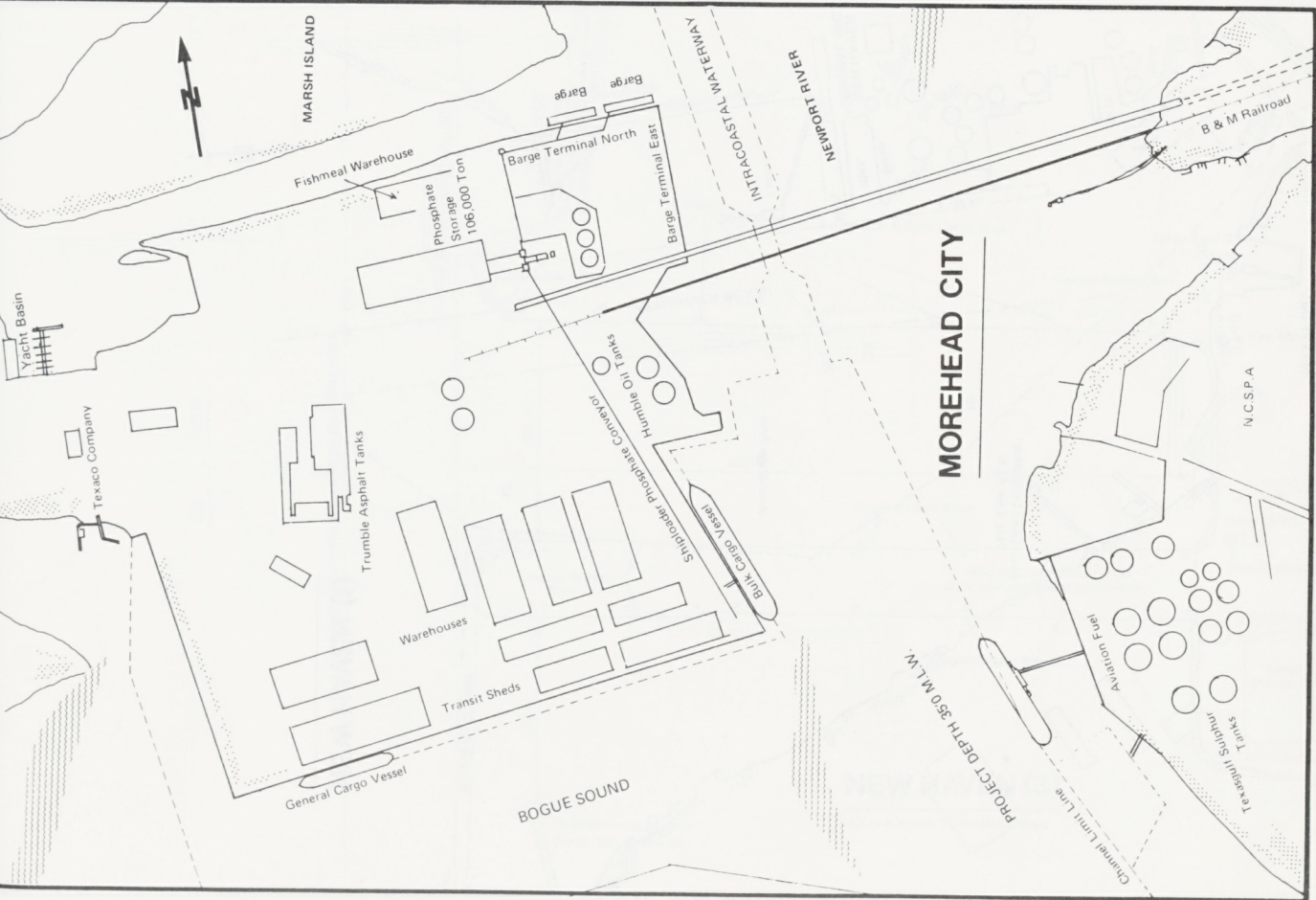
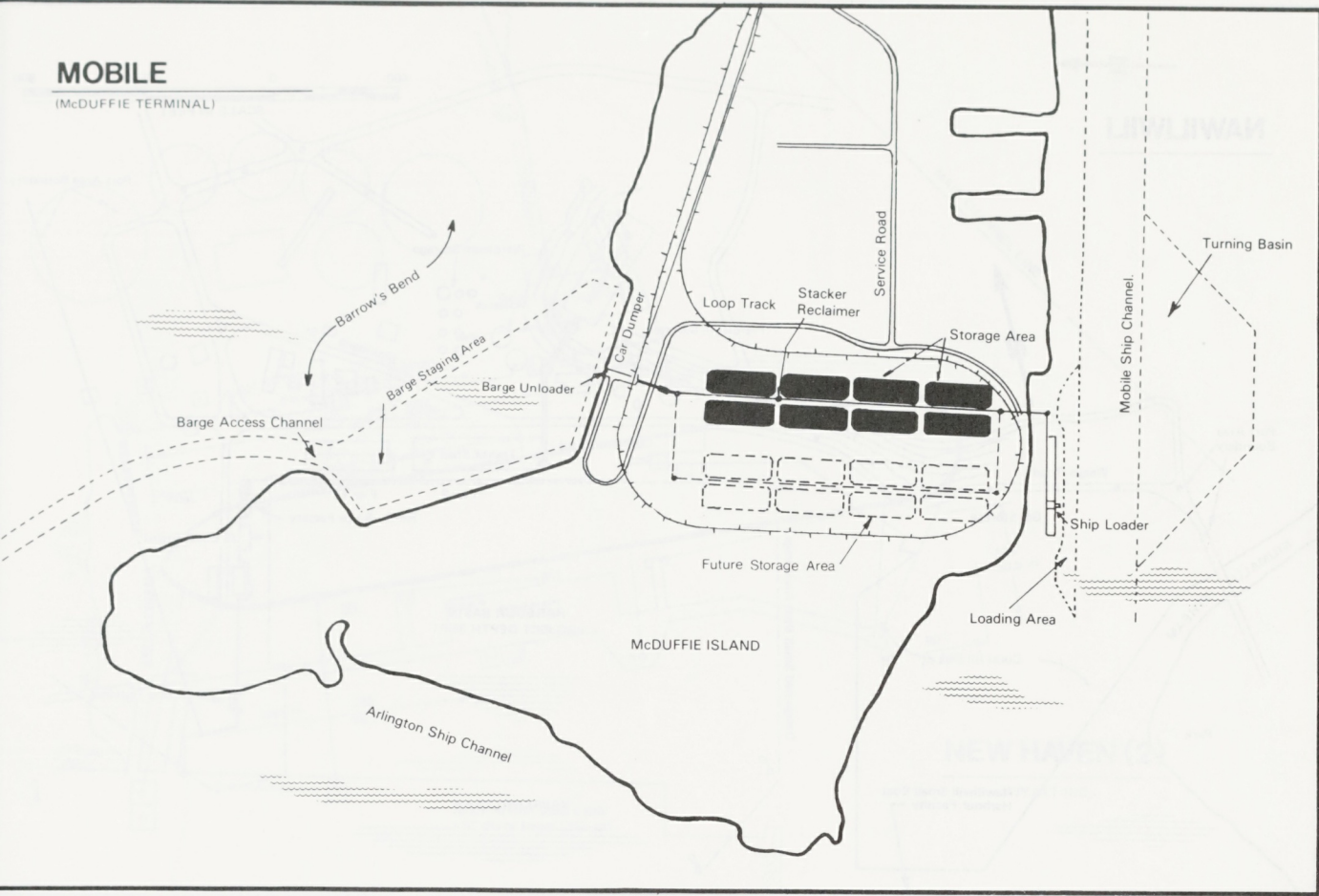
LOS ANGELES

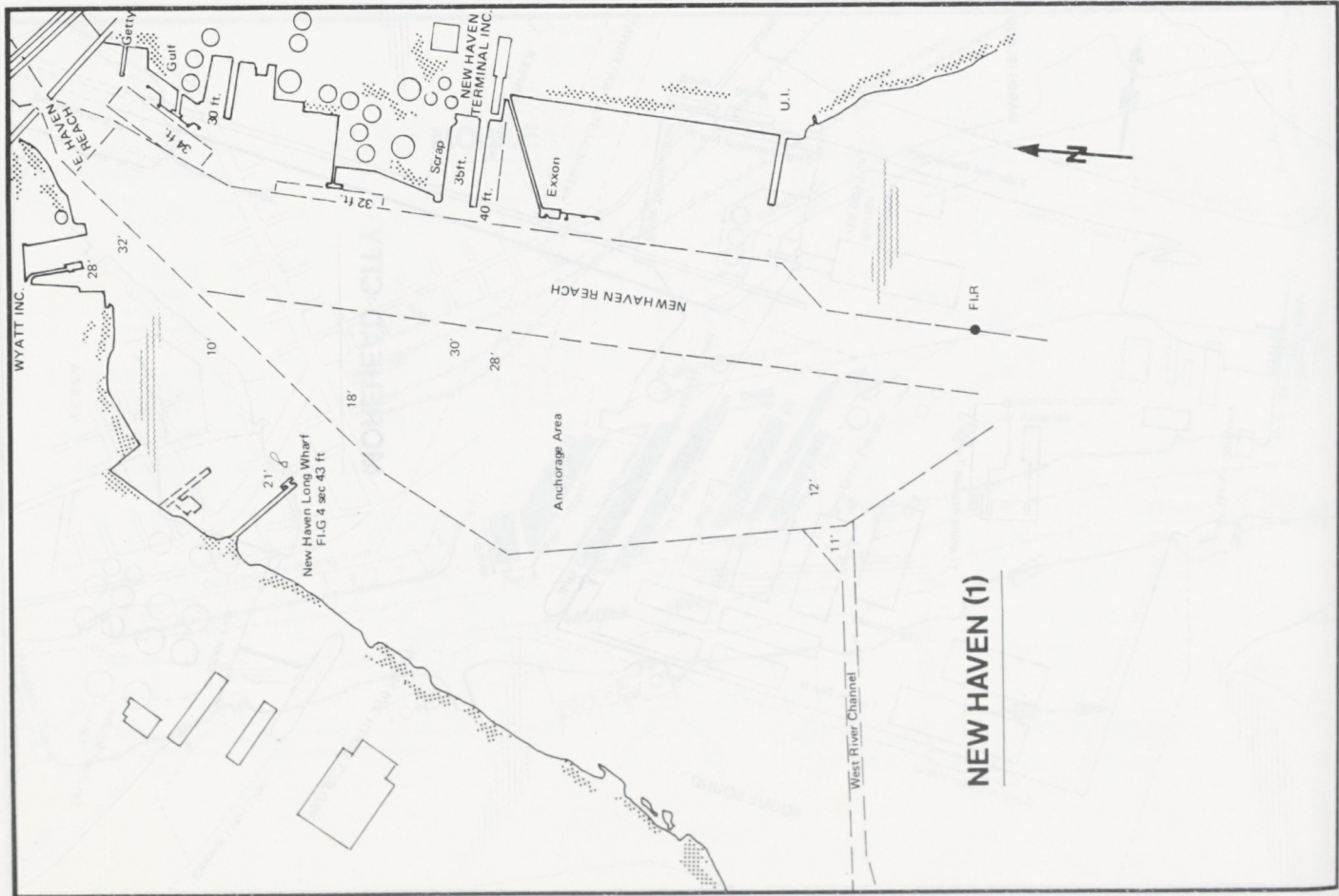
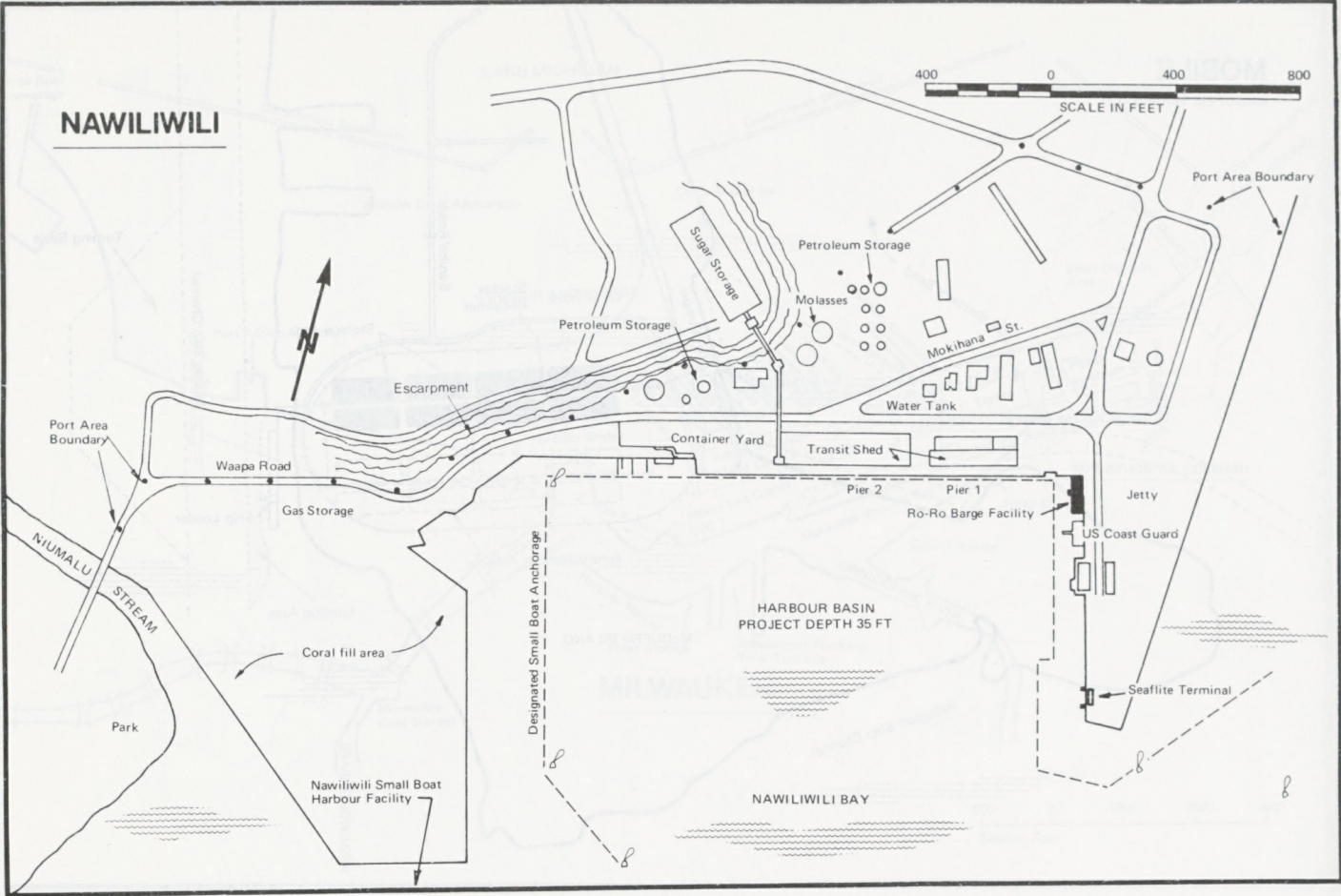


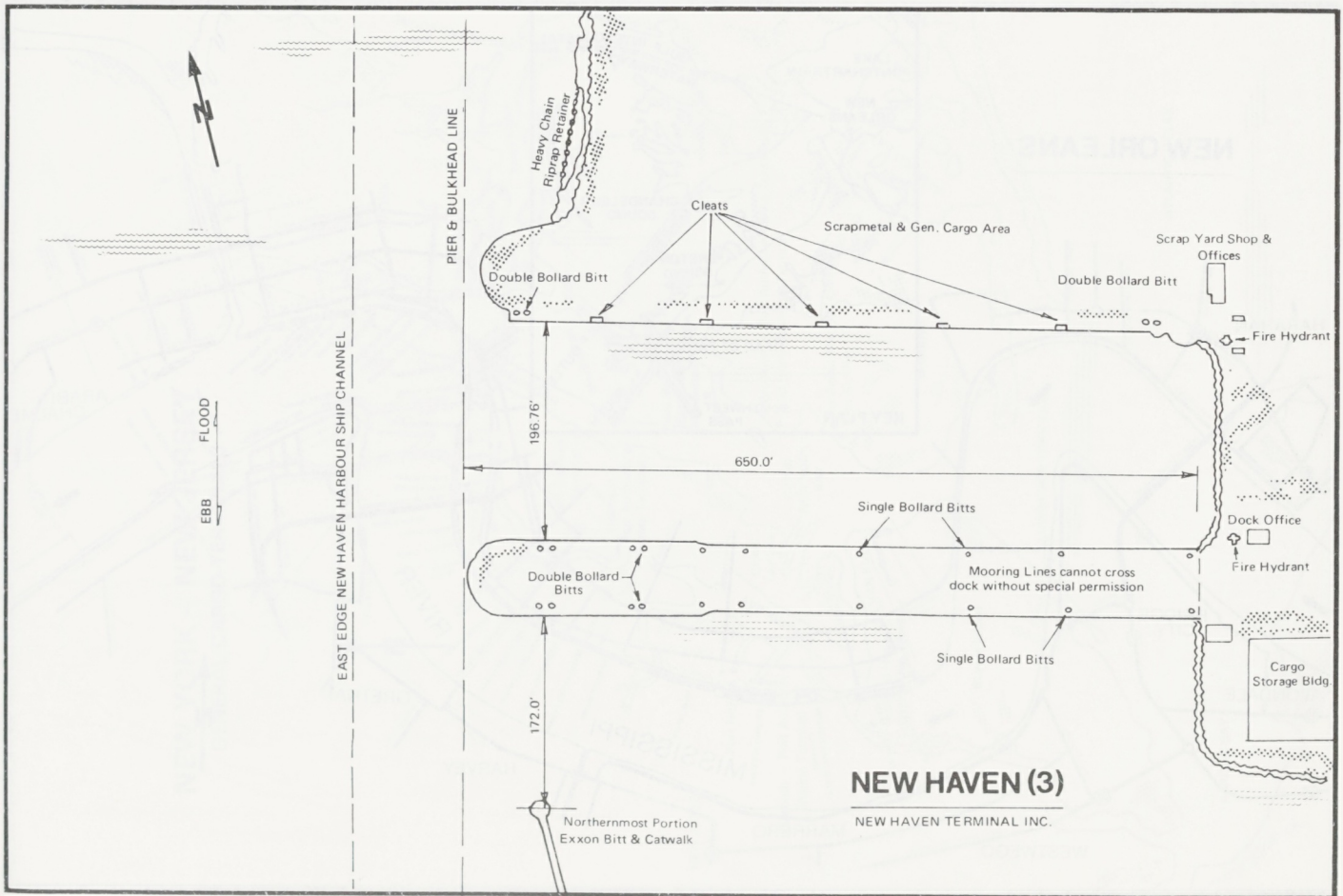
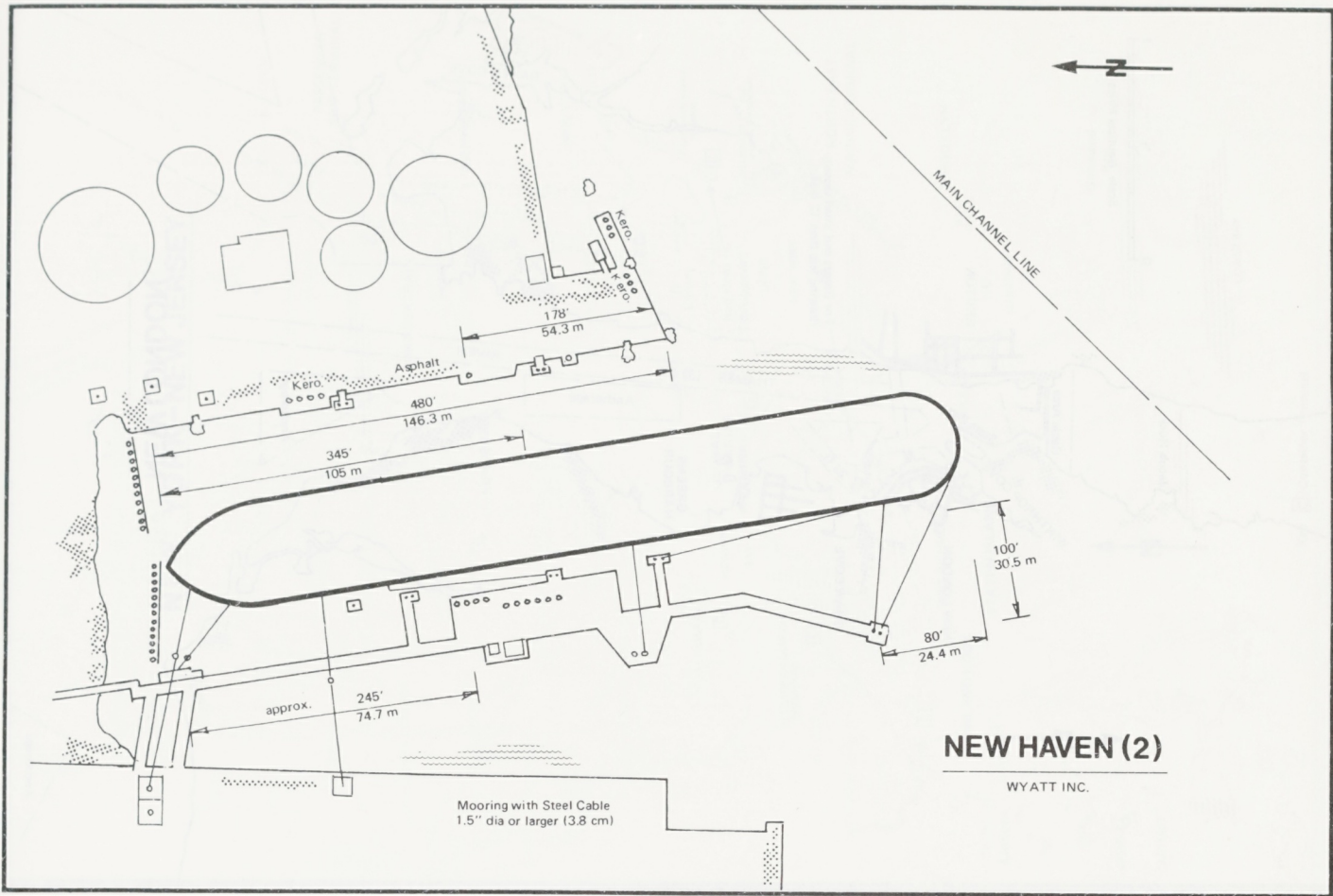


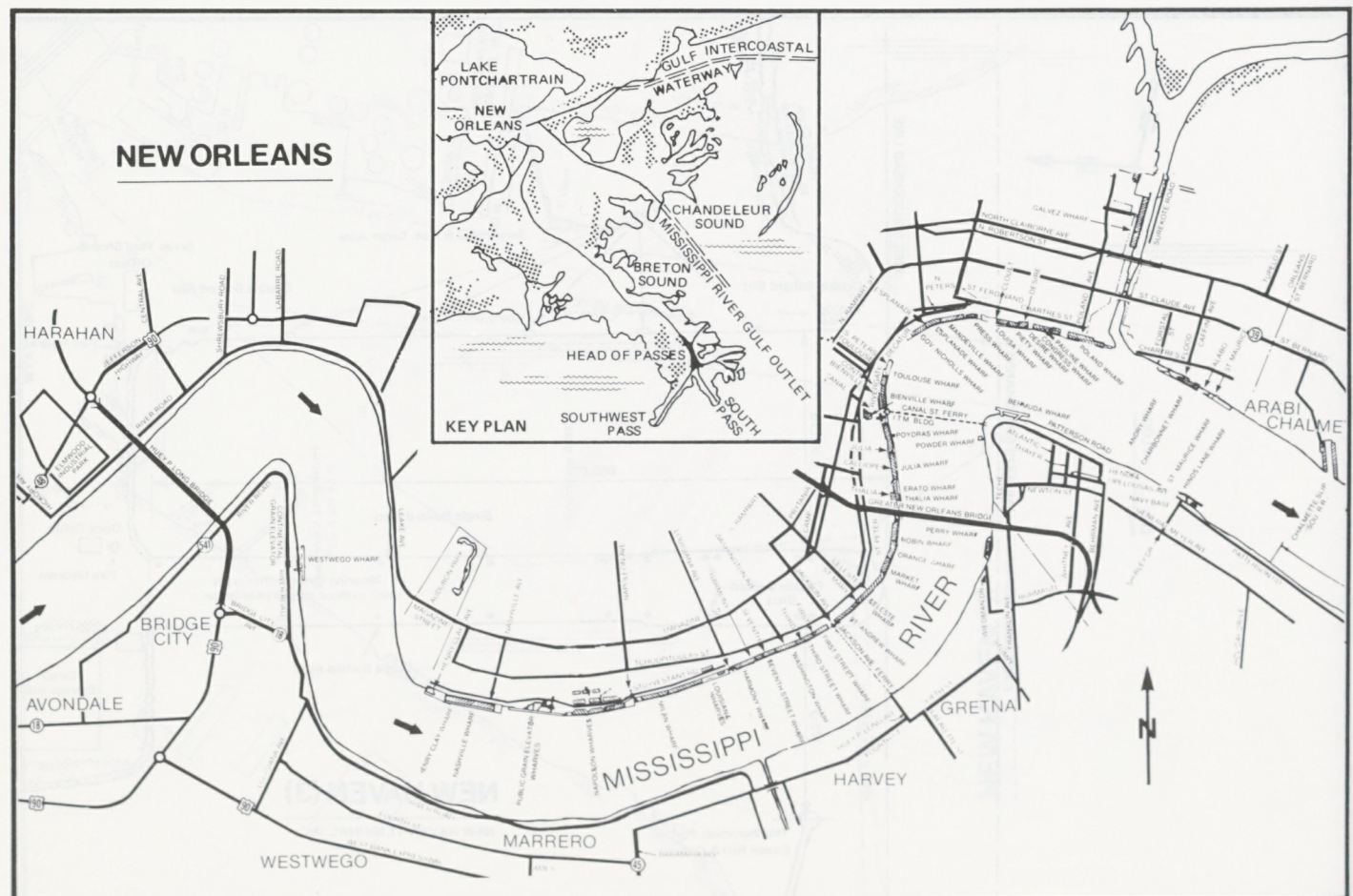
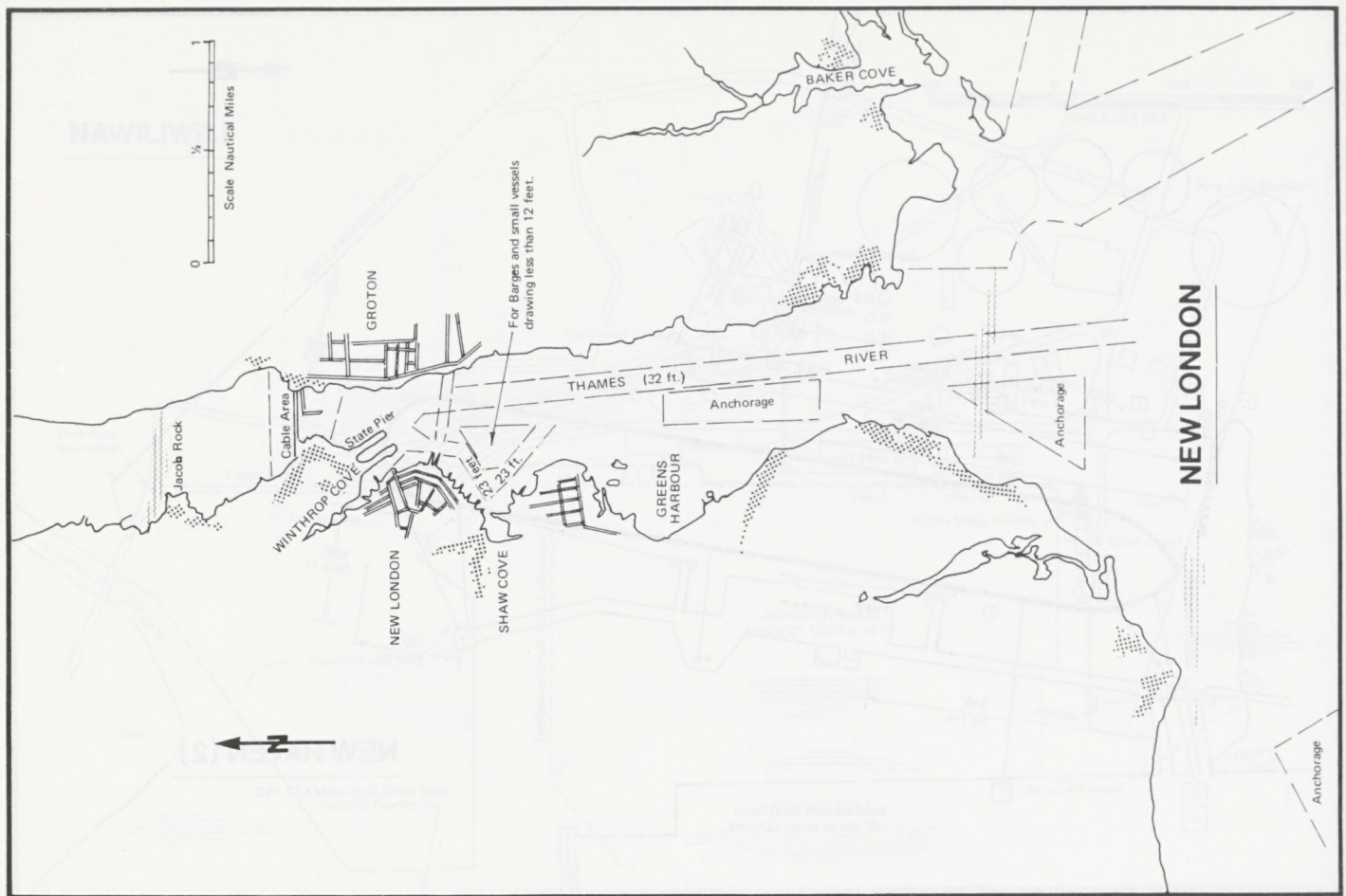
MOBILE

(McDUFFIE TERMINAL)

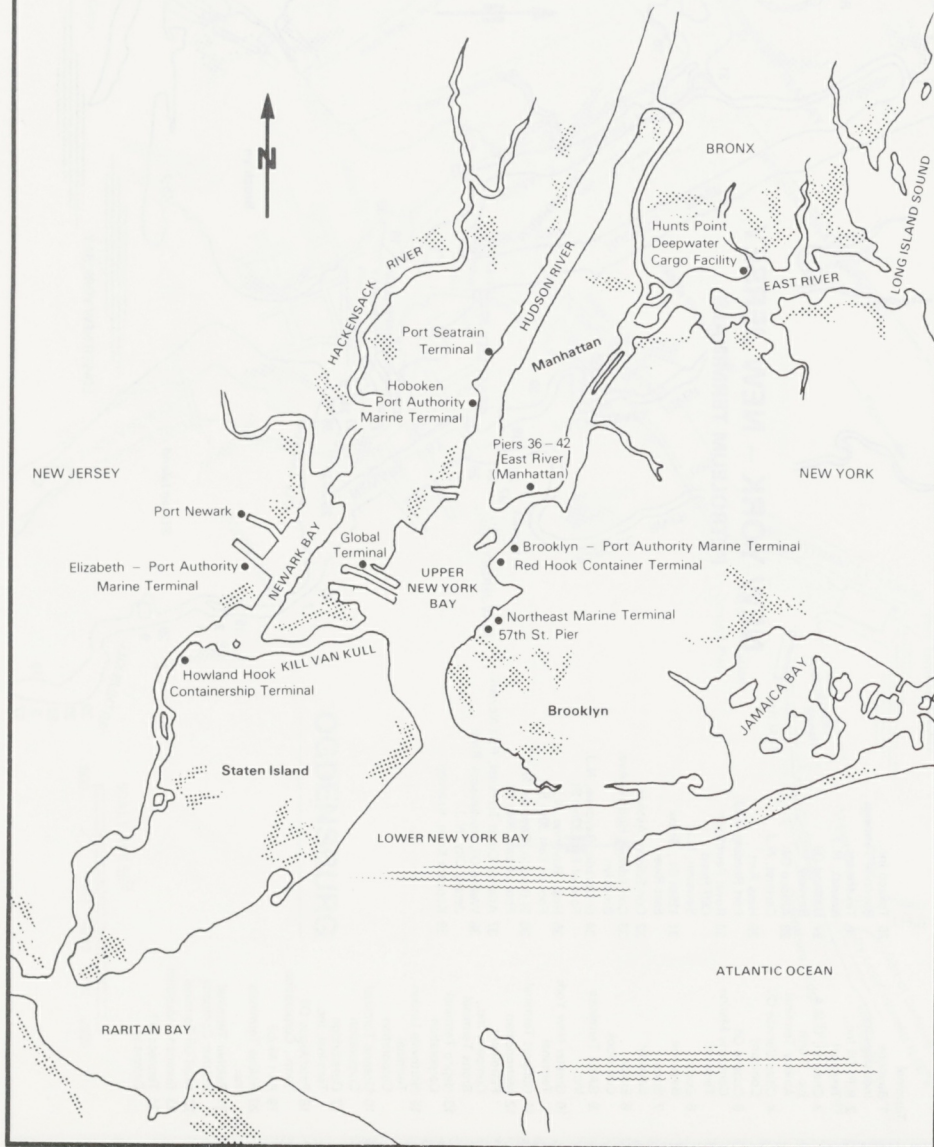




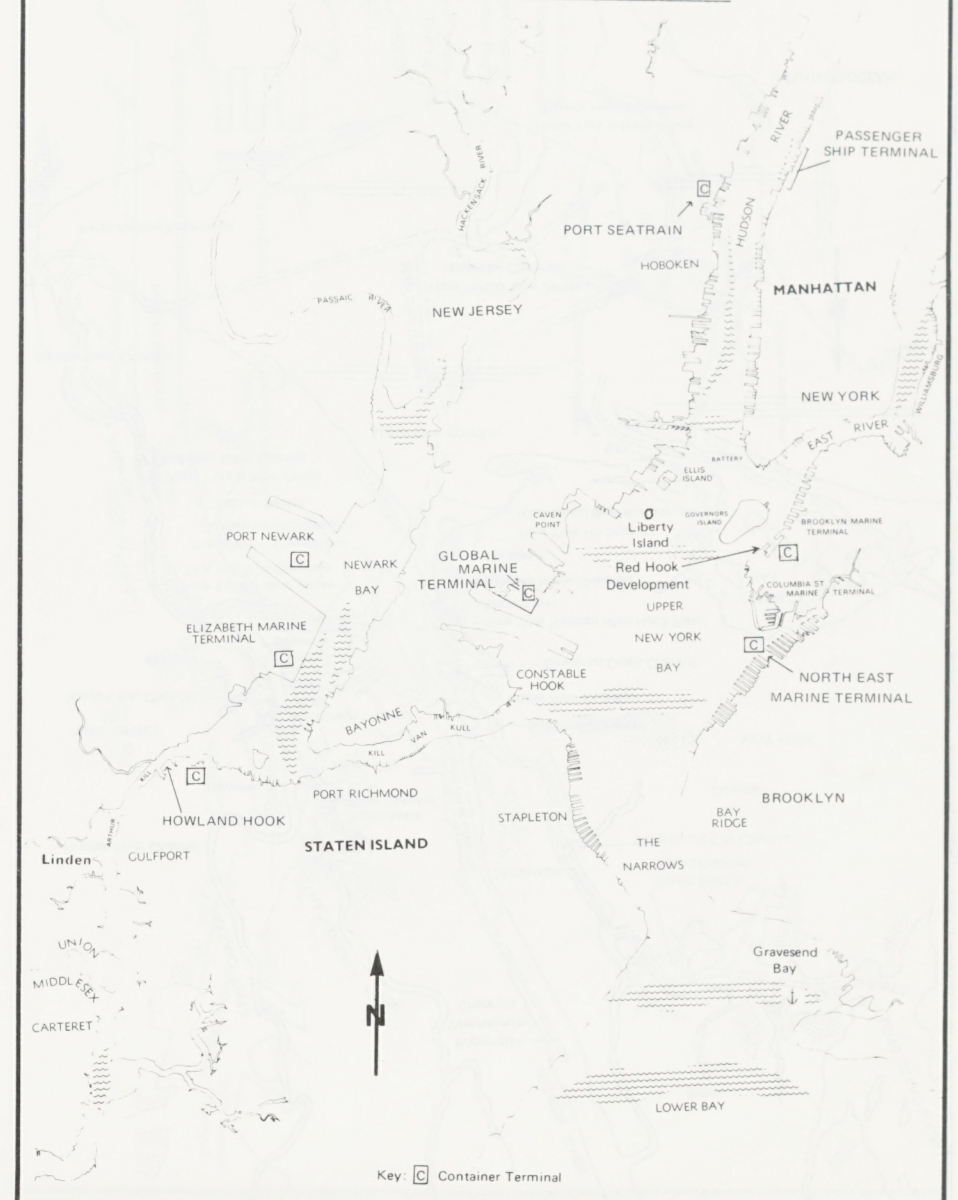


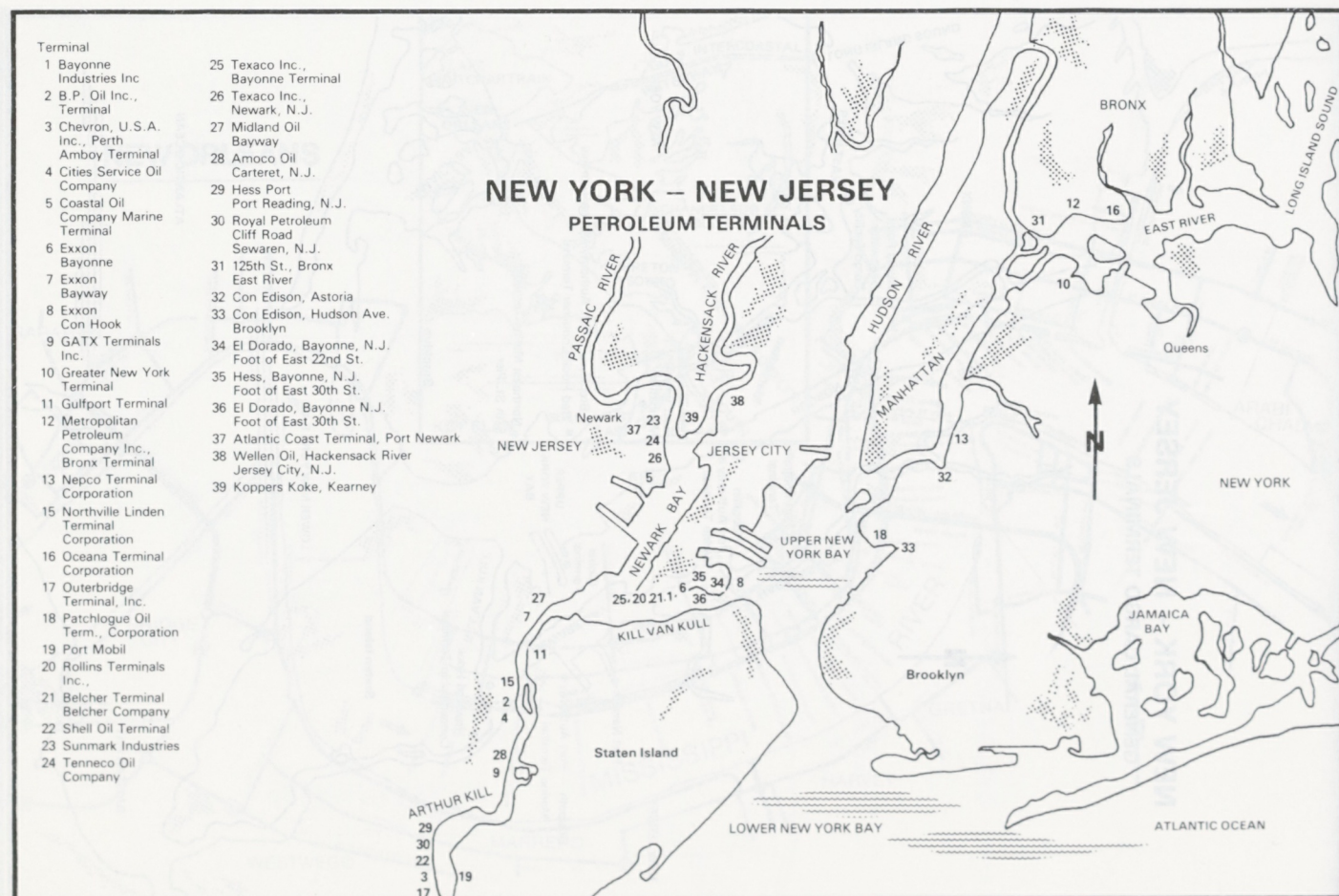
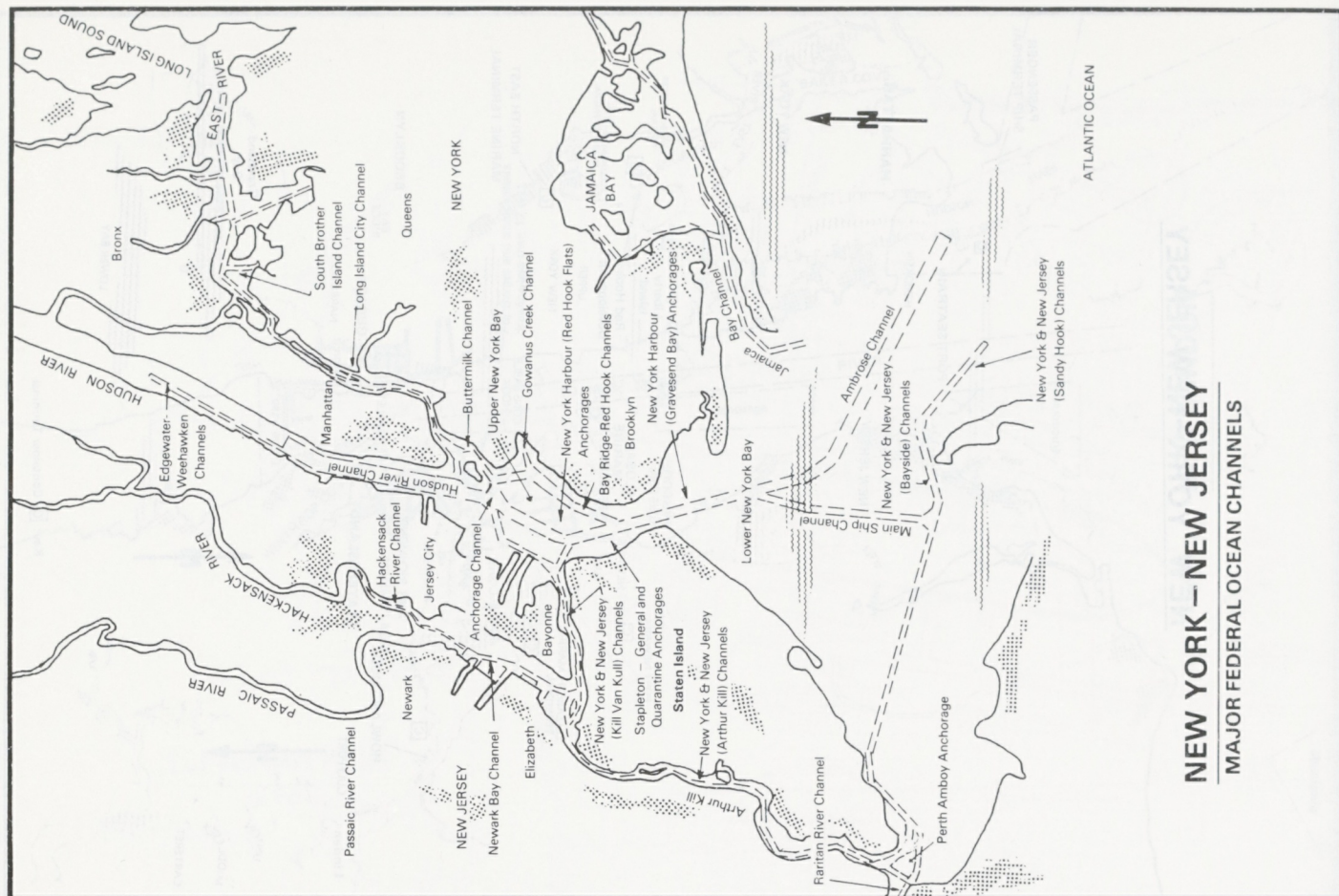


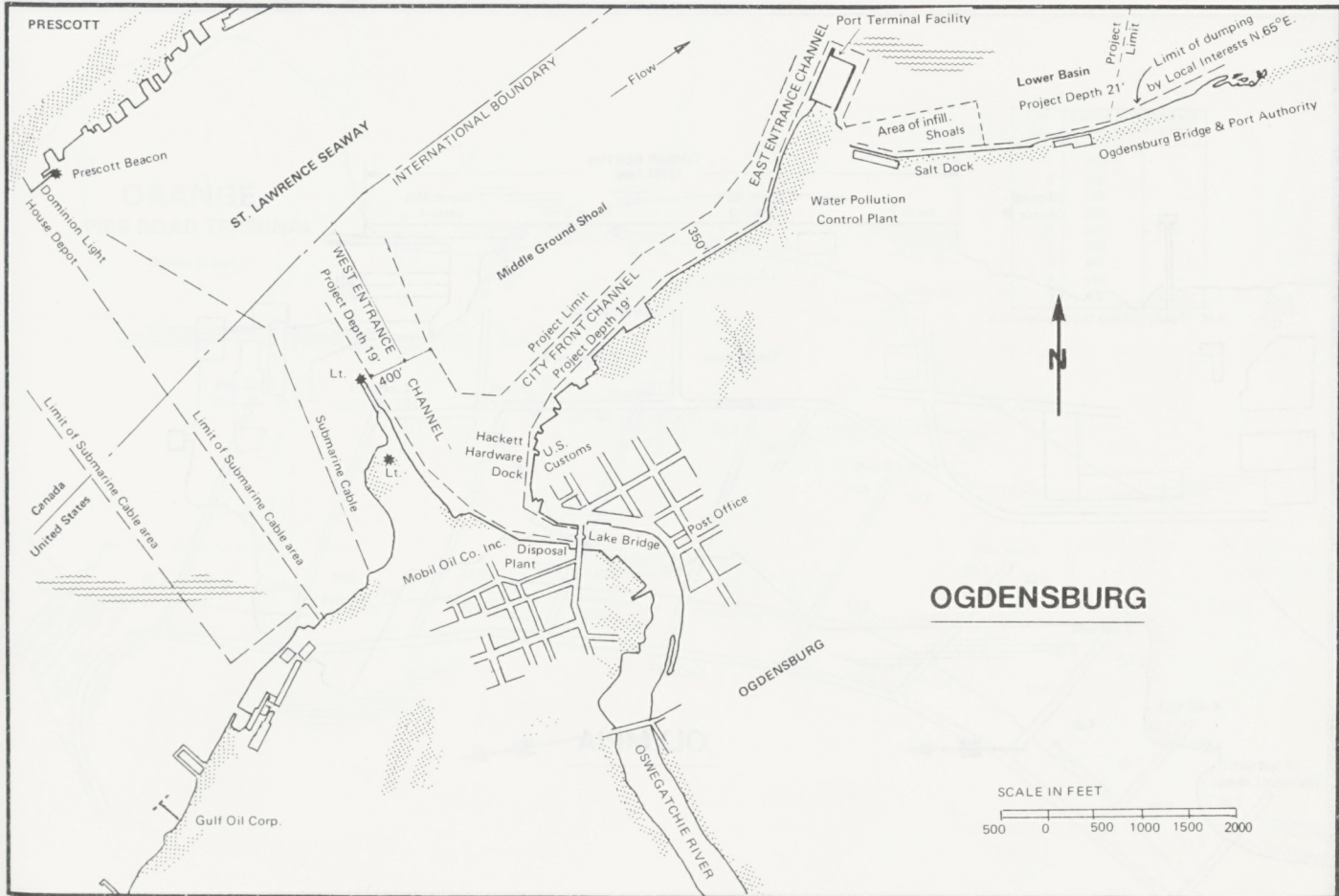
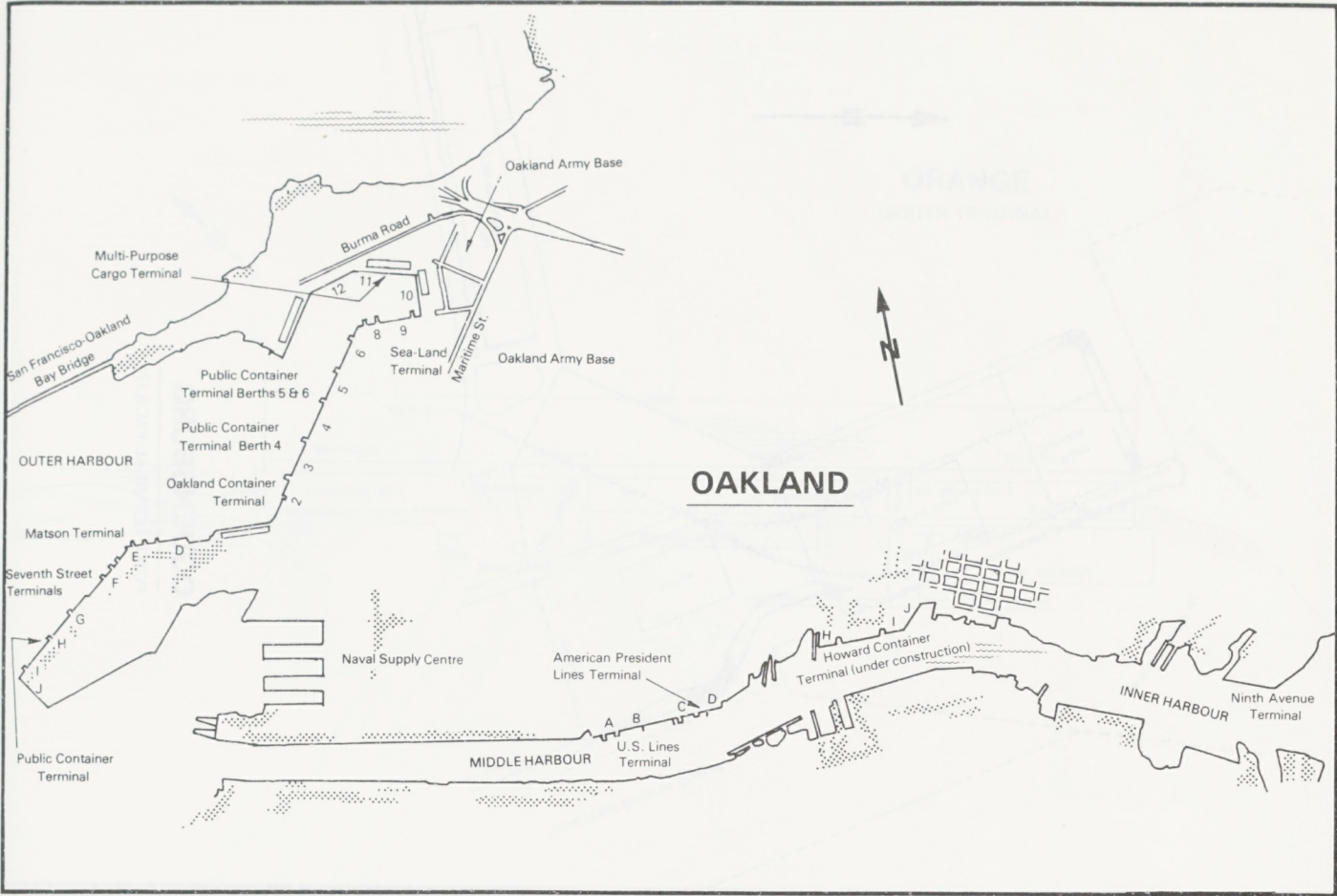
NEW YORK – NEW JERSEY GENERAL CARGO TERMINALS

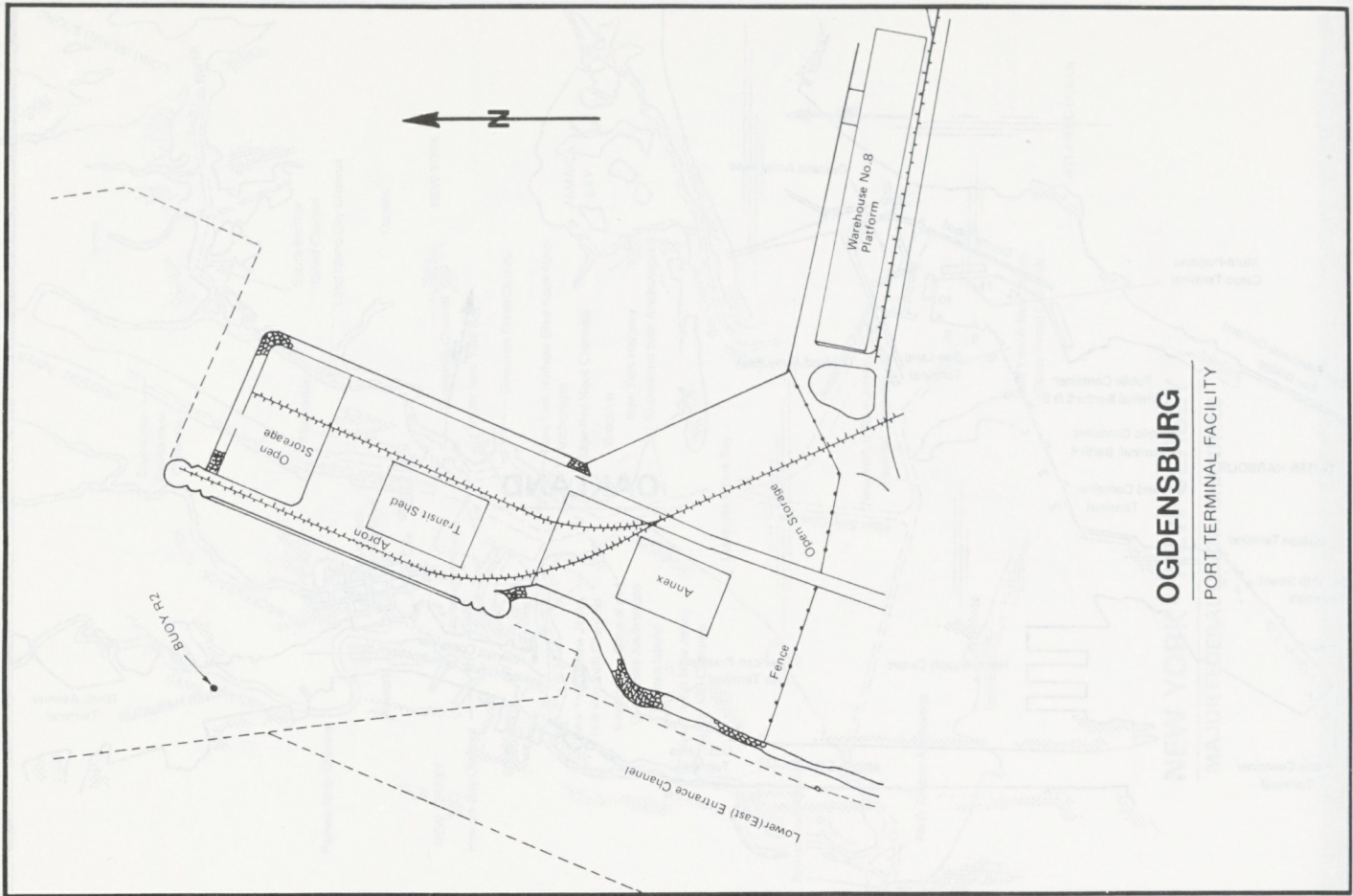


NEW YORK-NEW JERSEY

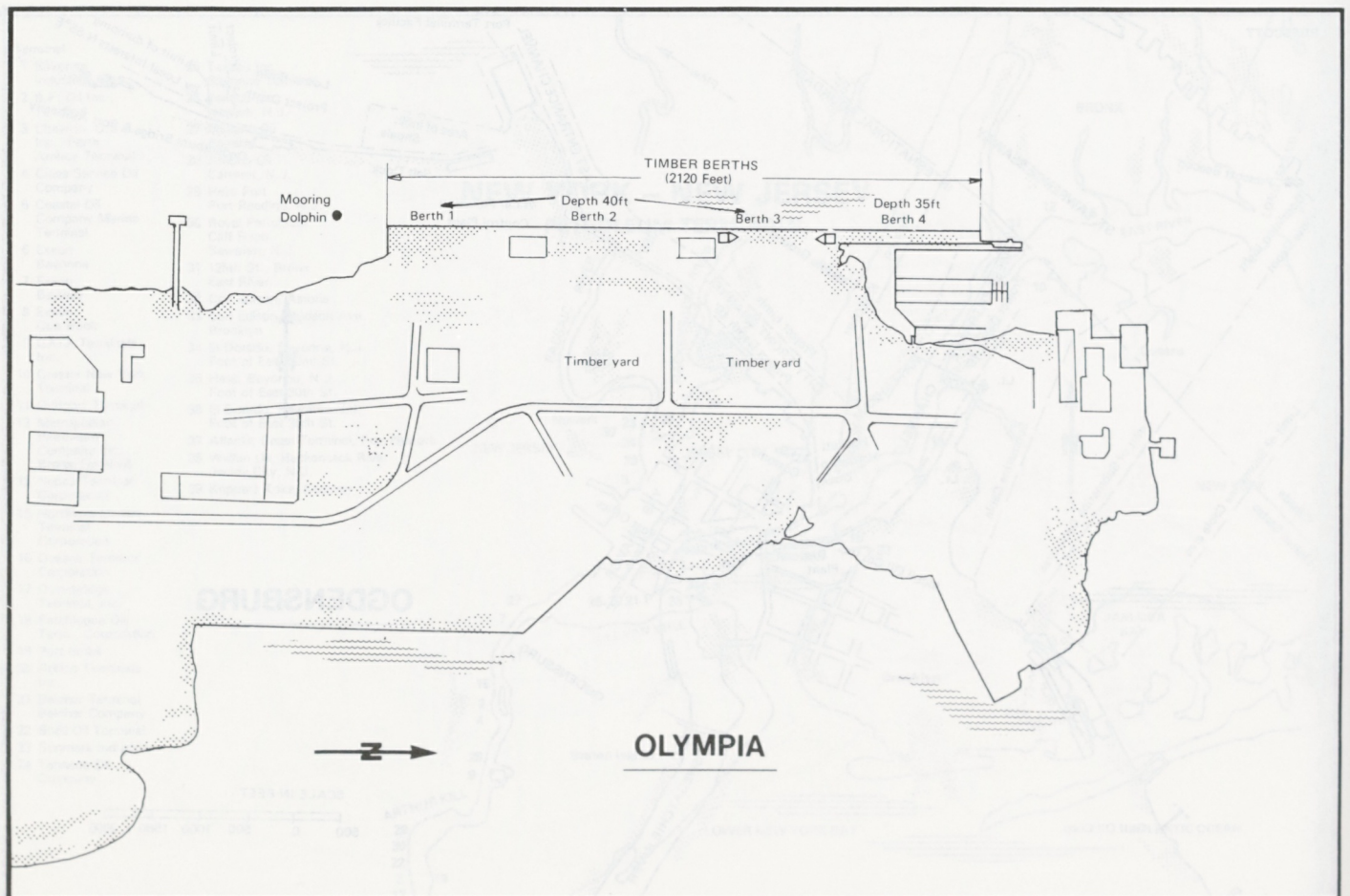


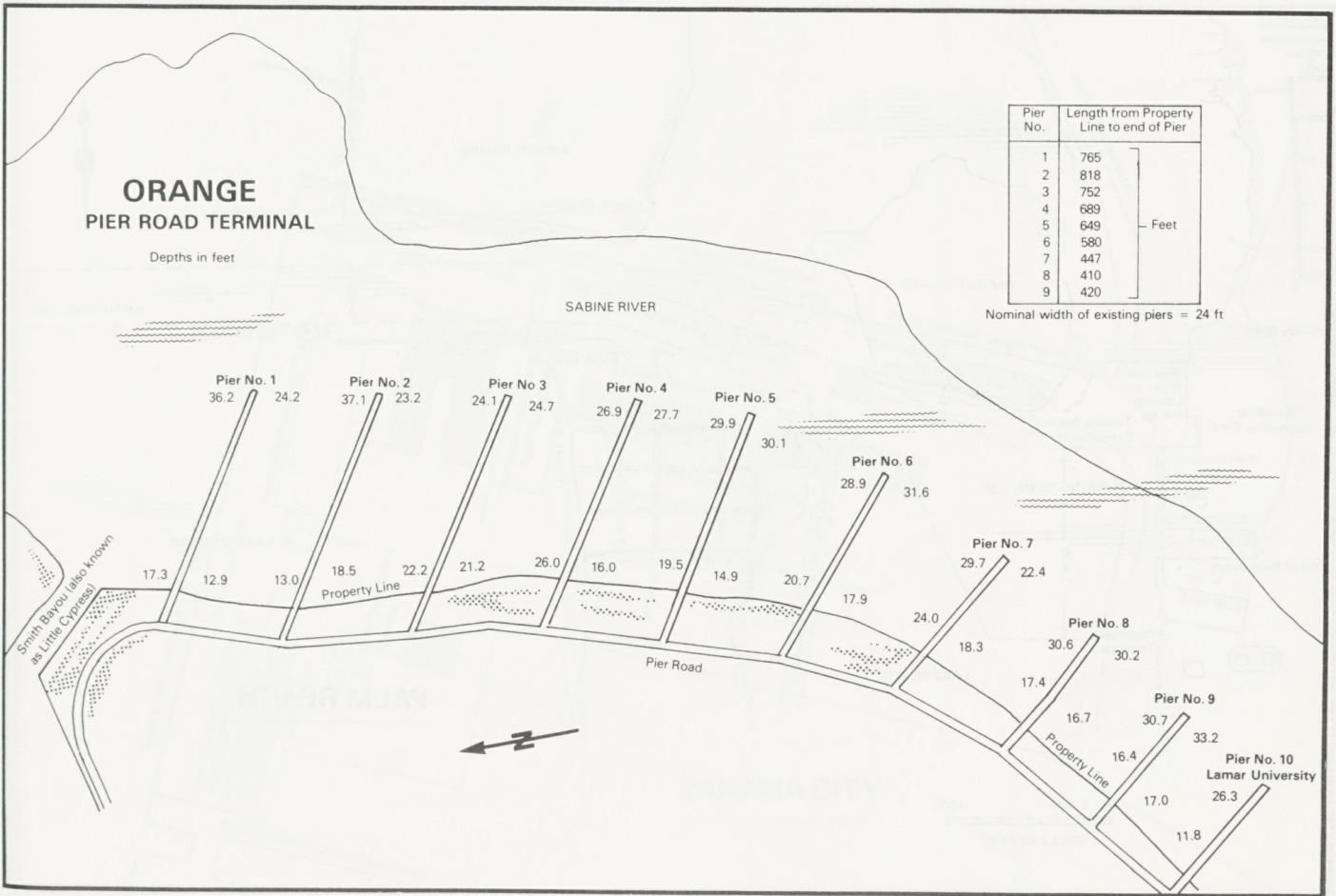
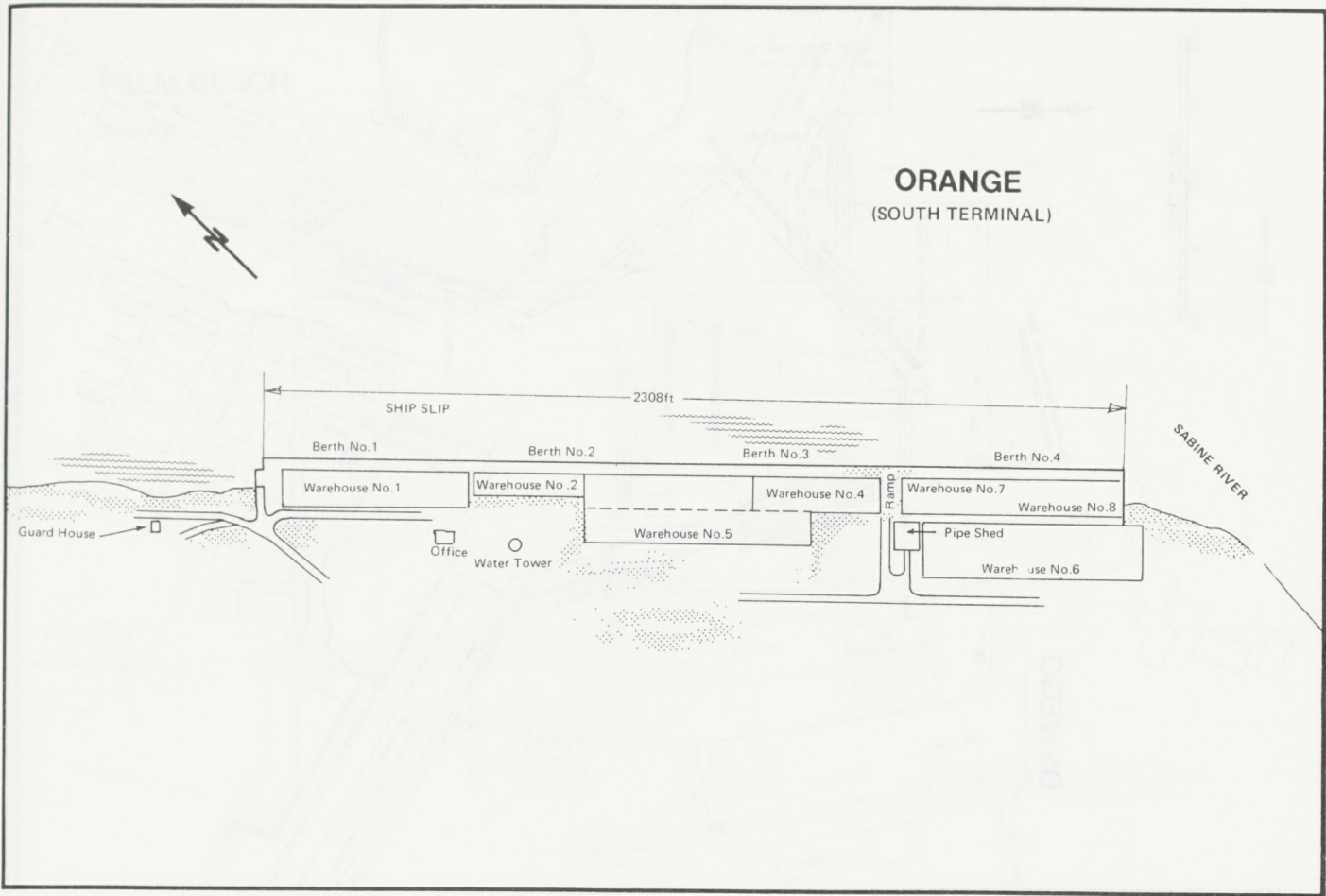


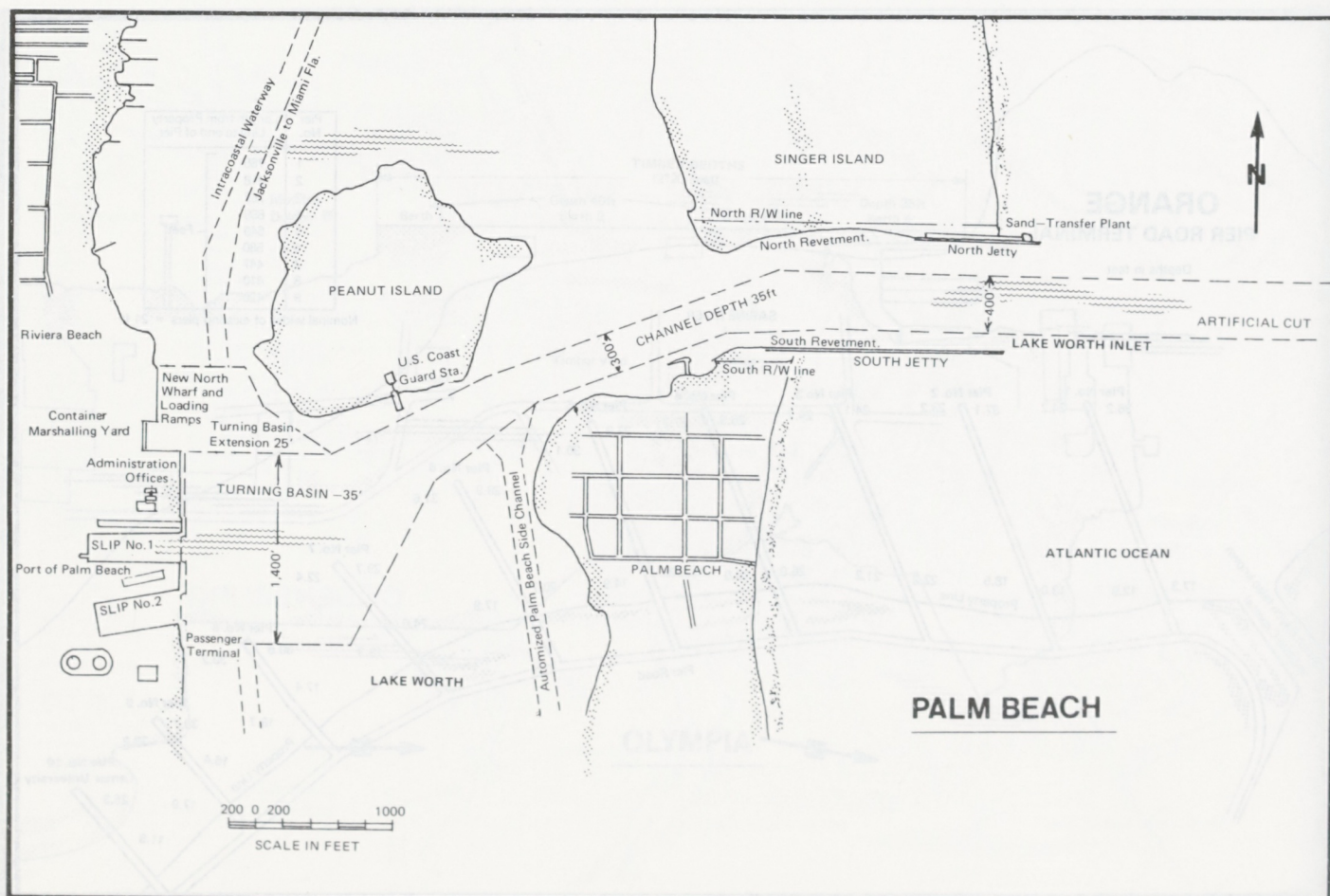
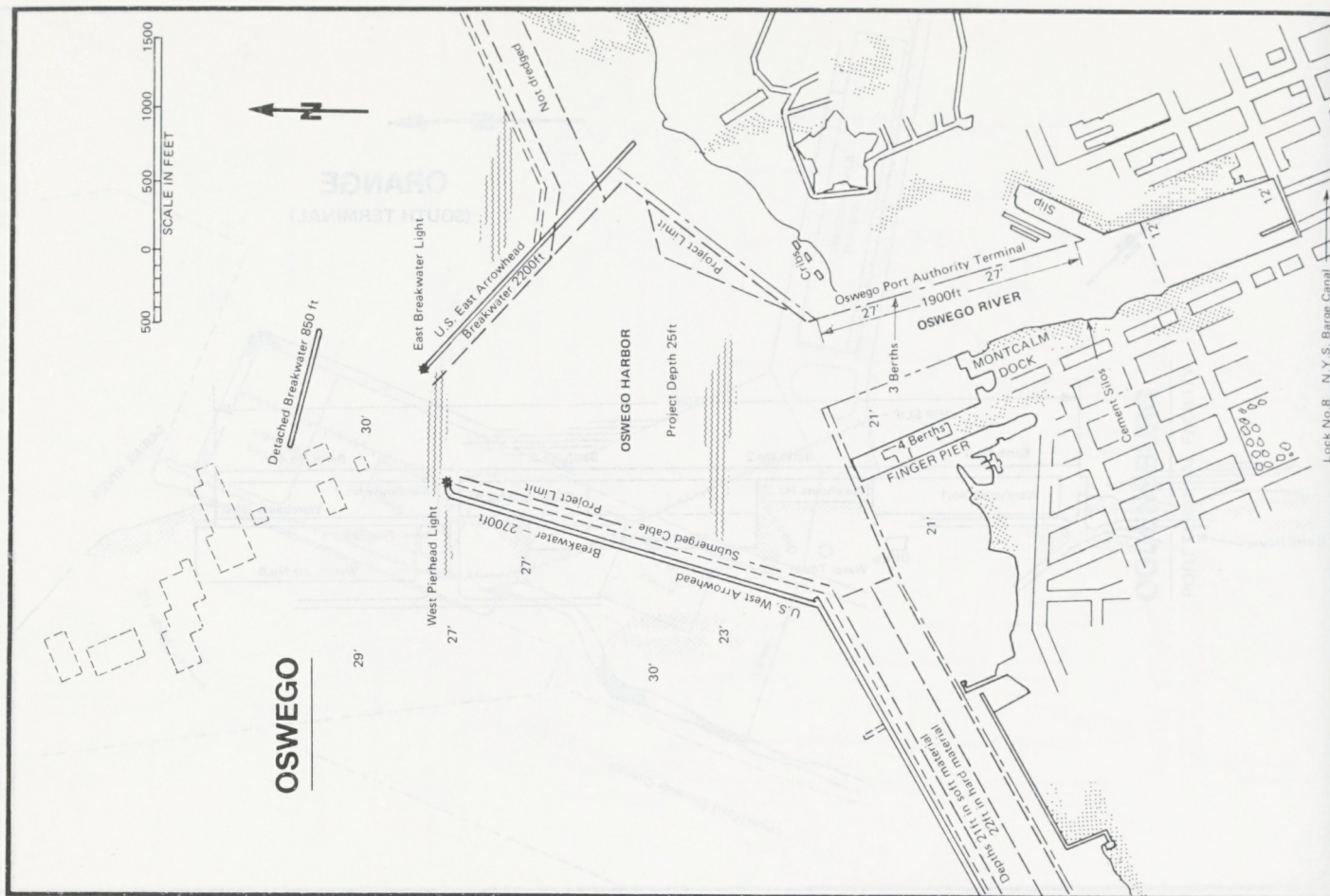




OGDENSBURG
PORT TERMINAL FACILITY

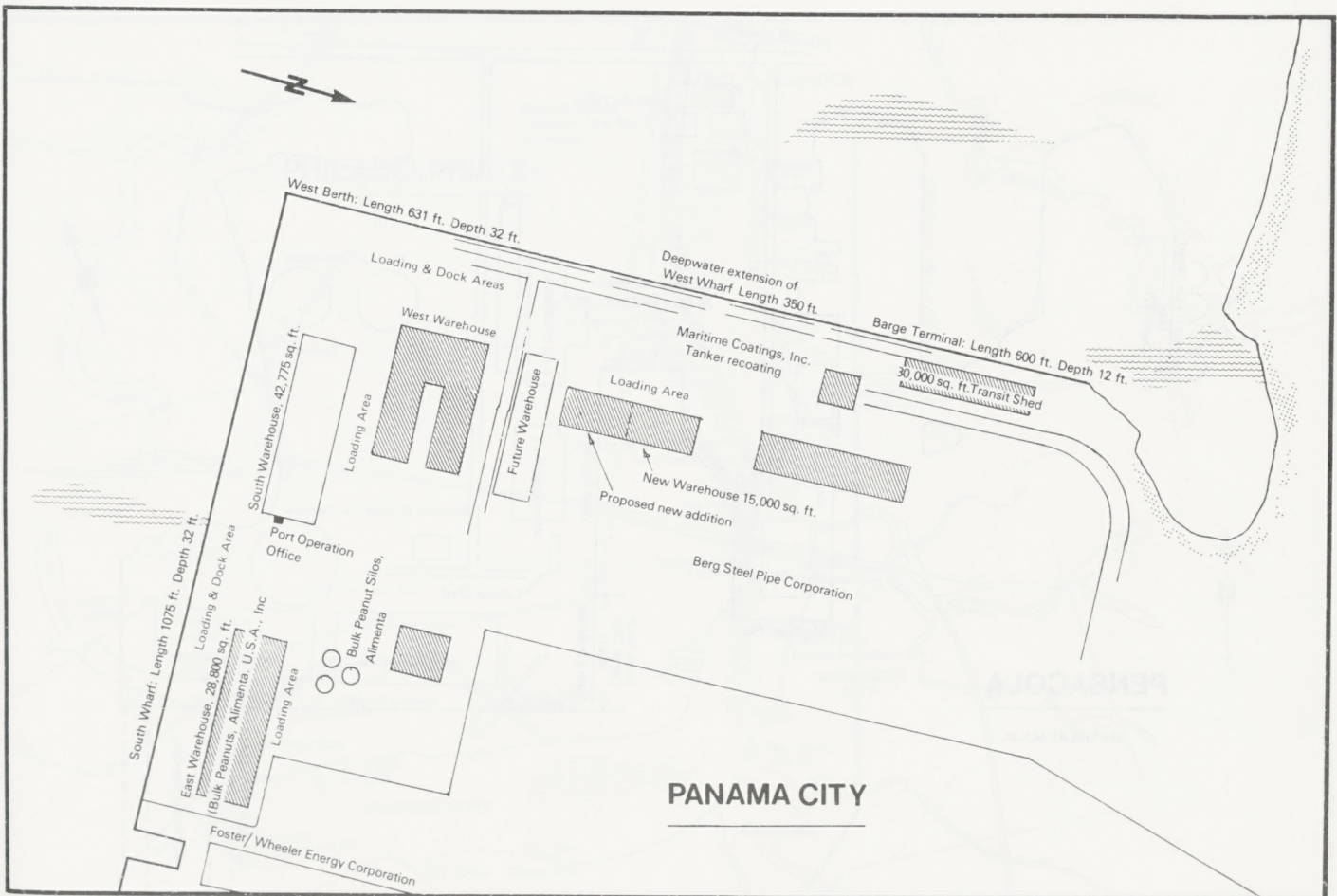
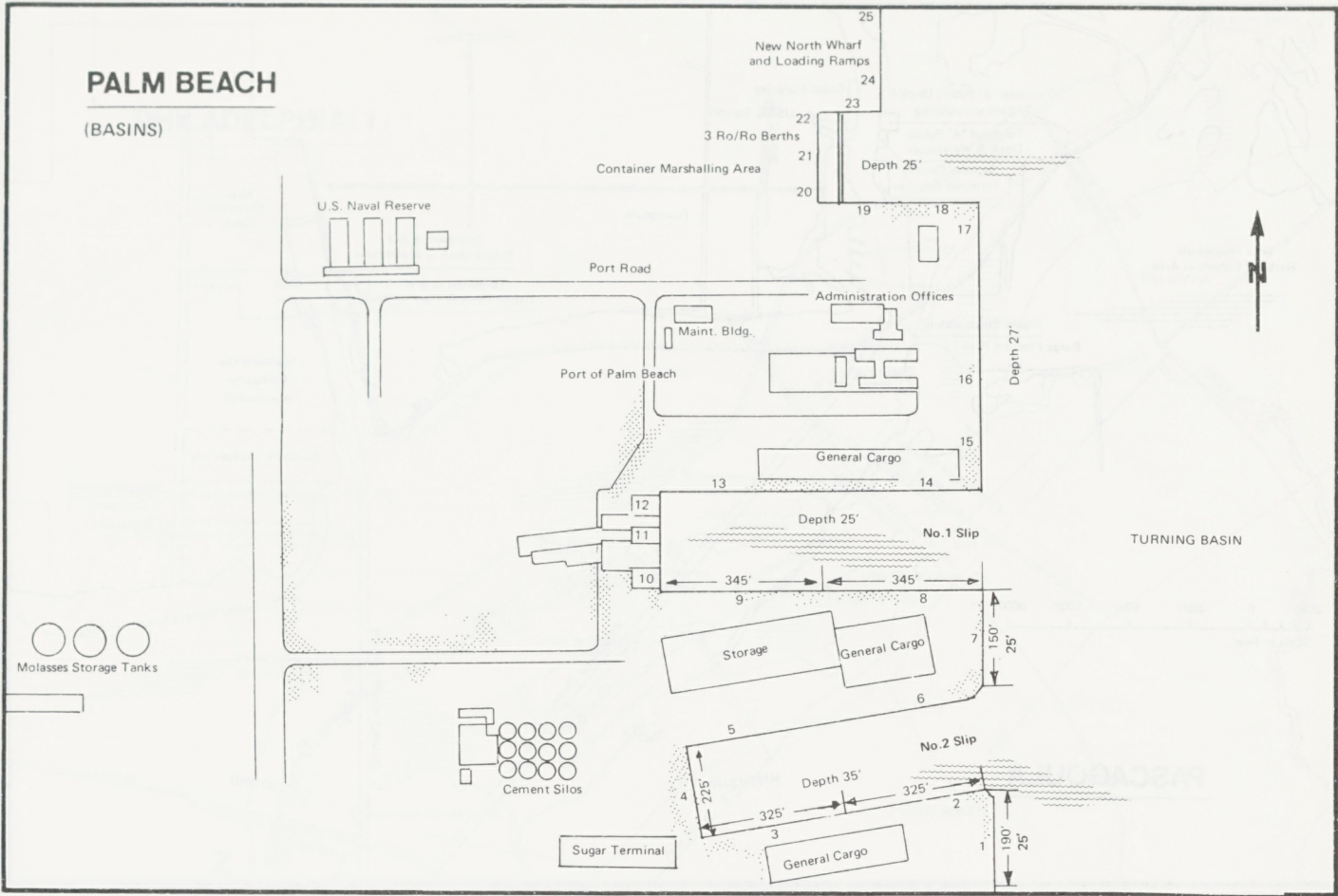


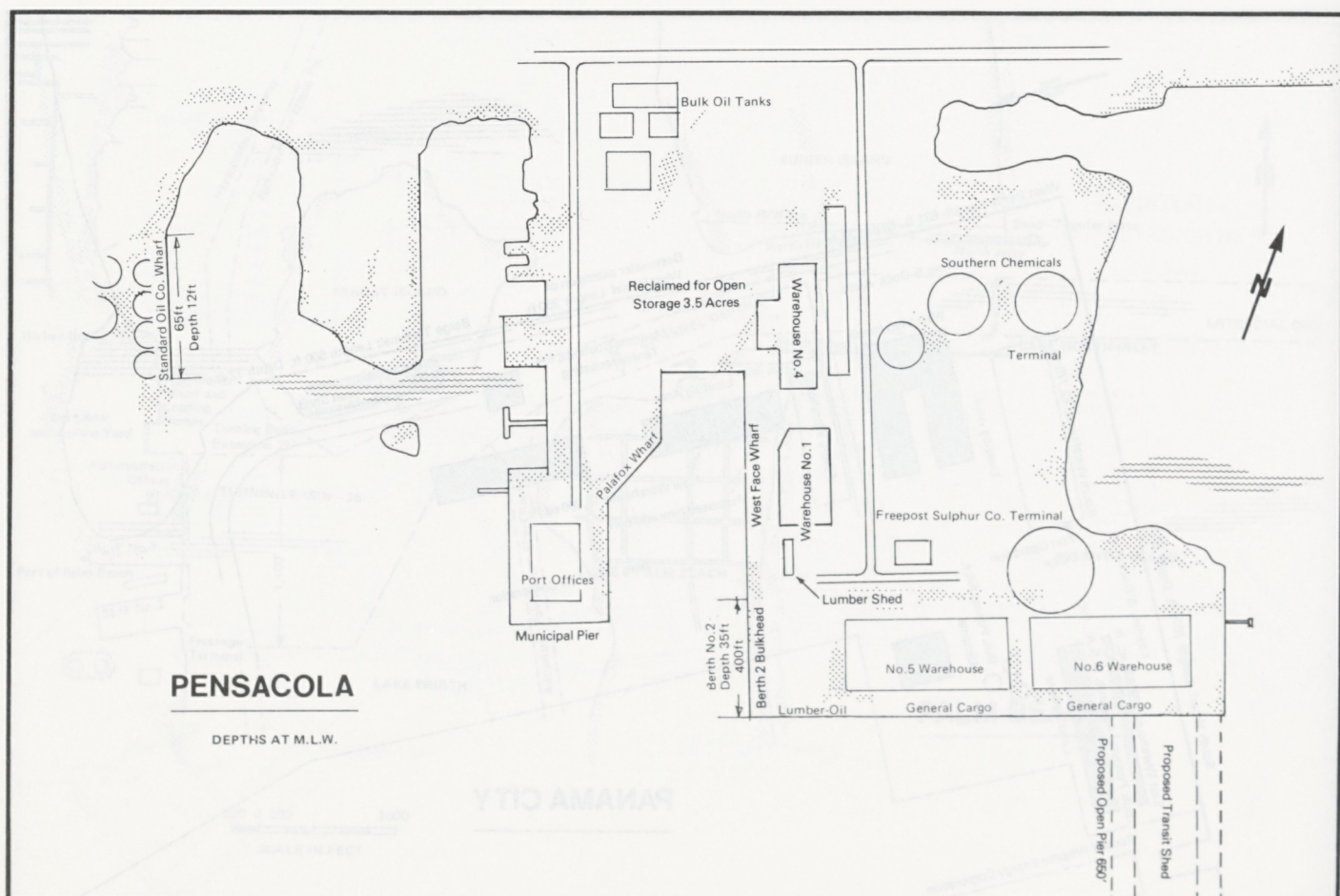
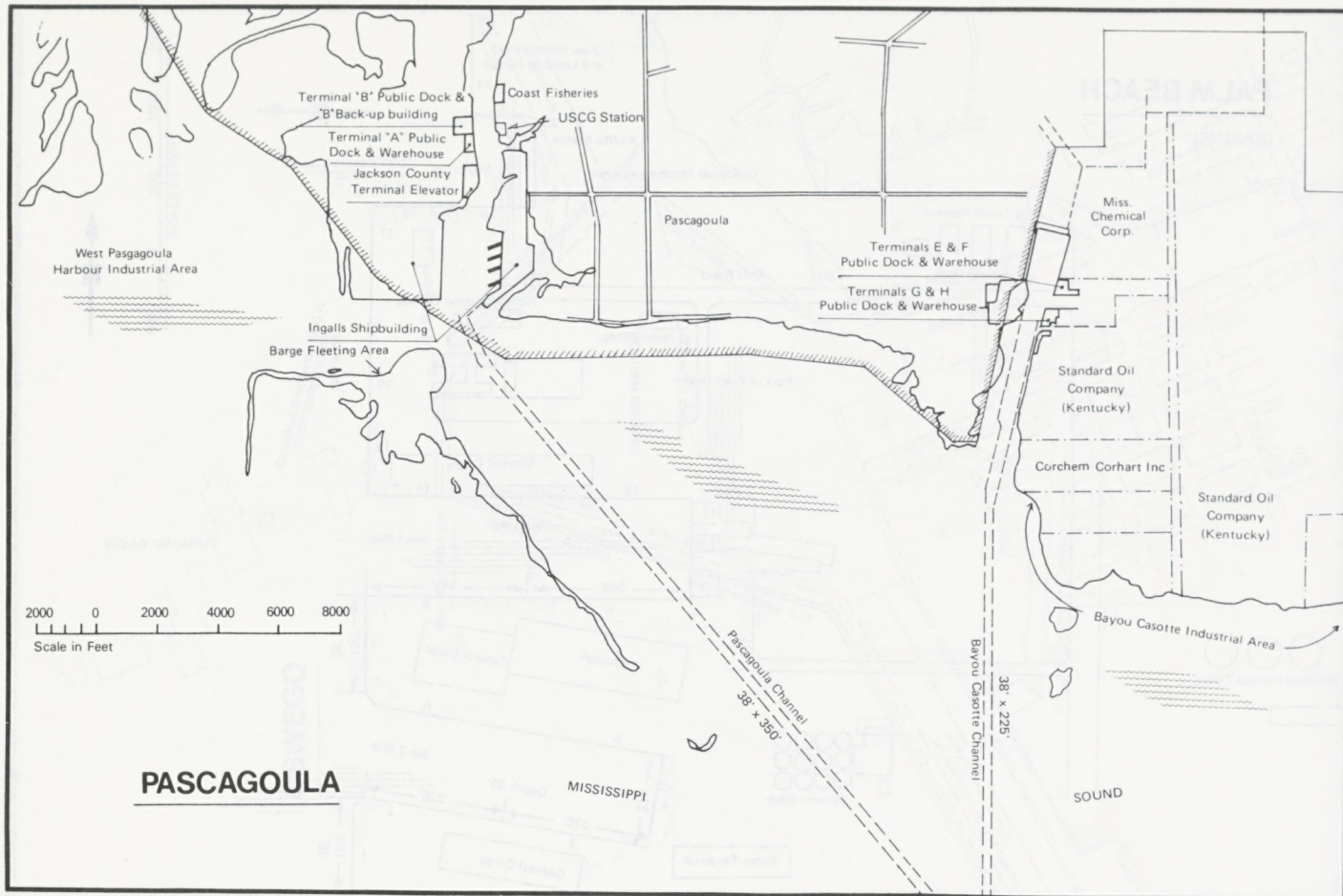




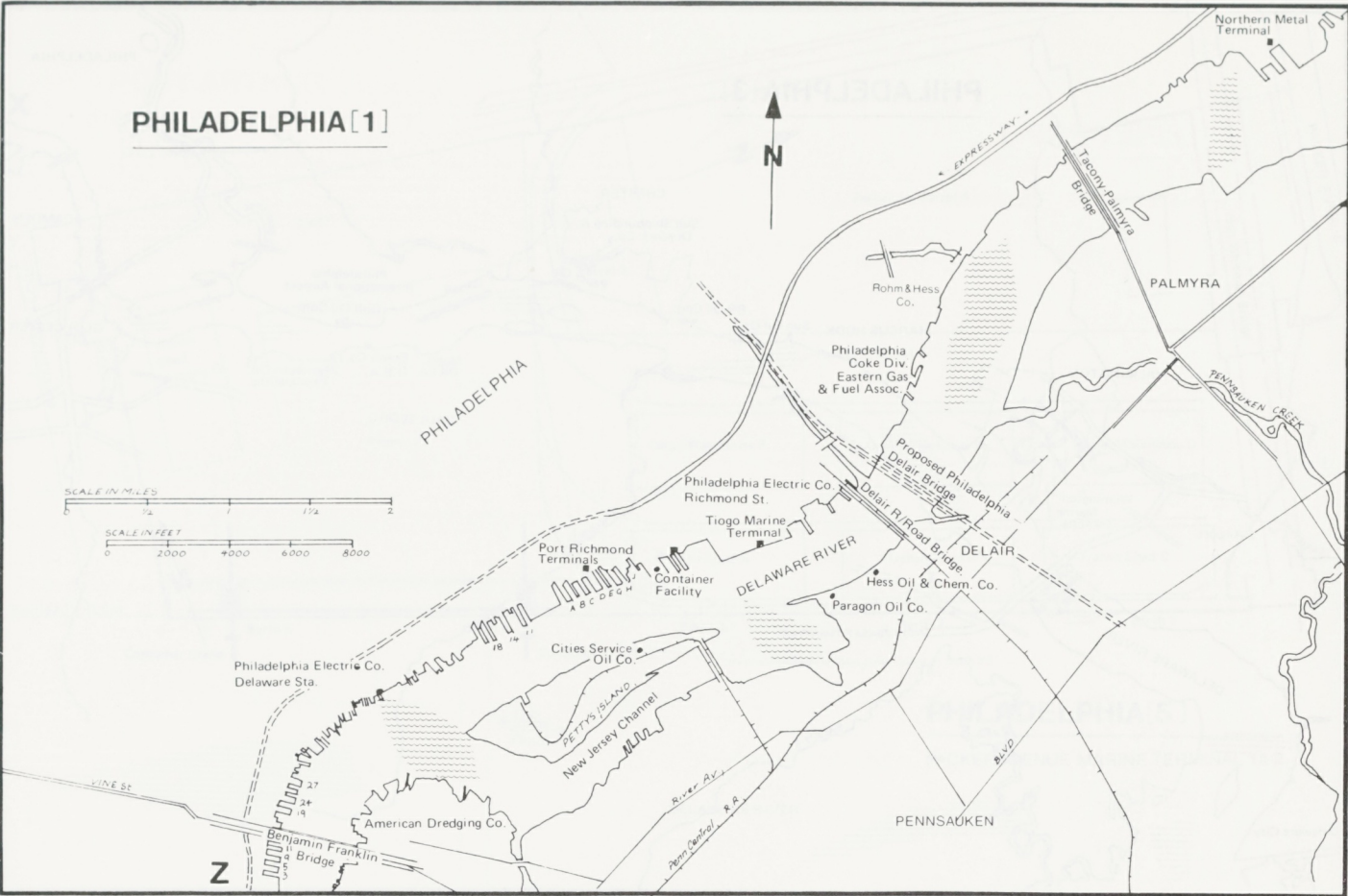
PALM BEACH

(BASINS)

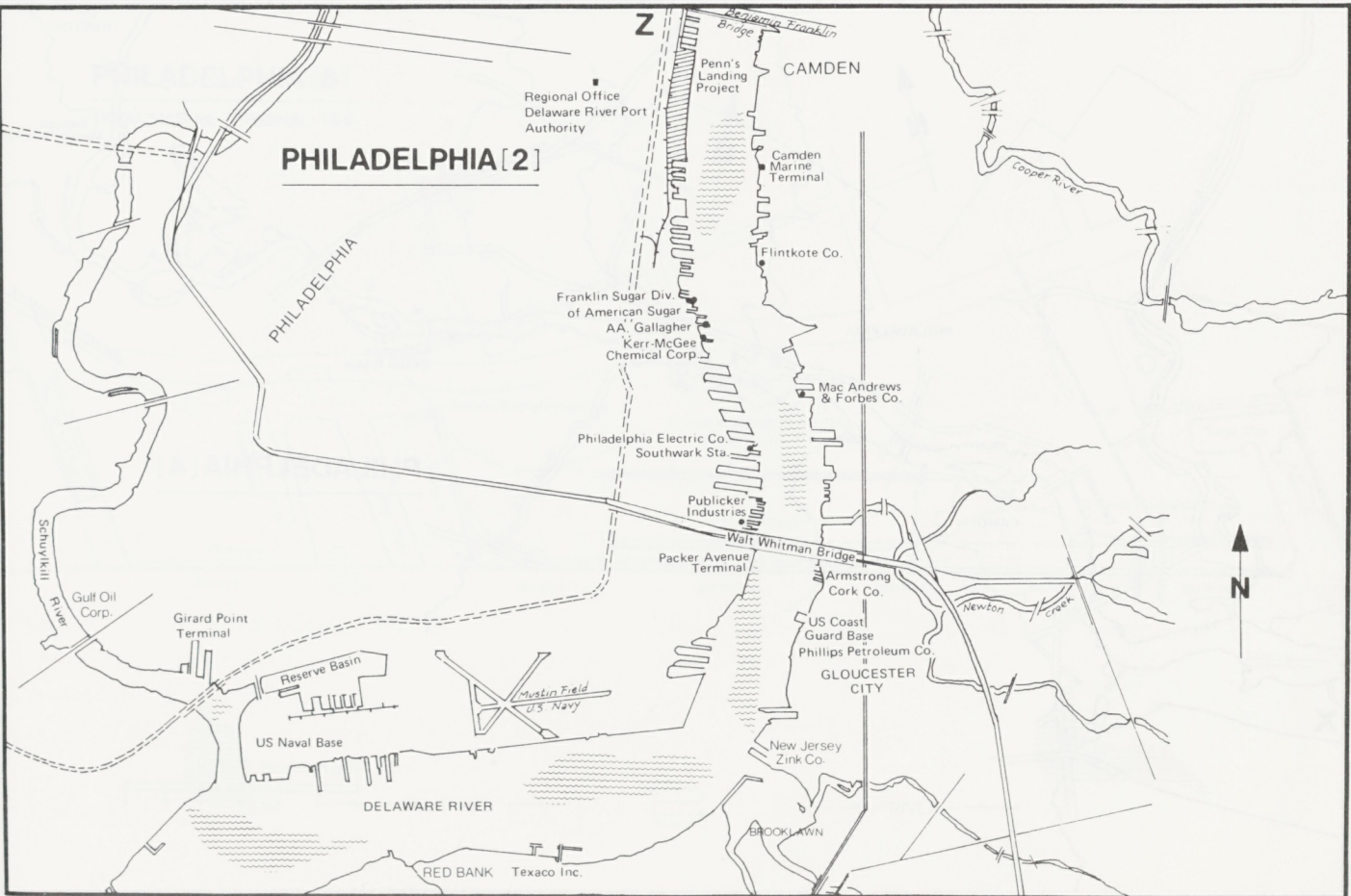


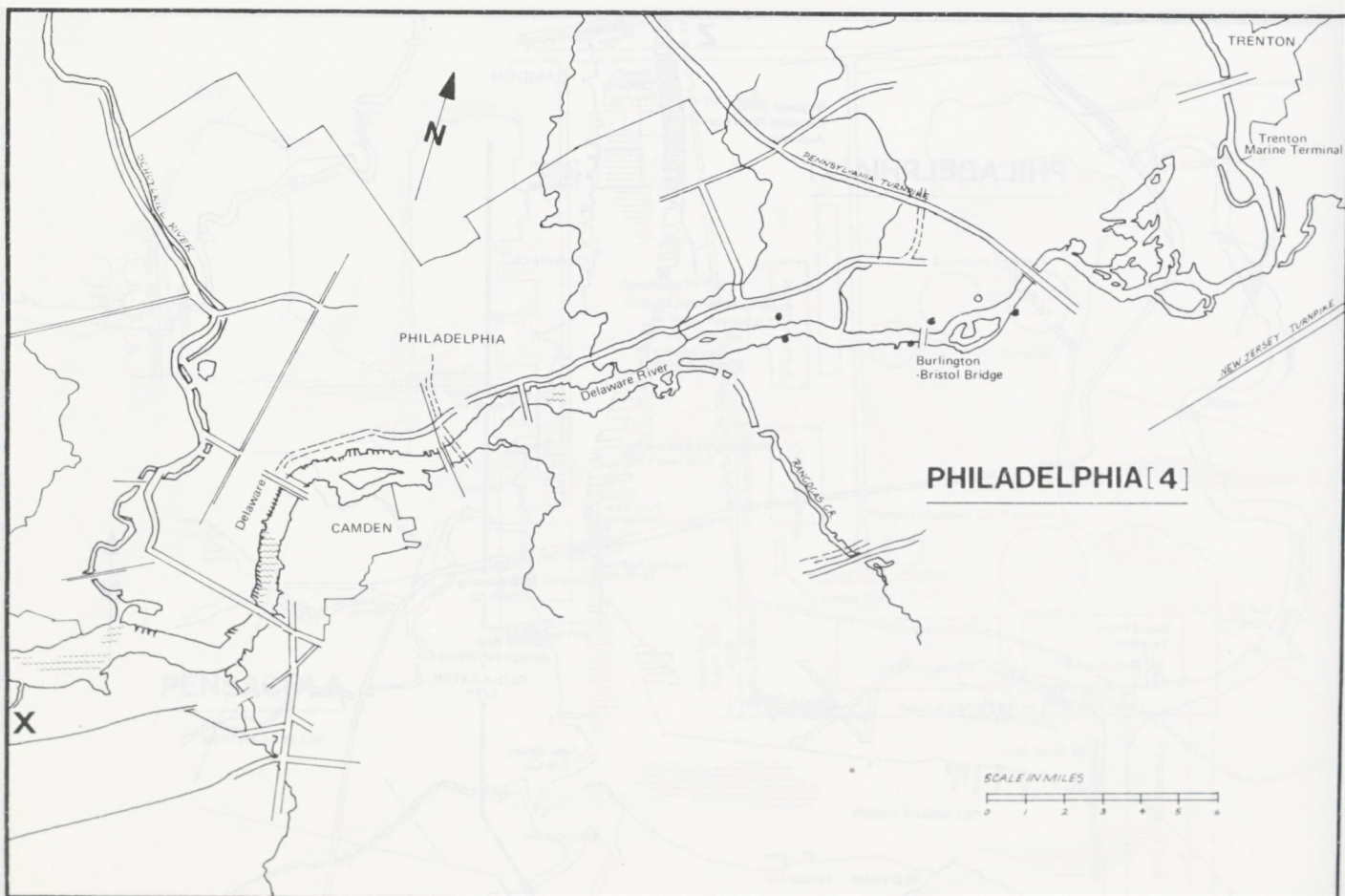
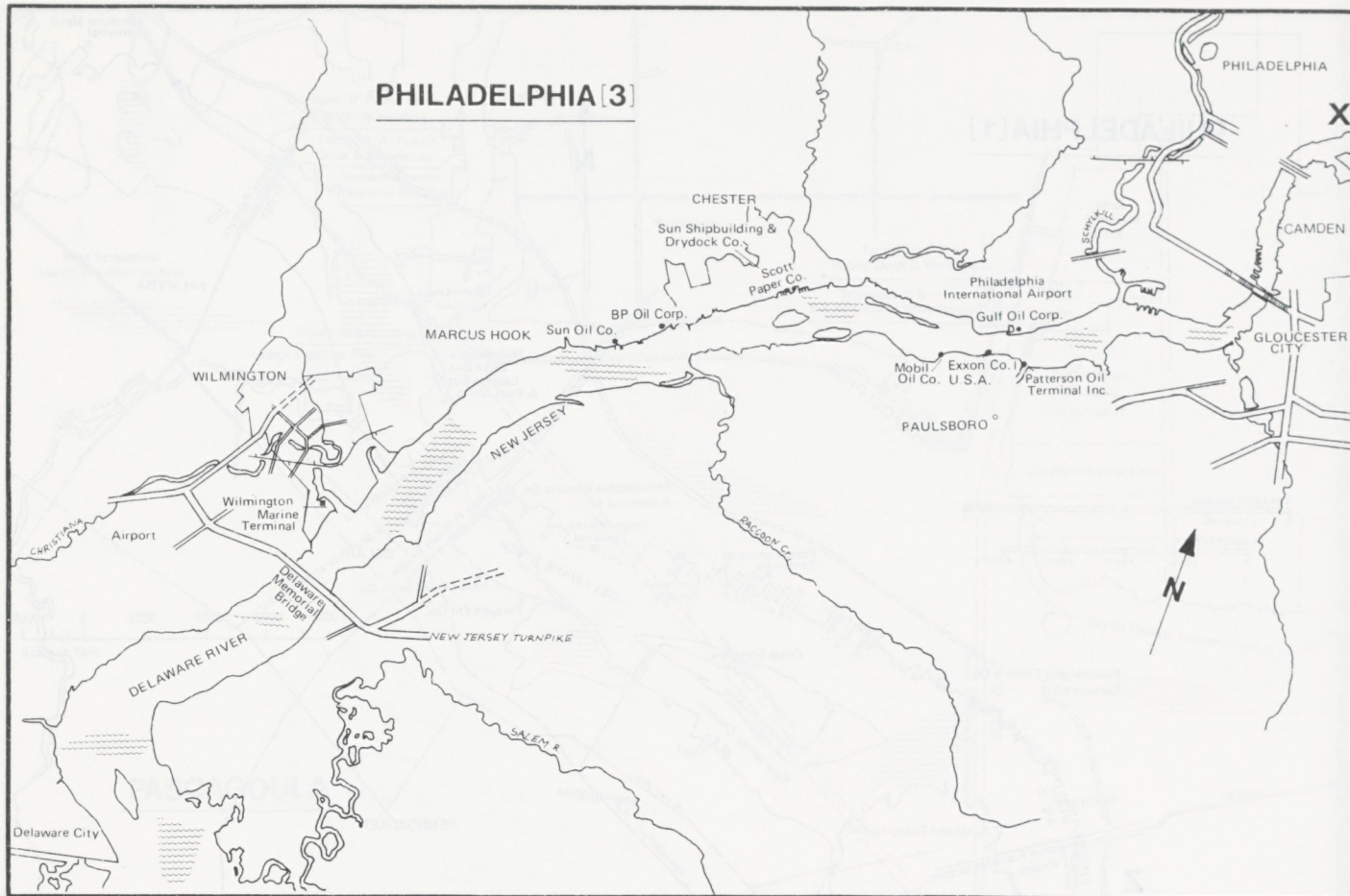


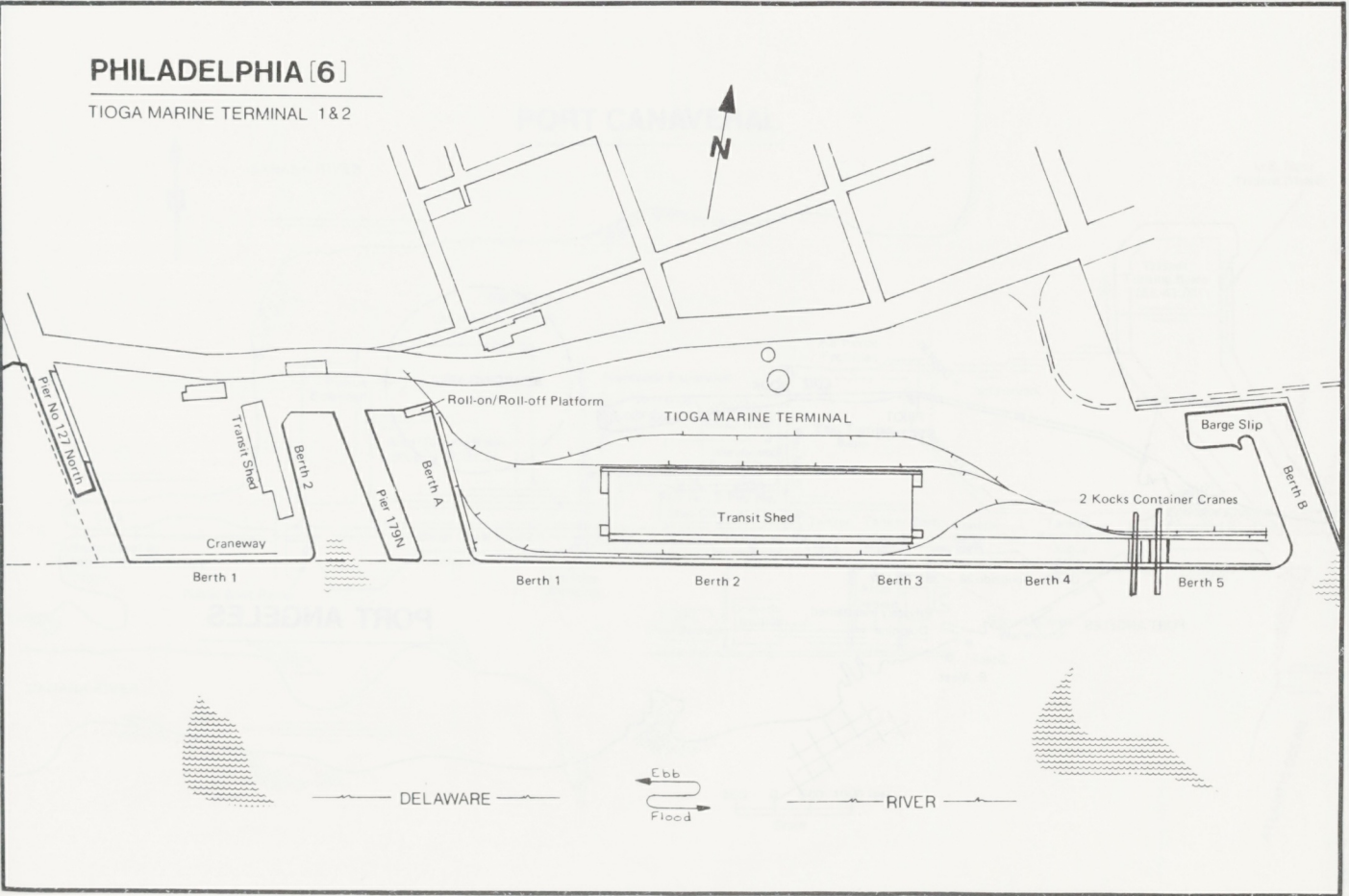
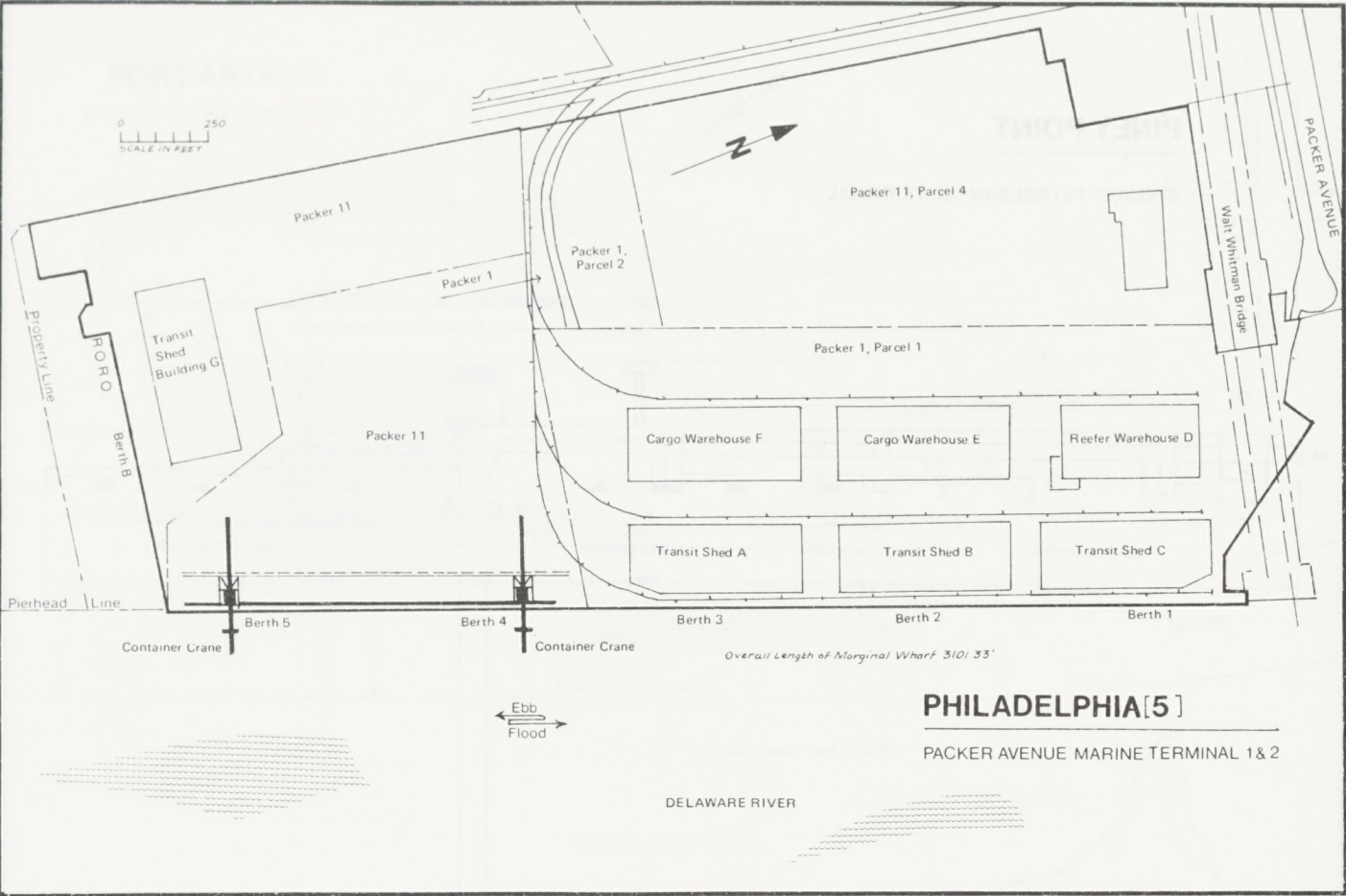
PHILADELPHIA [1]



PHILADELPHIA [2]

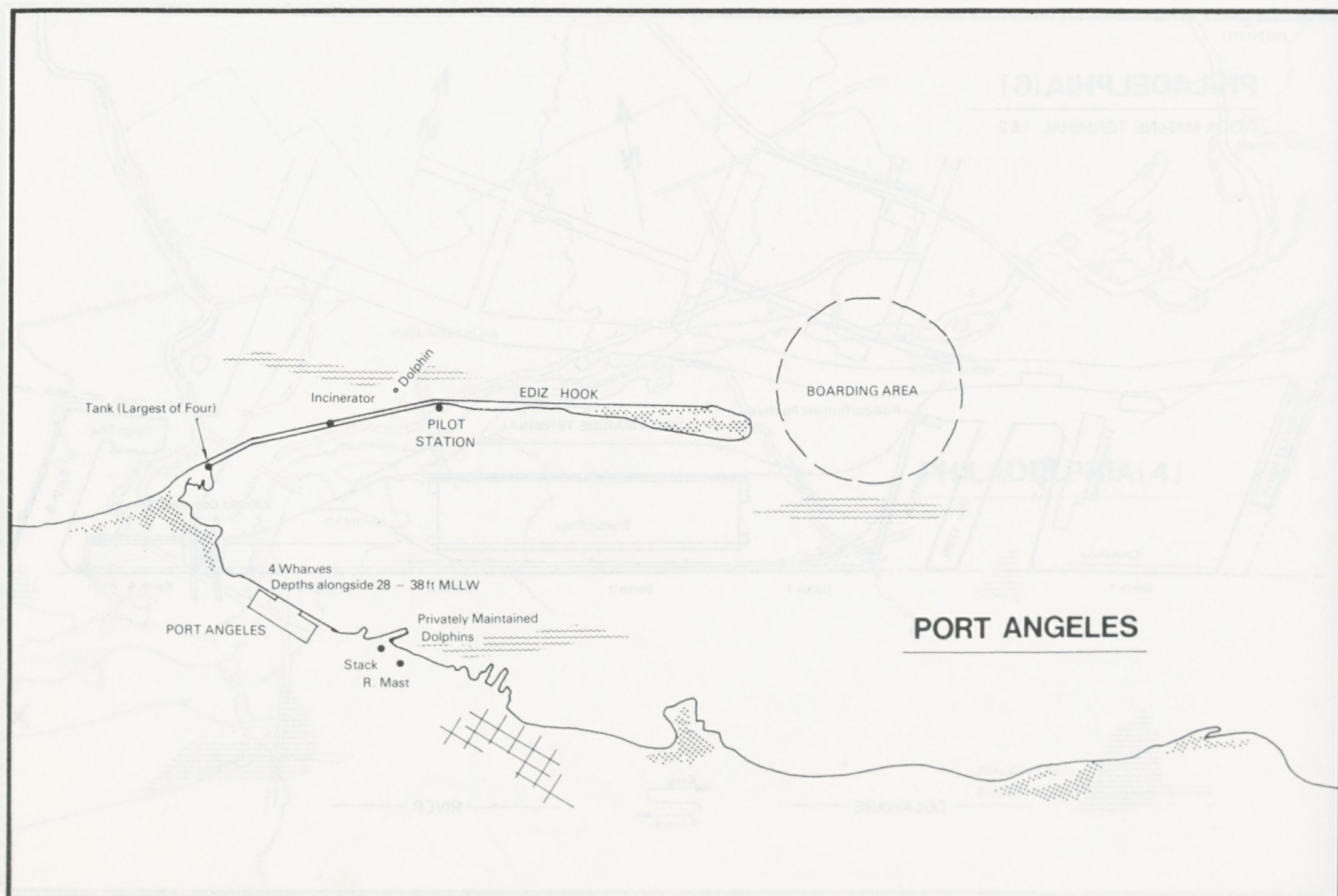
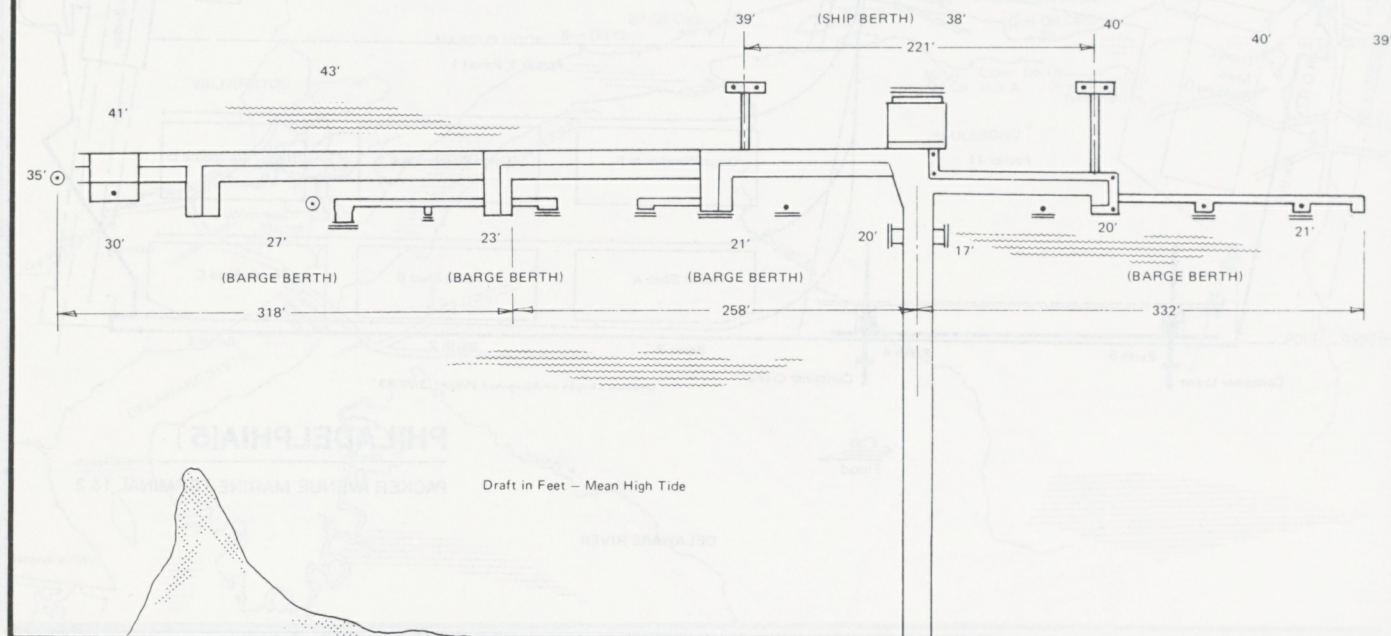


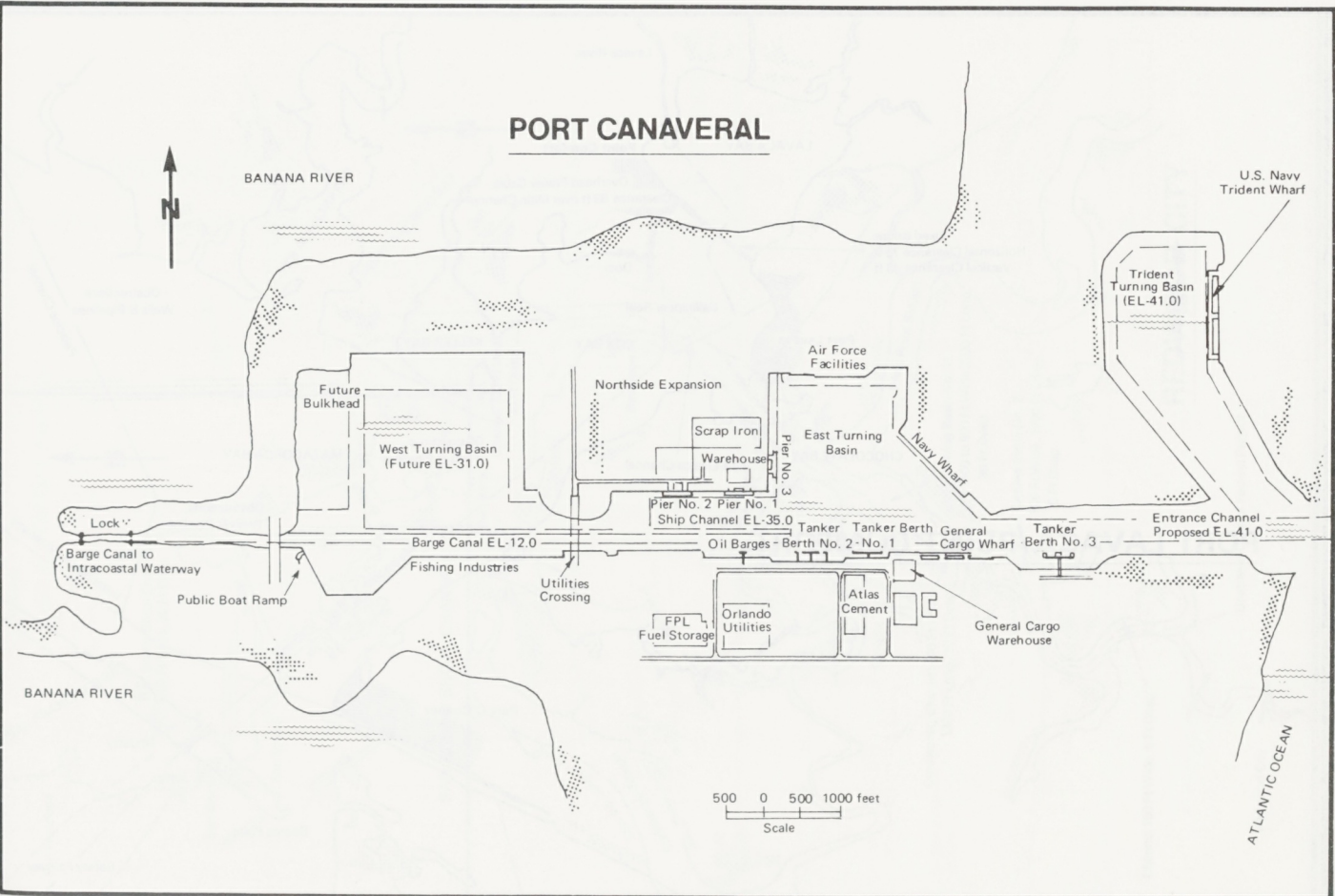
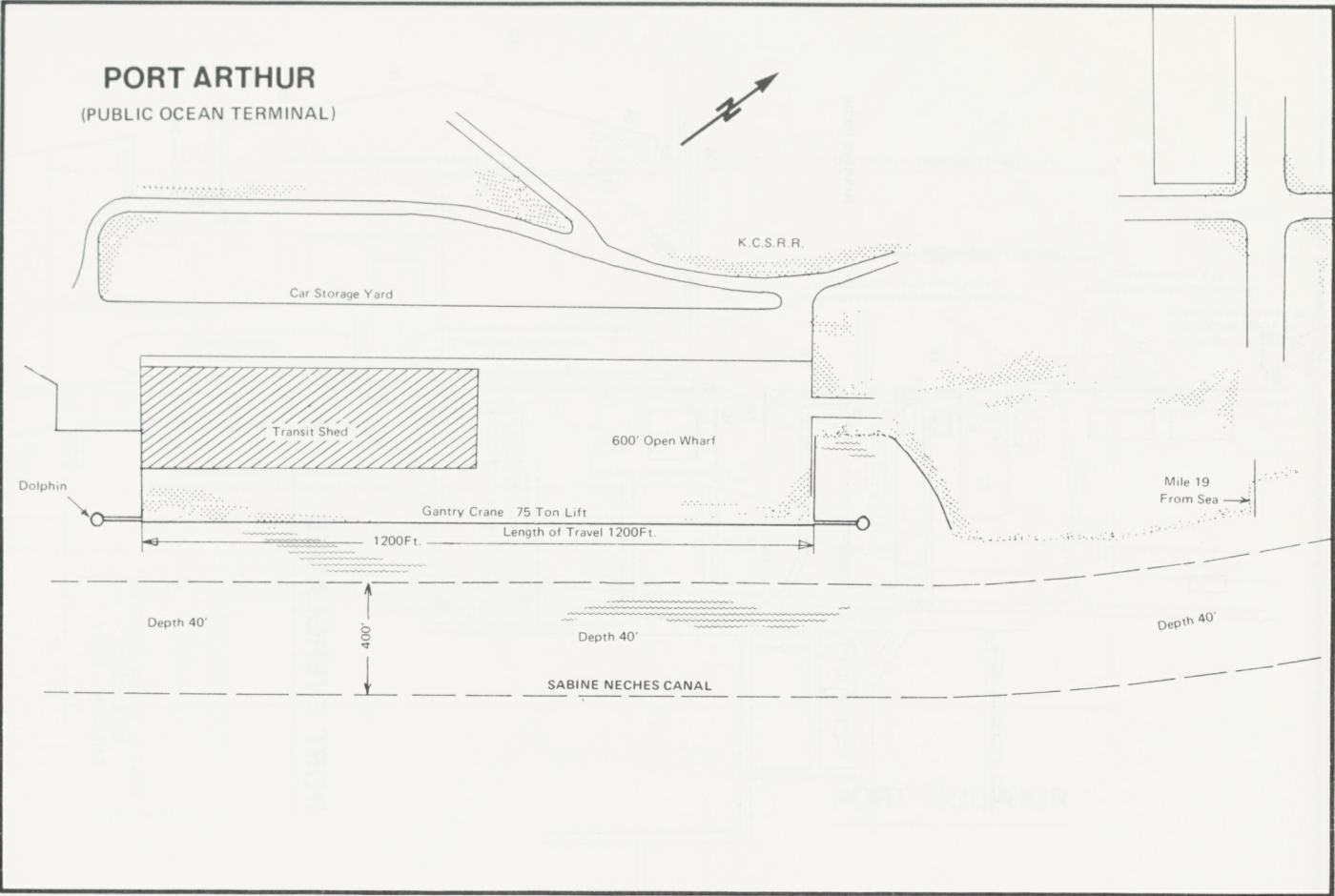


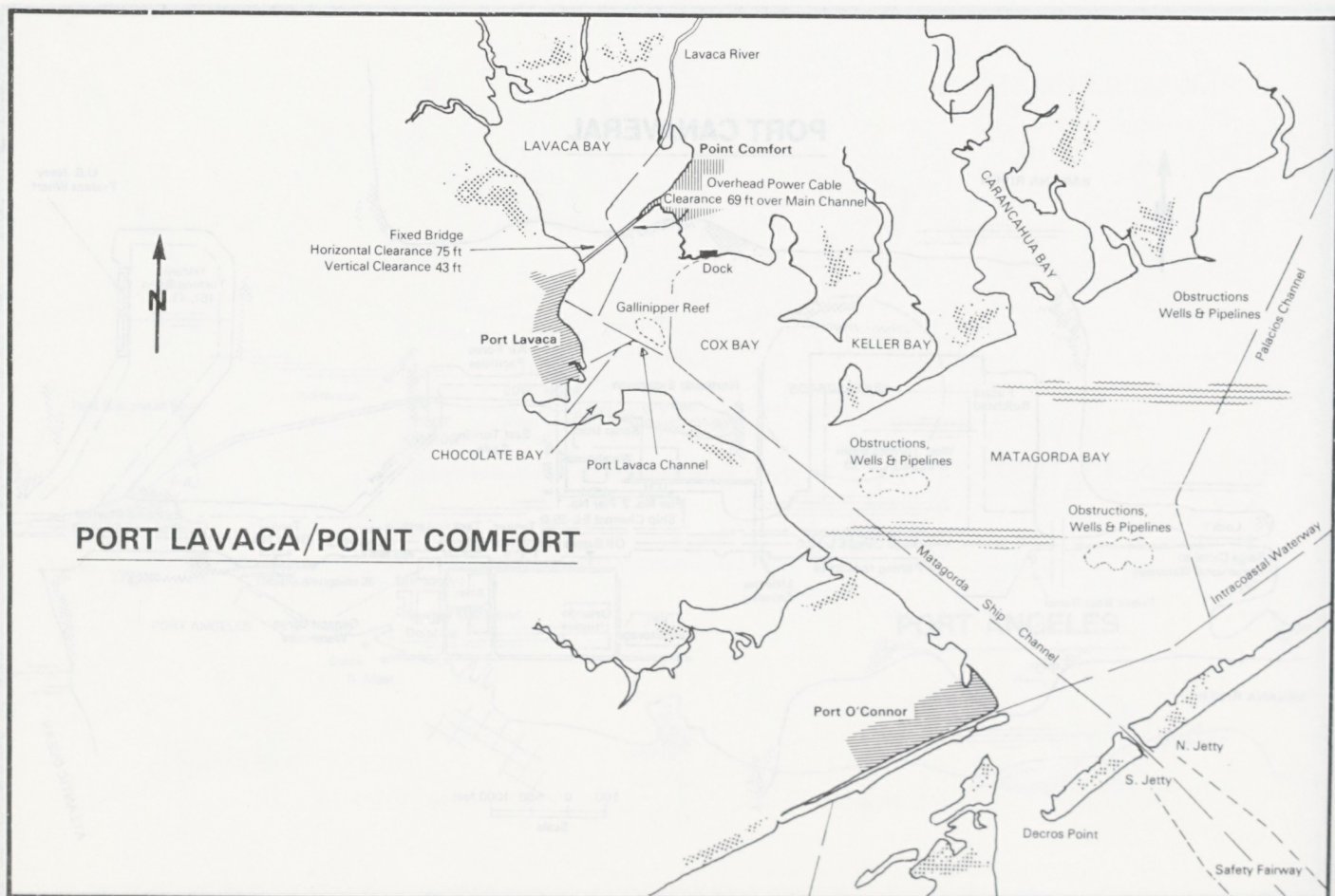
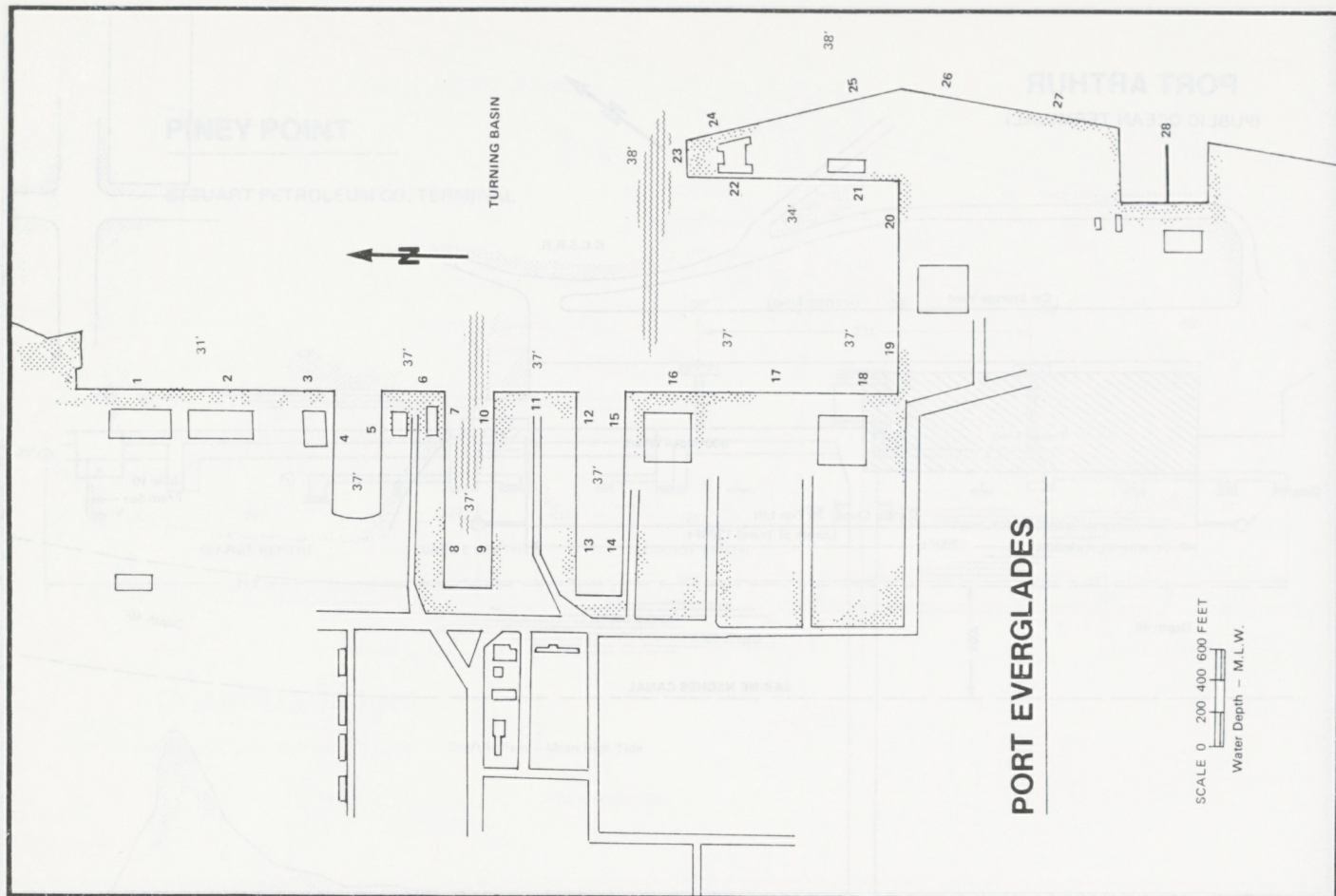


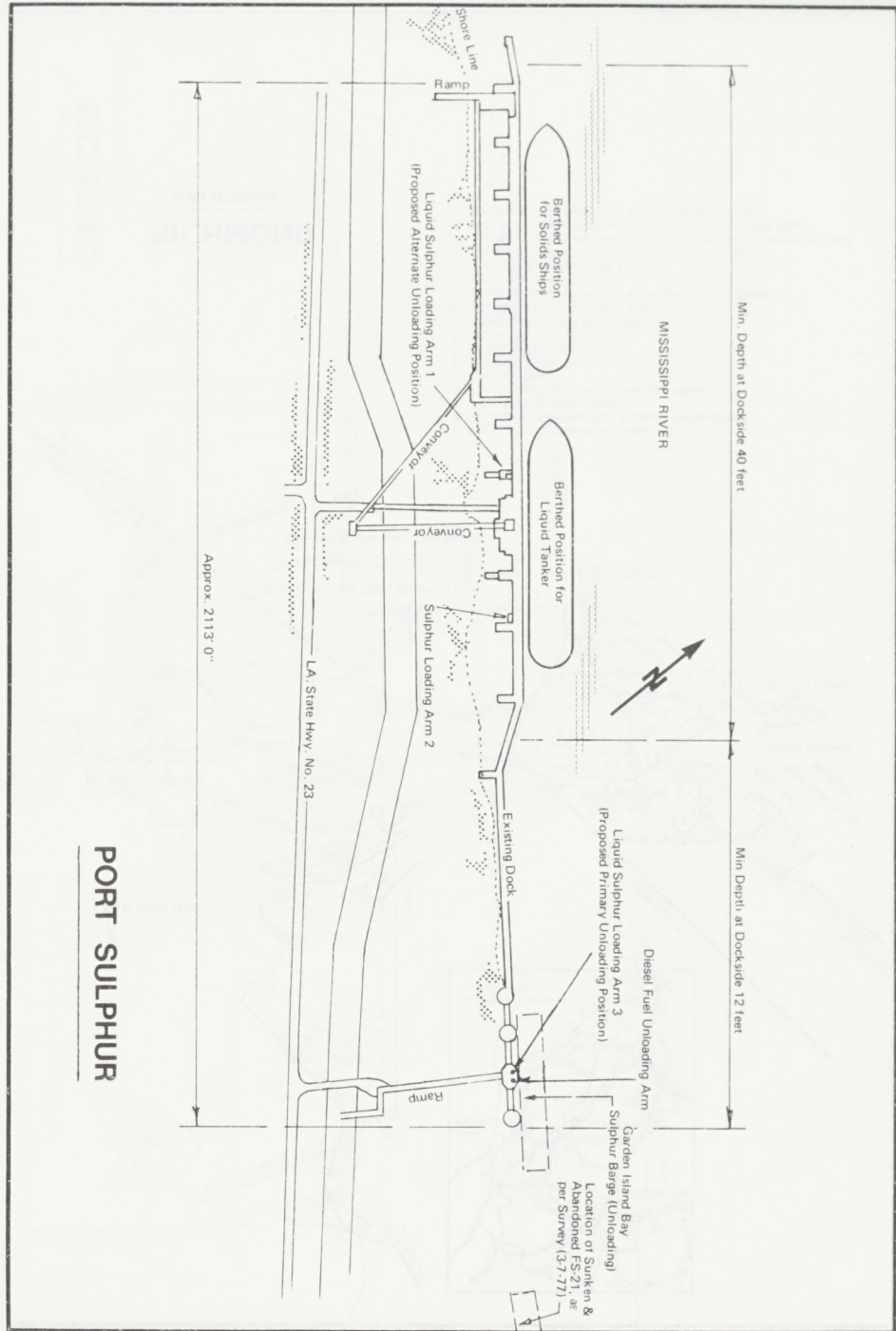
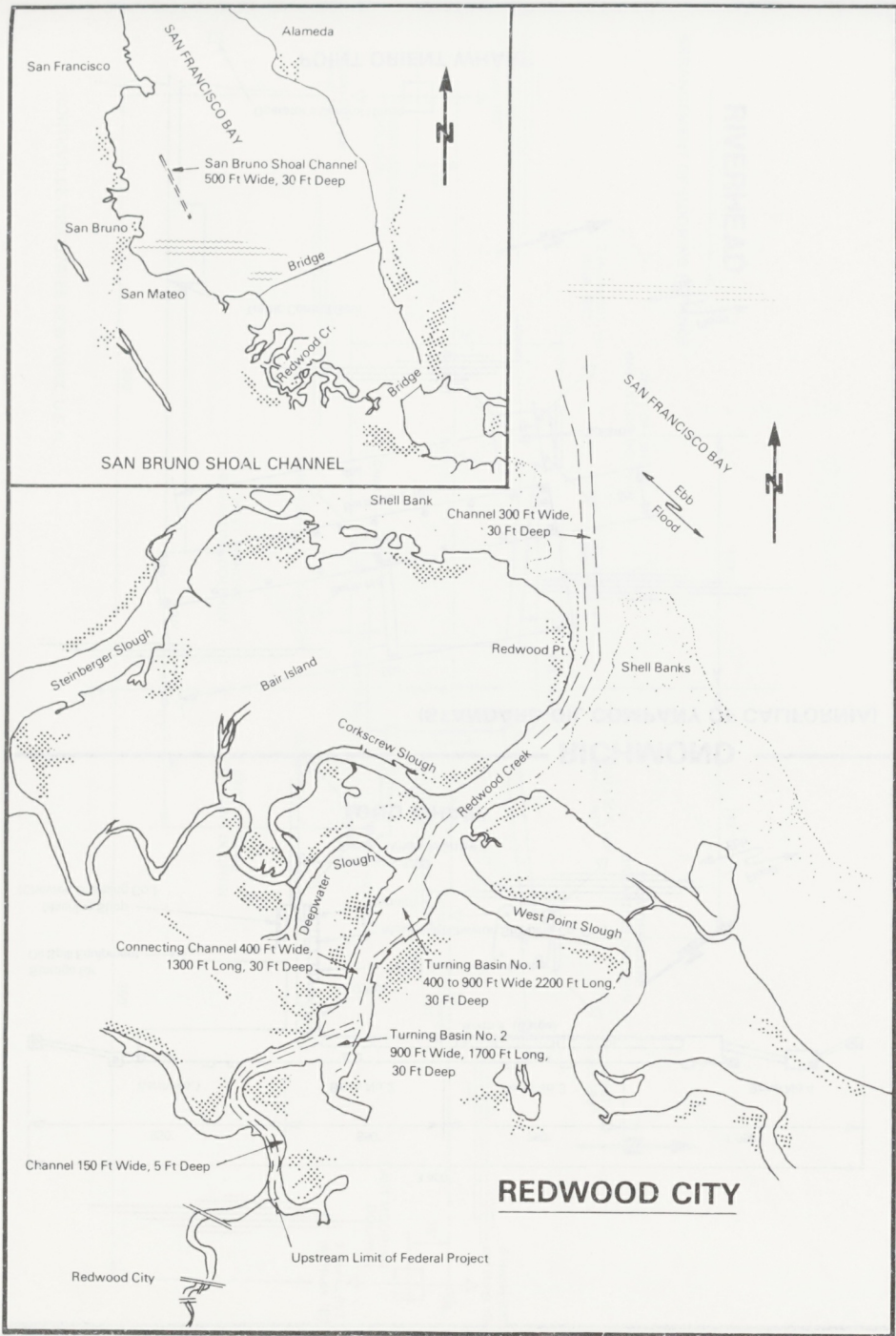
PHILADELPHIA **PINEY POINT**

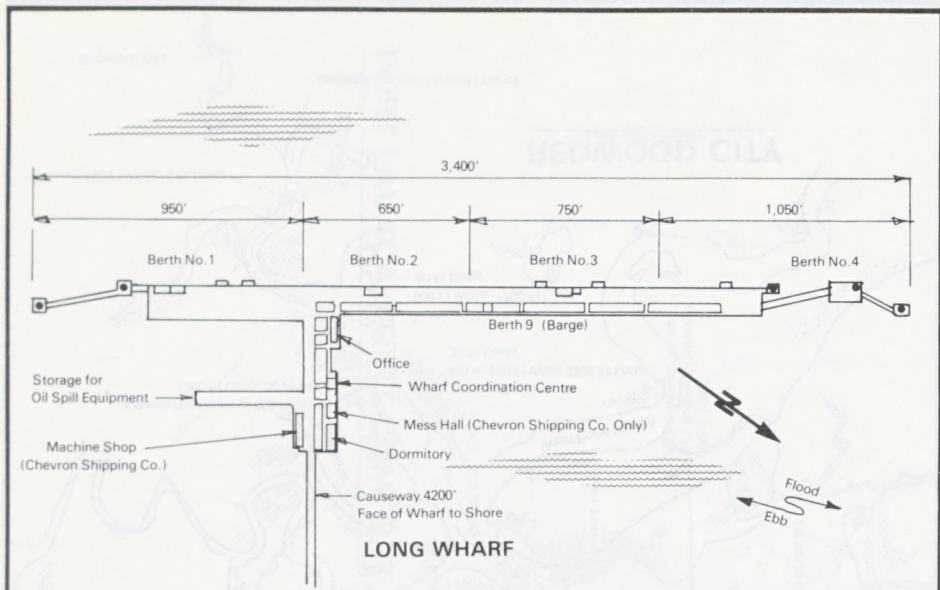
STEUART PETROLEUM CO. TERMINAL



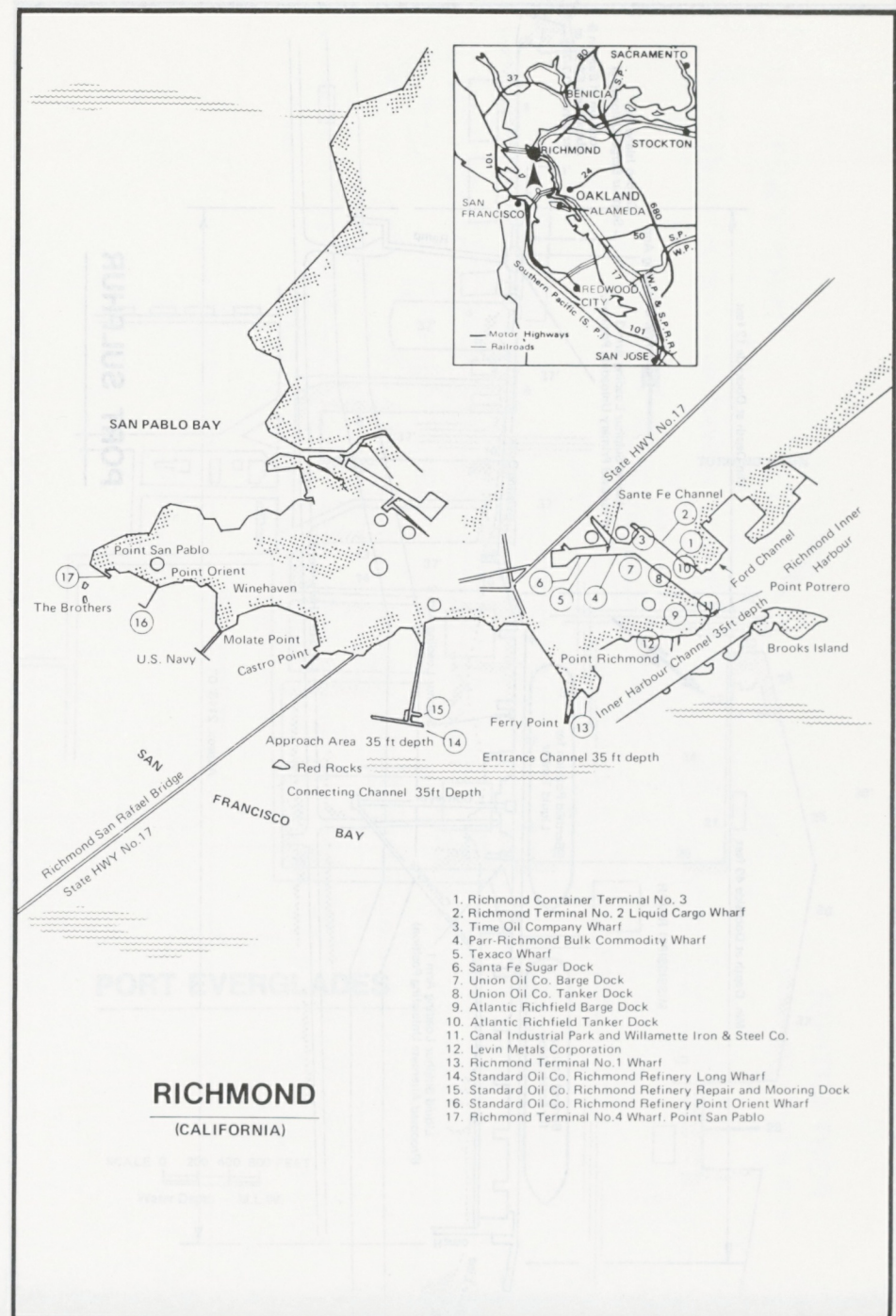
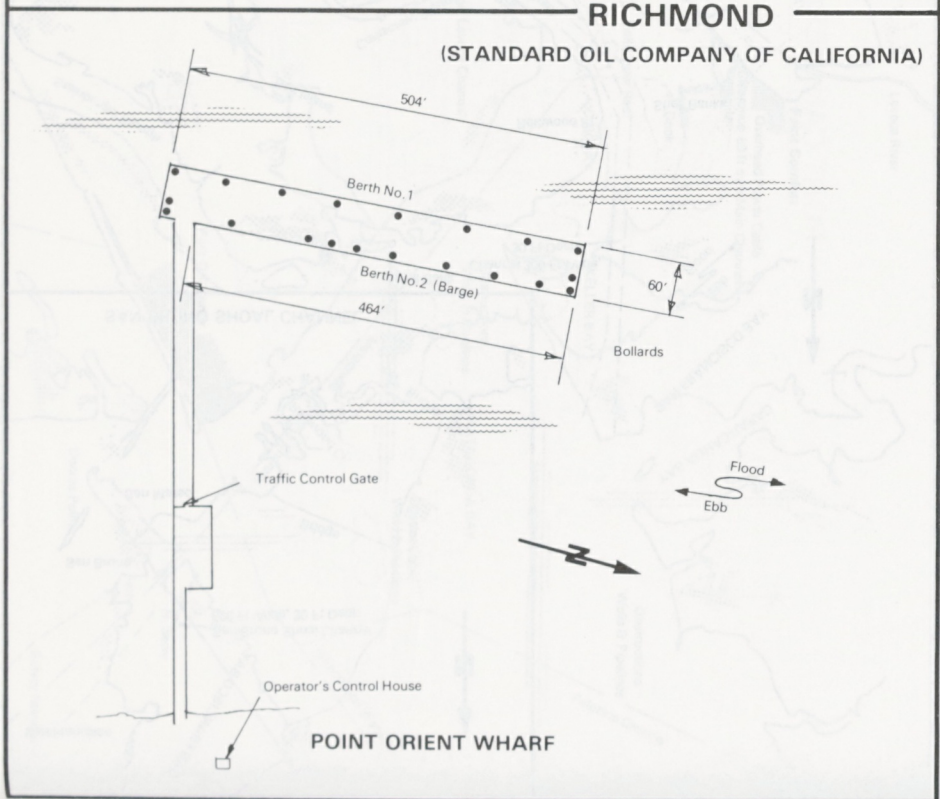


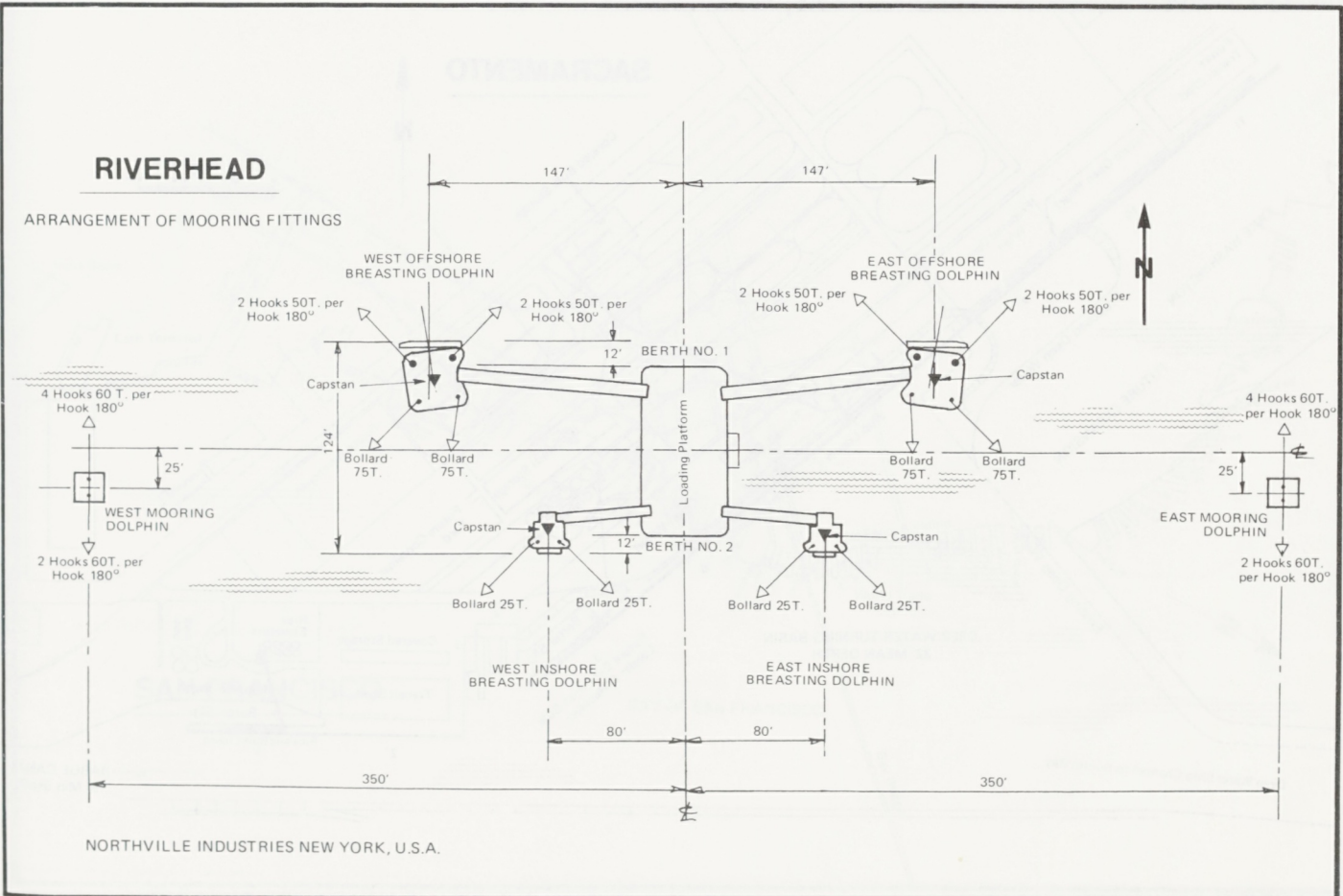
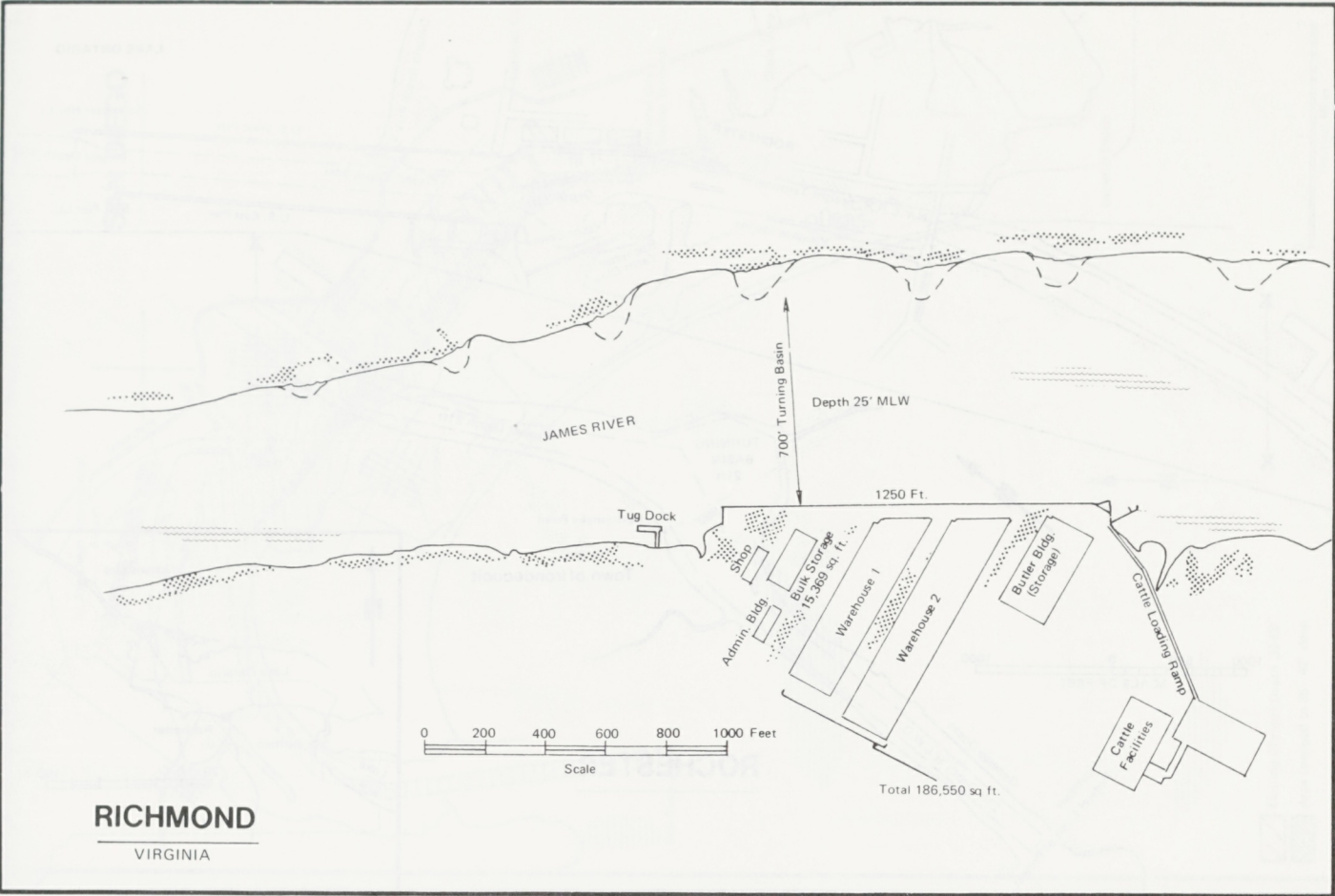


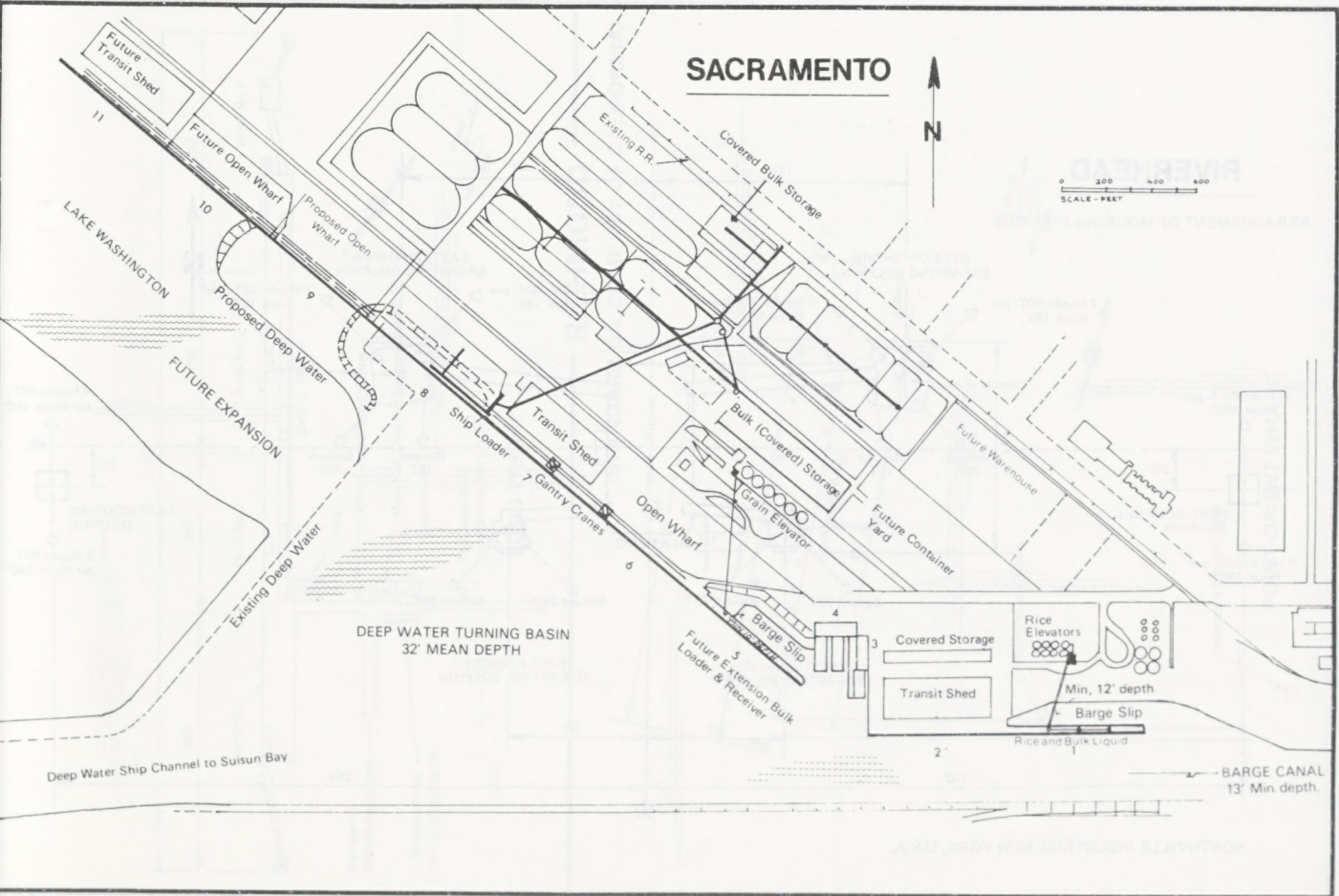
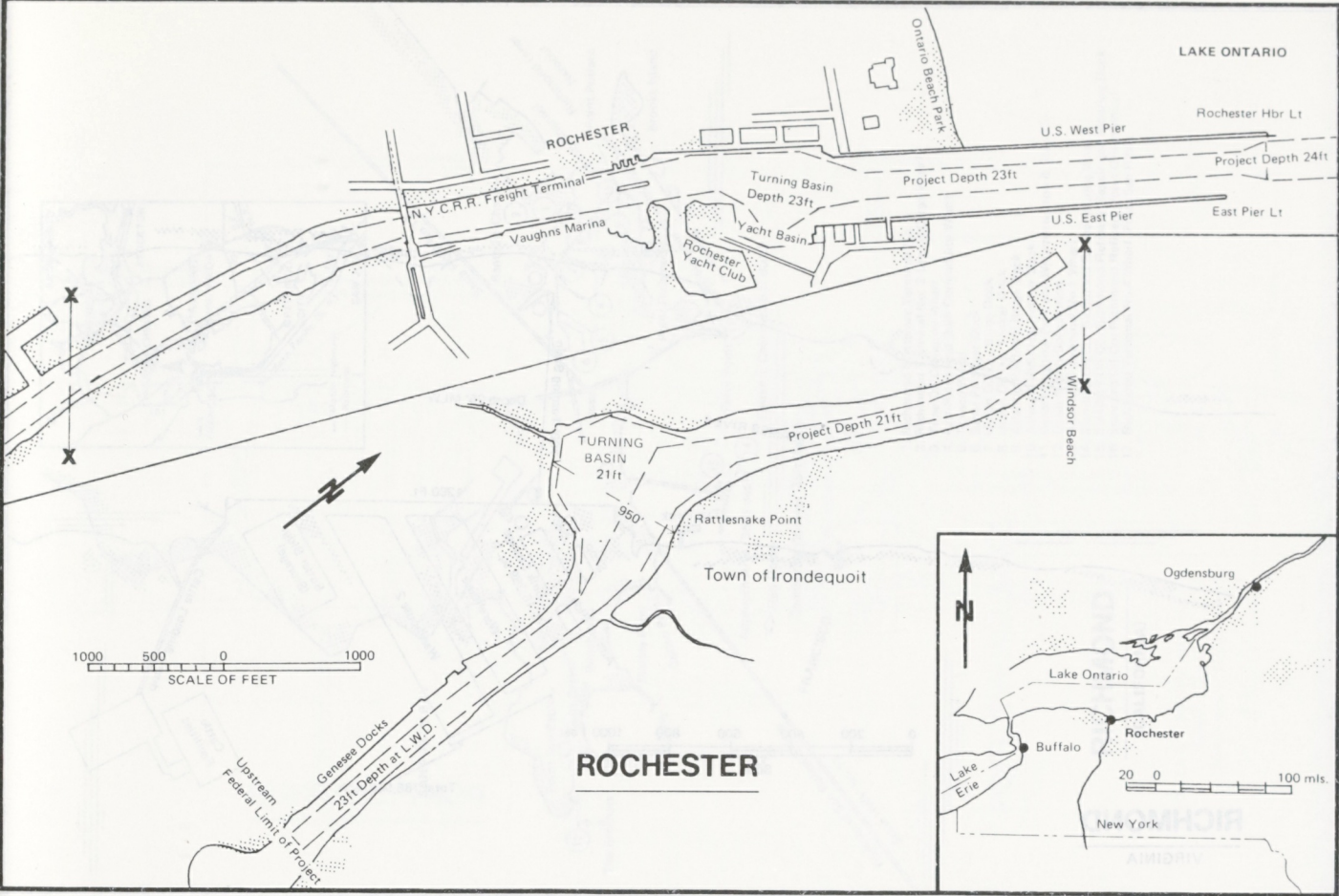


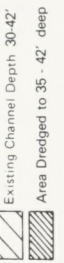


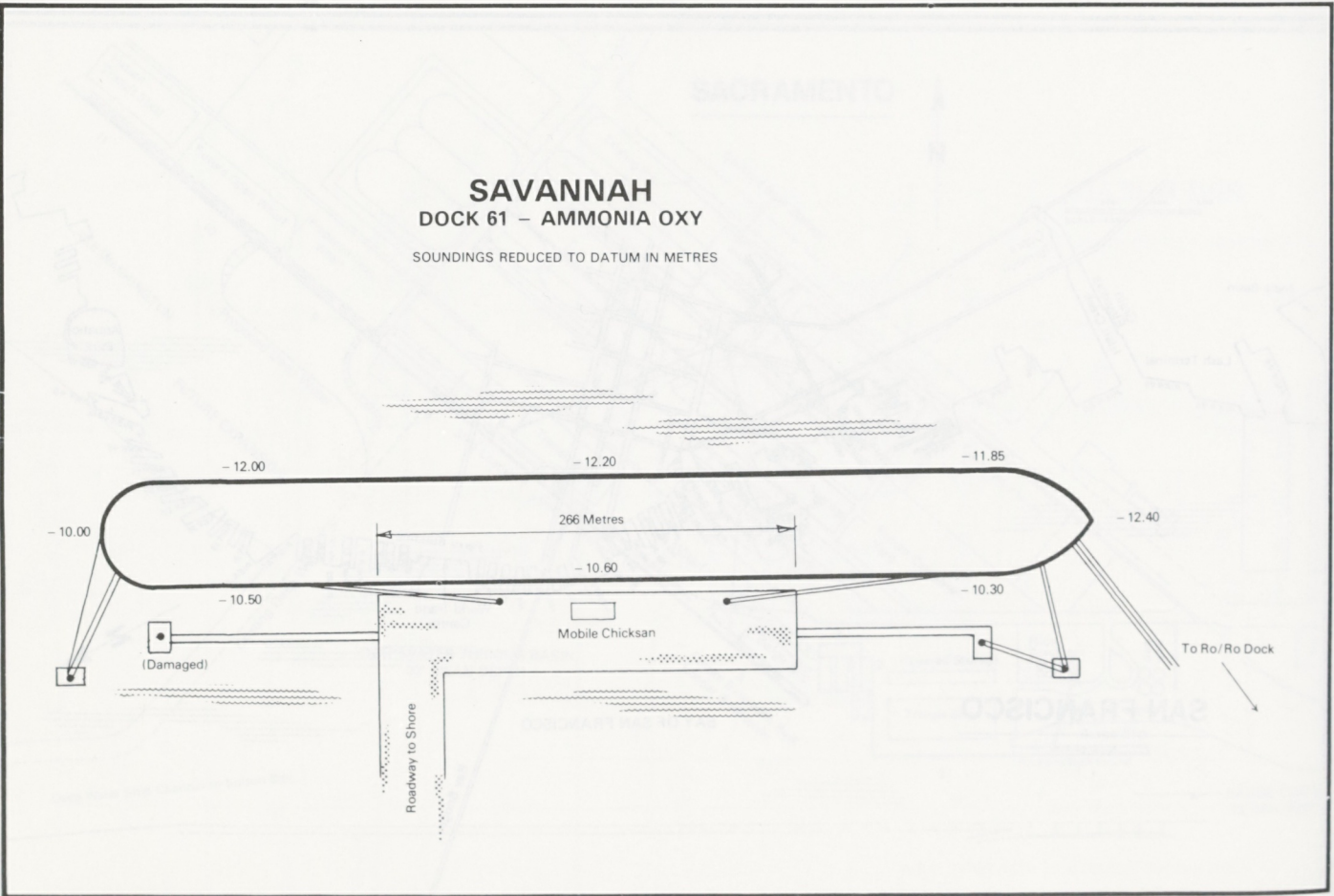
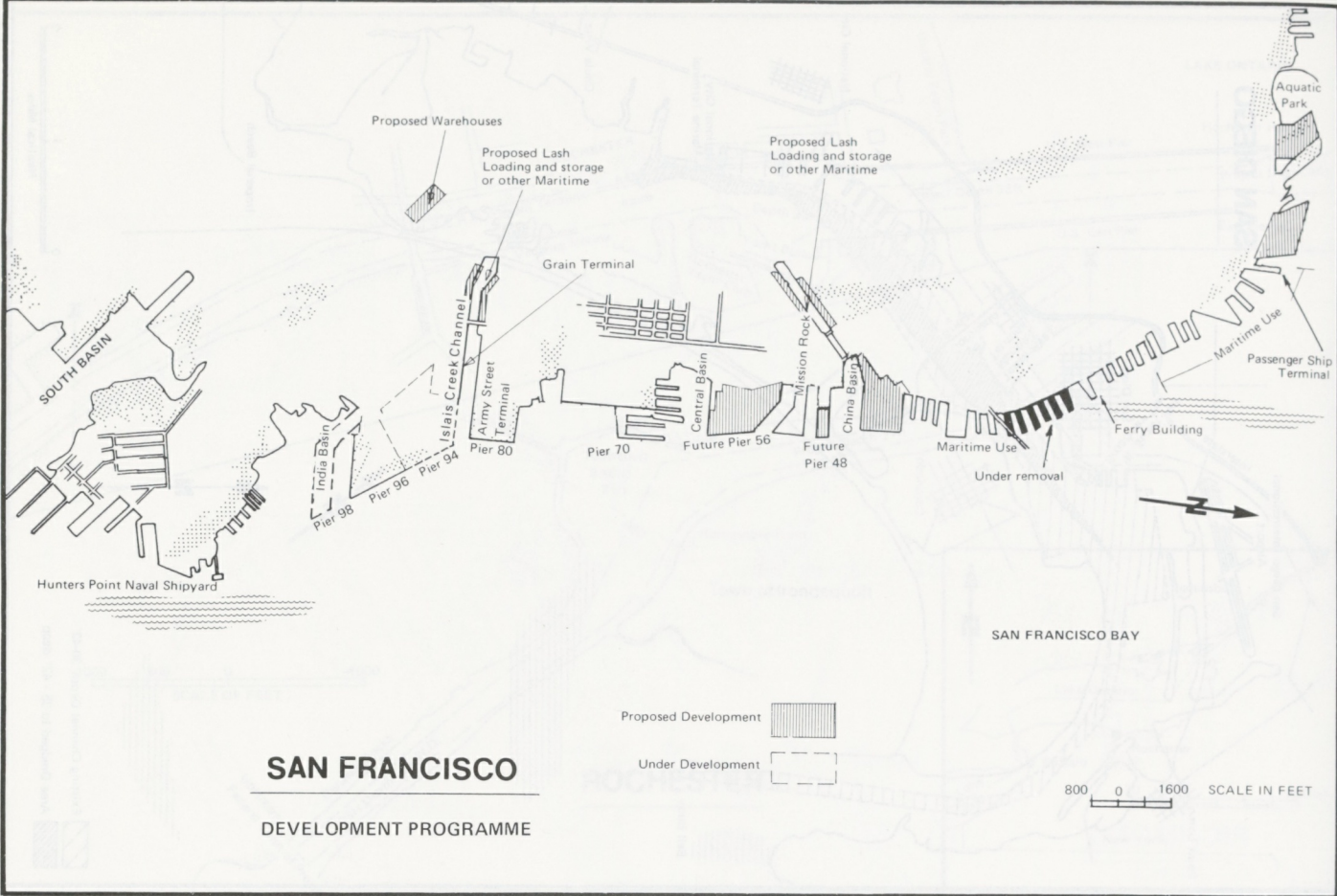
RICHMOND
(STANDARD OIL COMPANY OF CALIFORNIA)



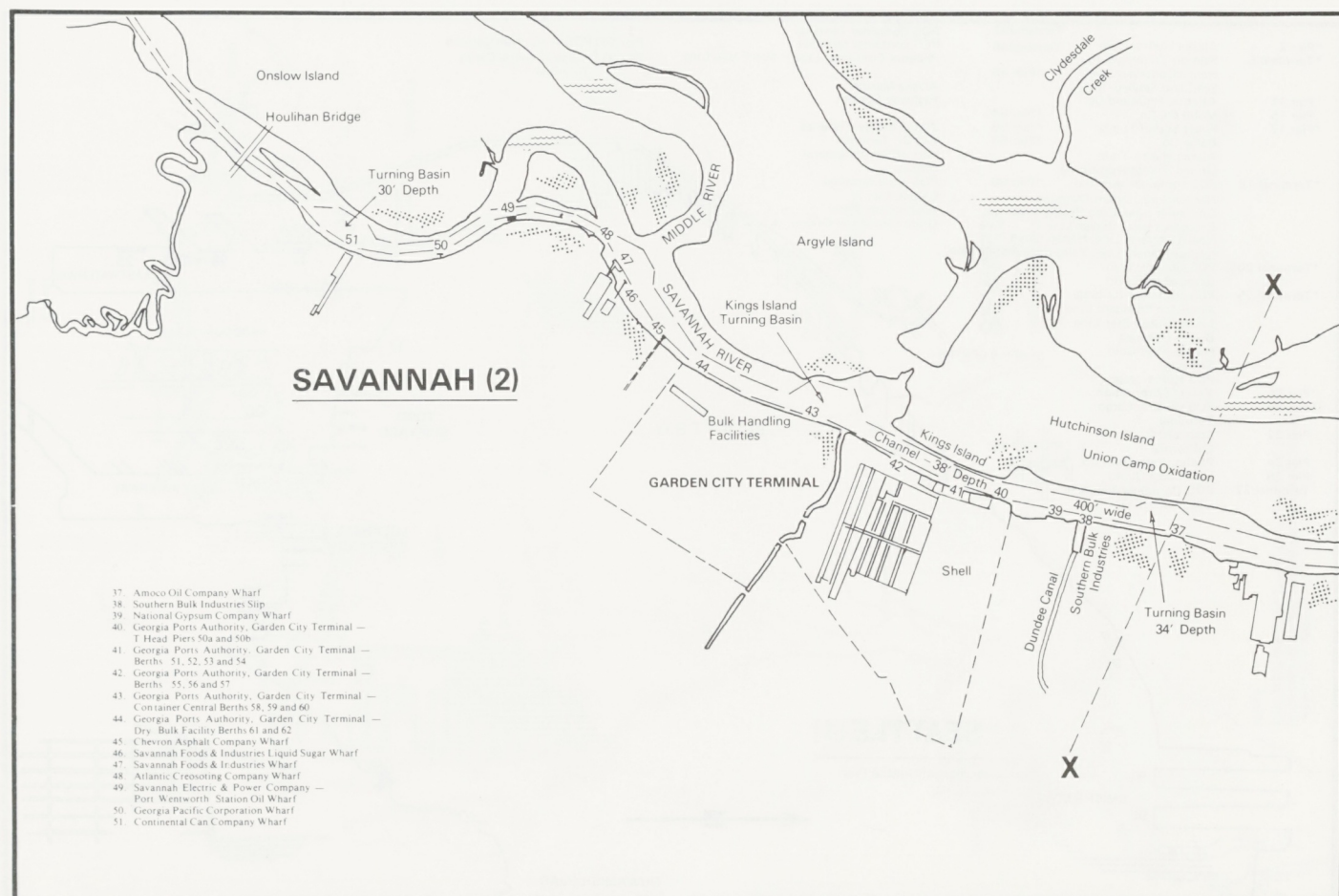
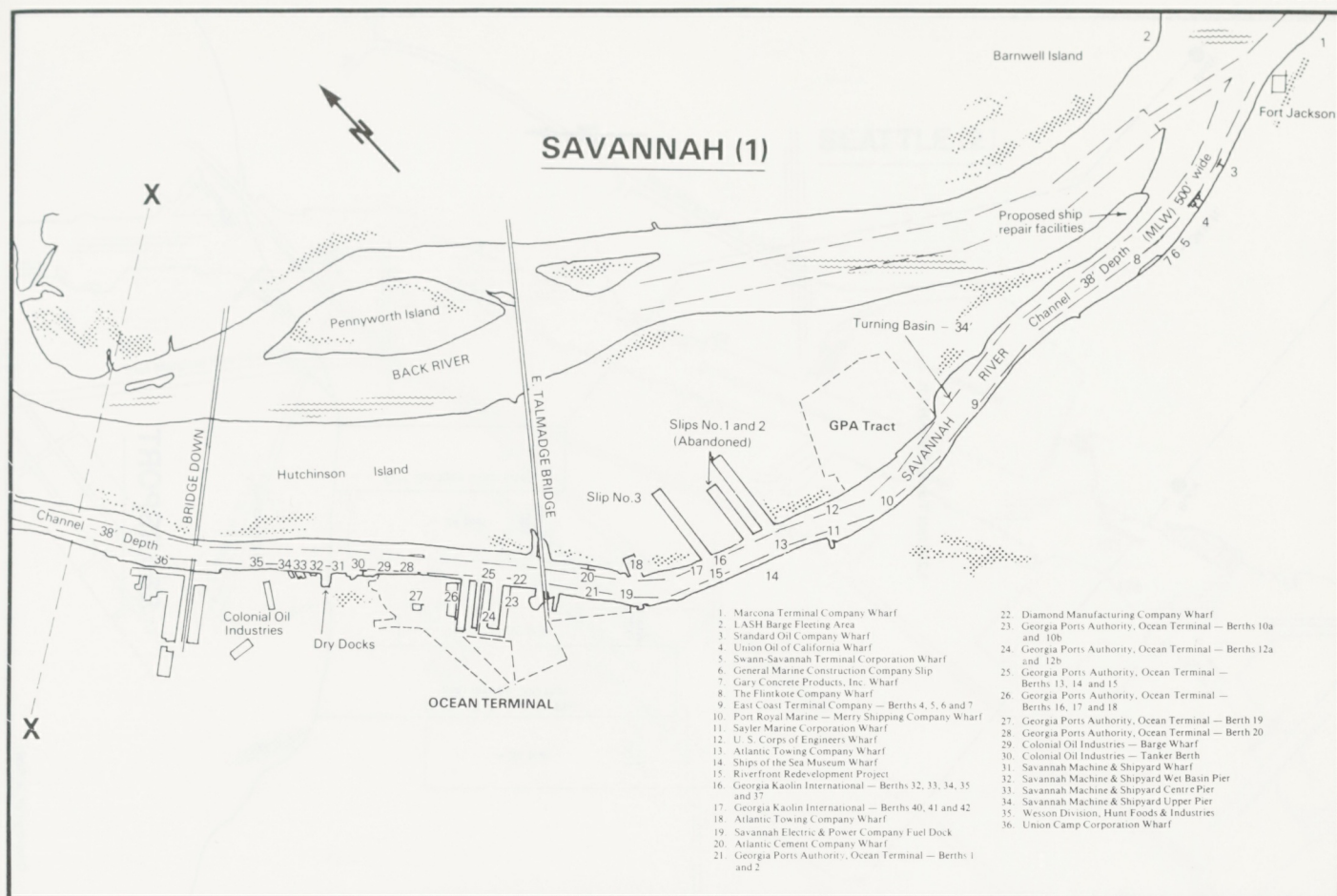


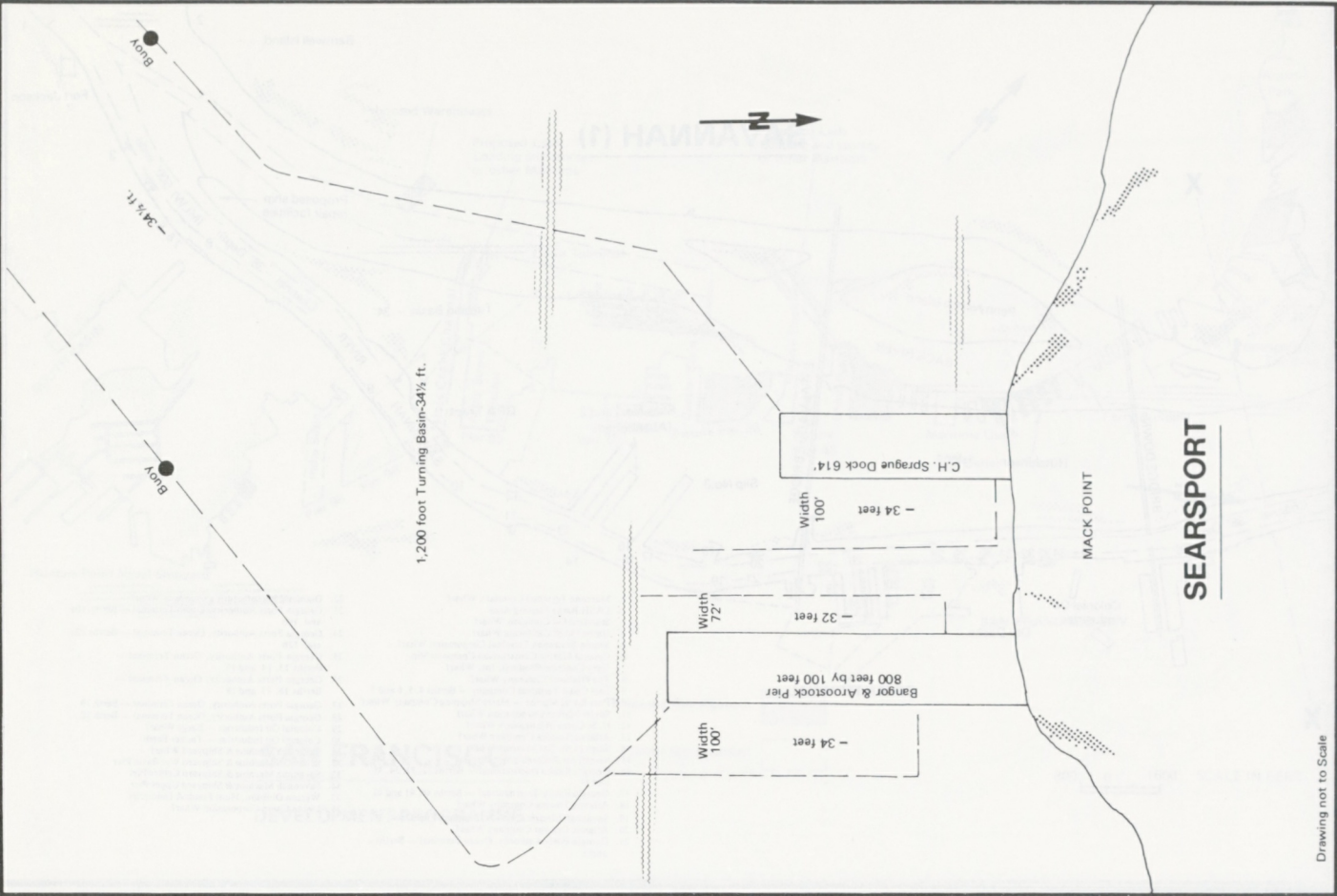




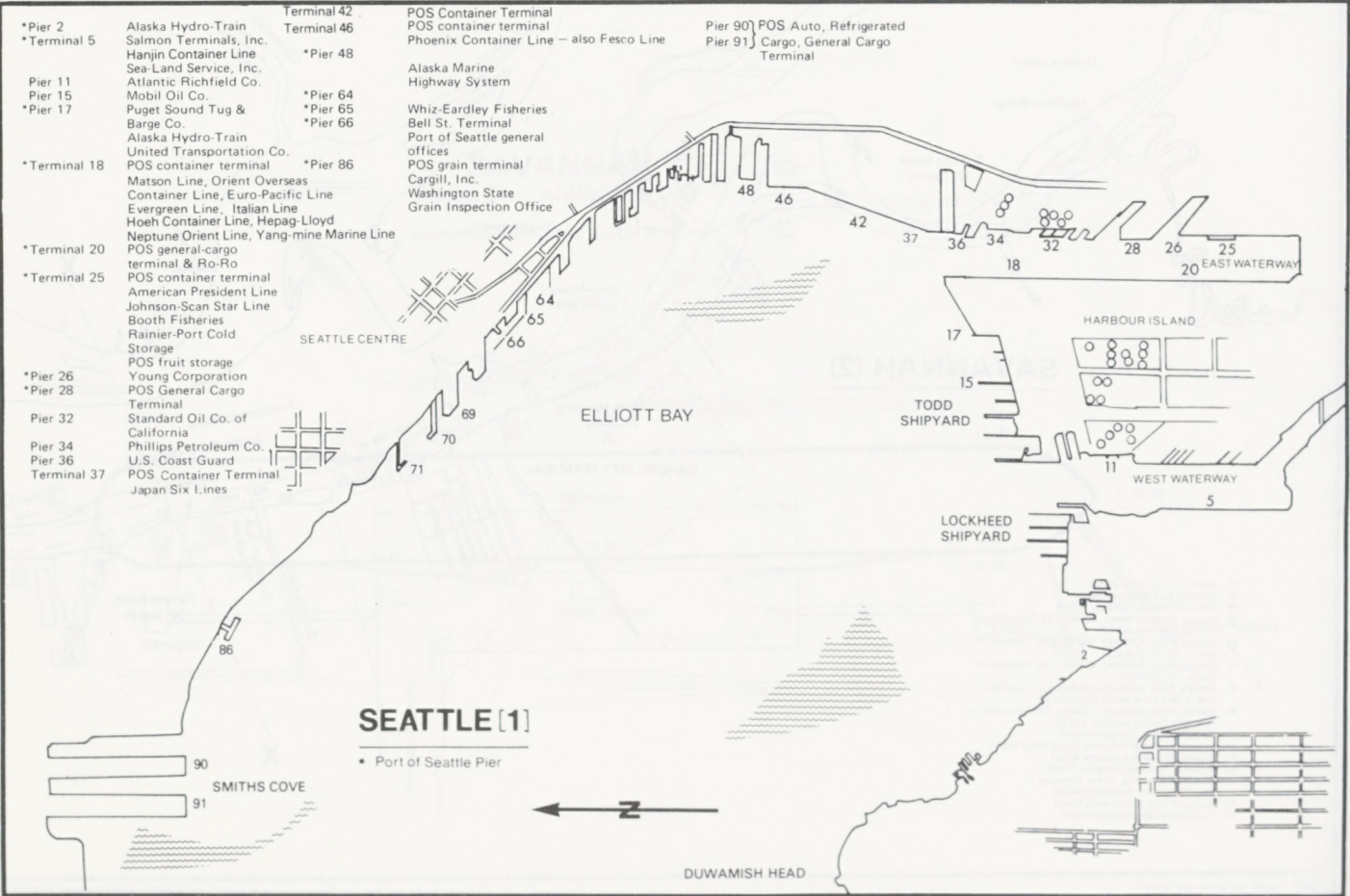


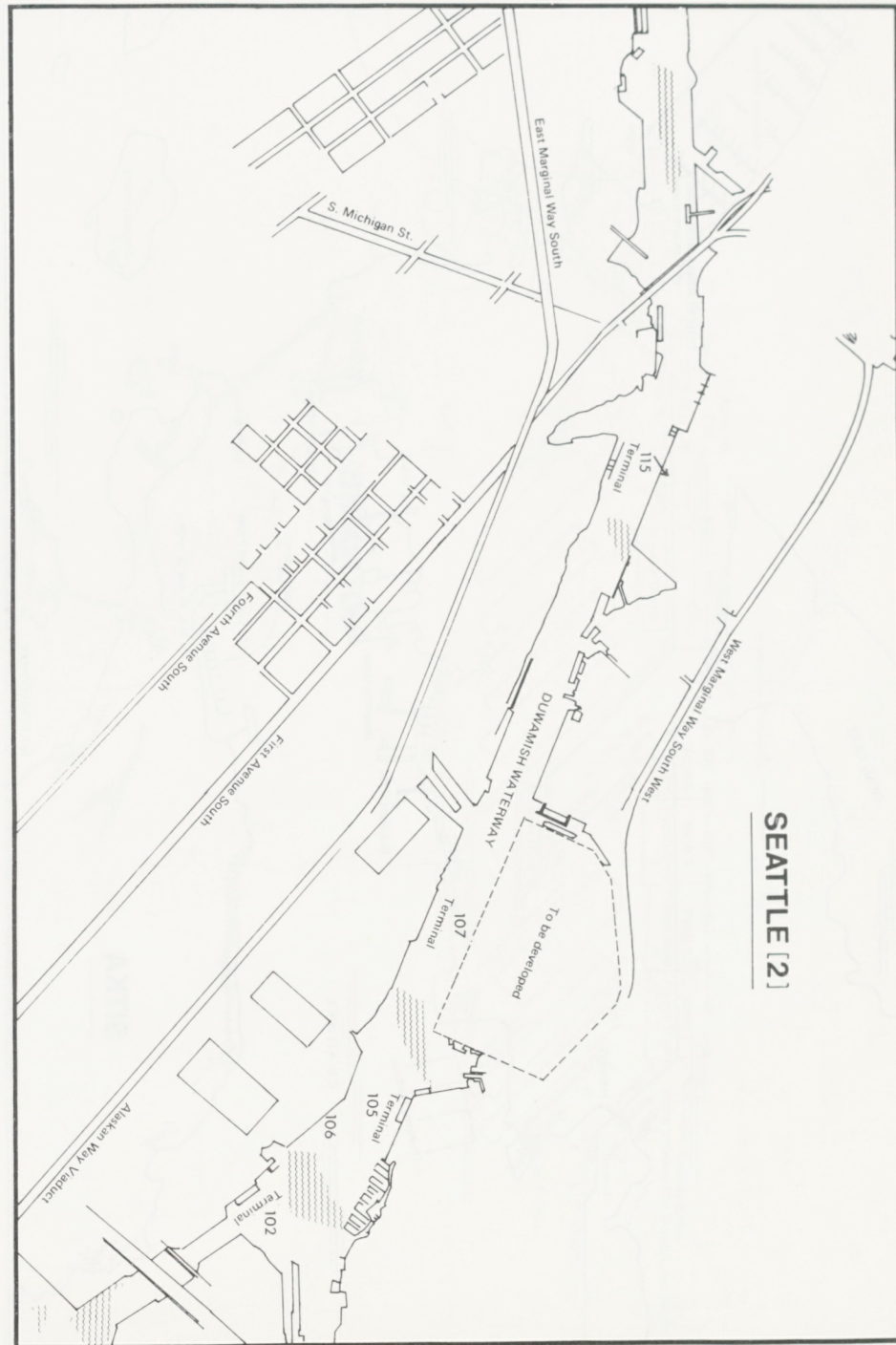
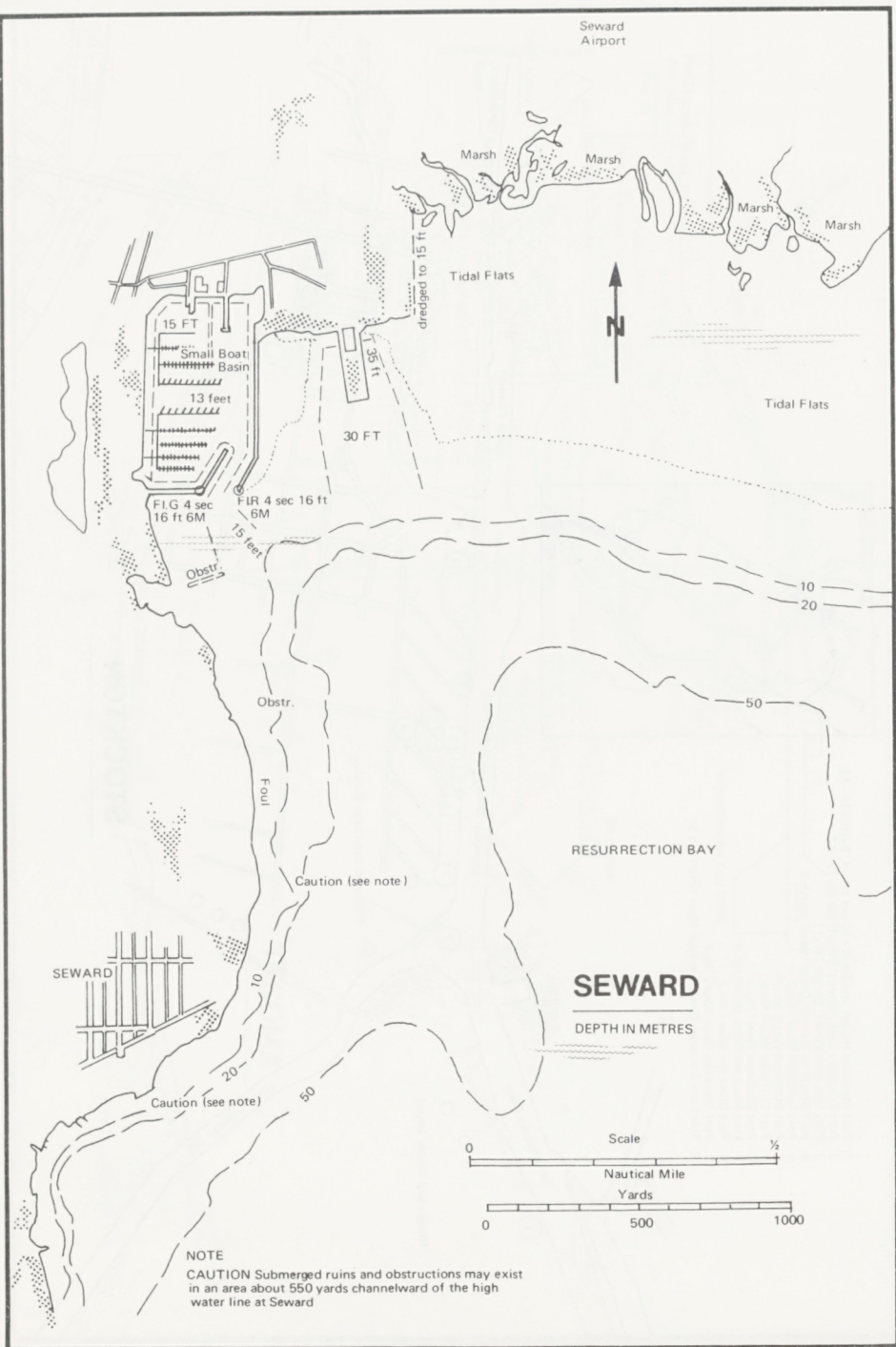
Plan supplied by Ship's Master

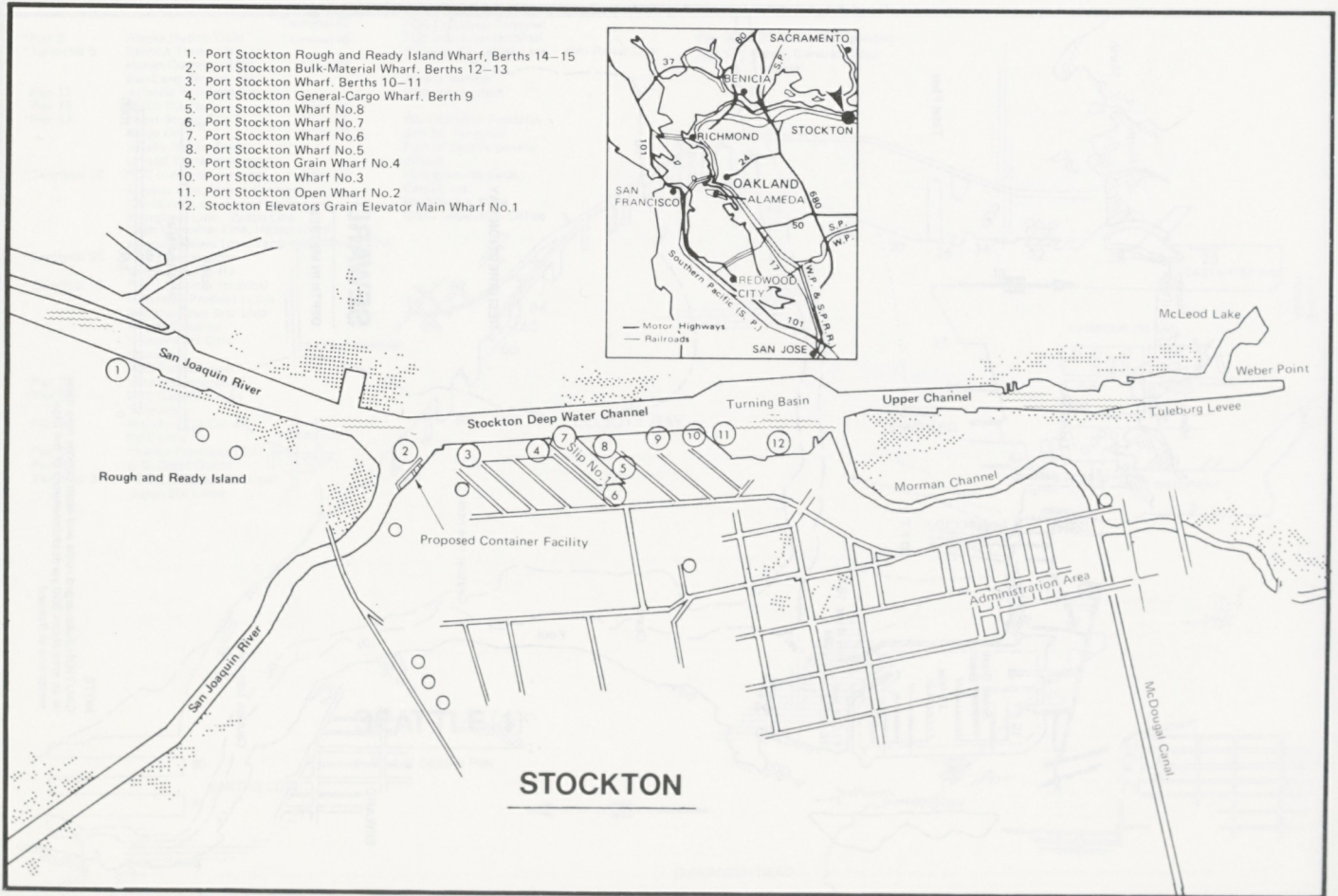
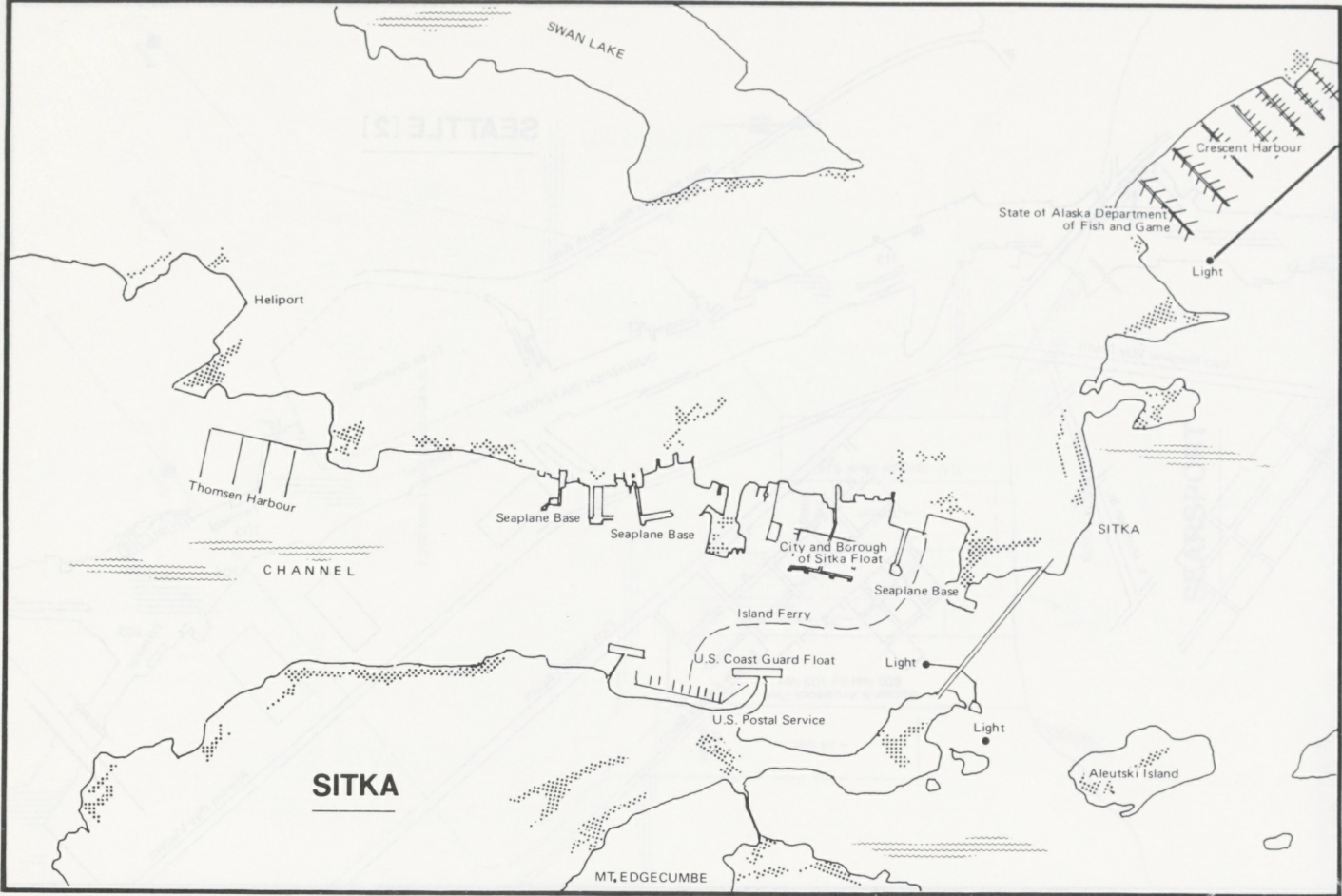




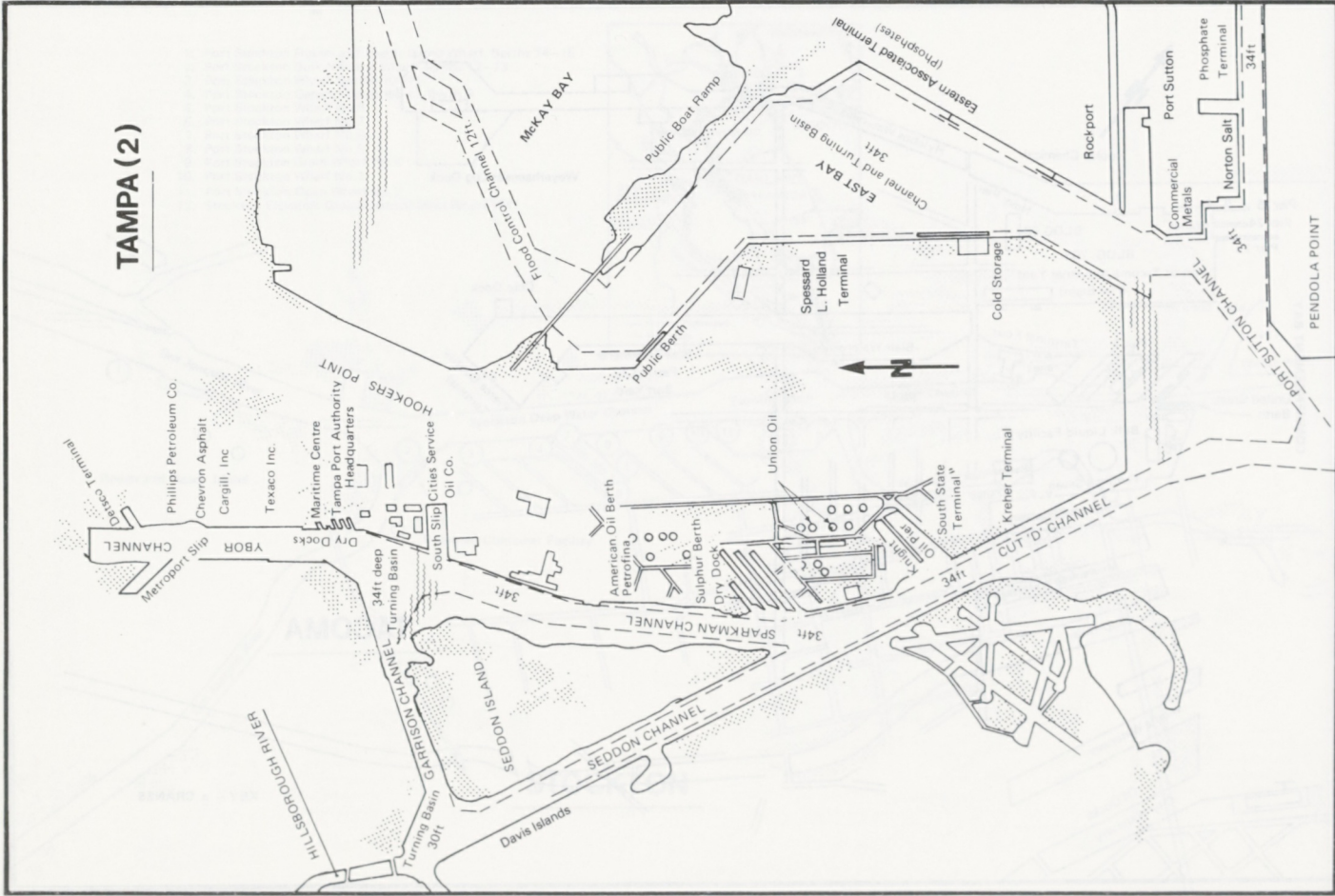
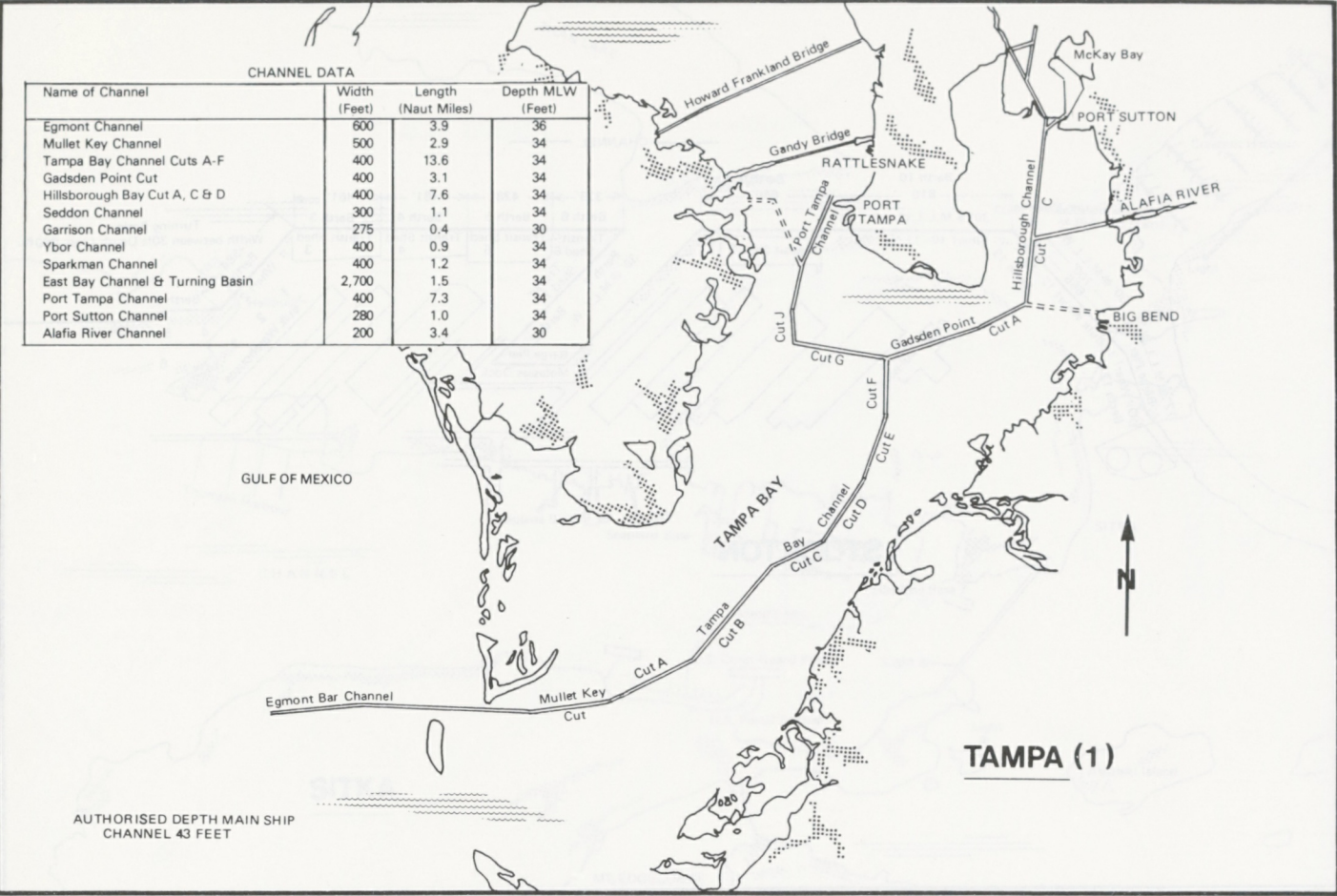
Drawing not to Scale

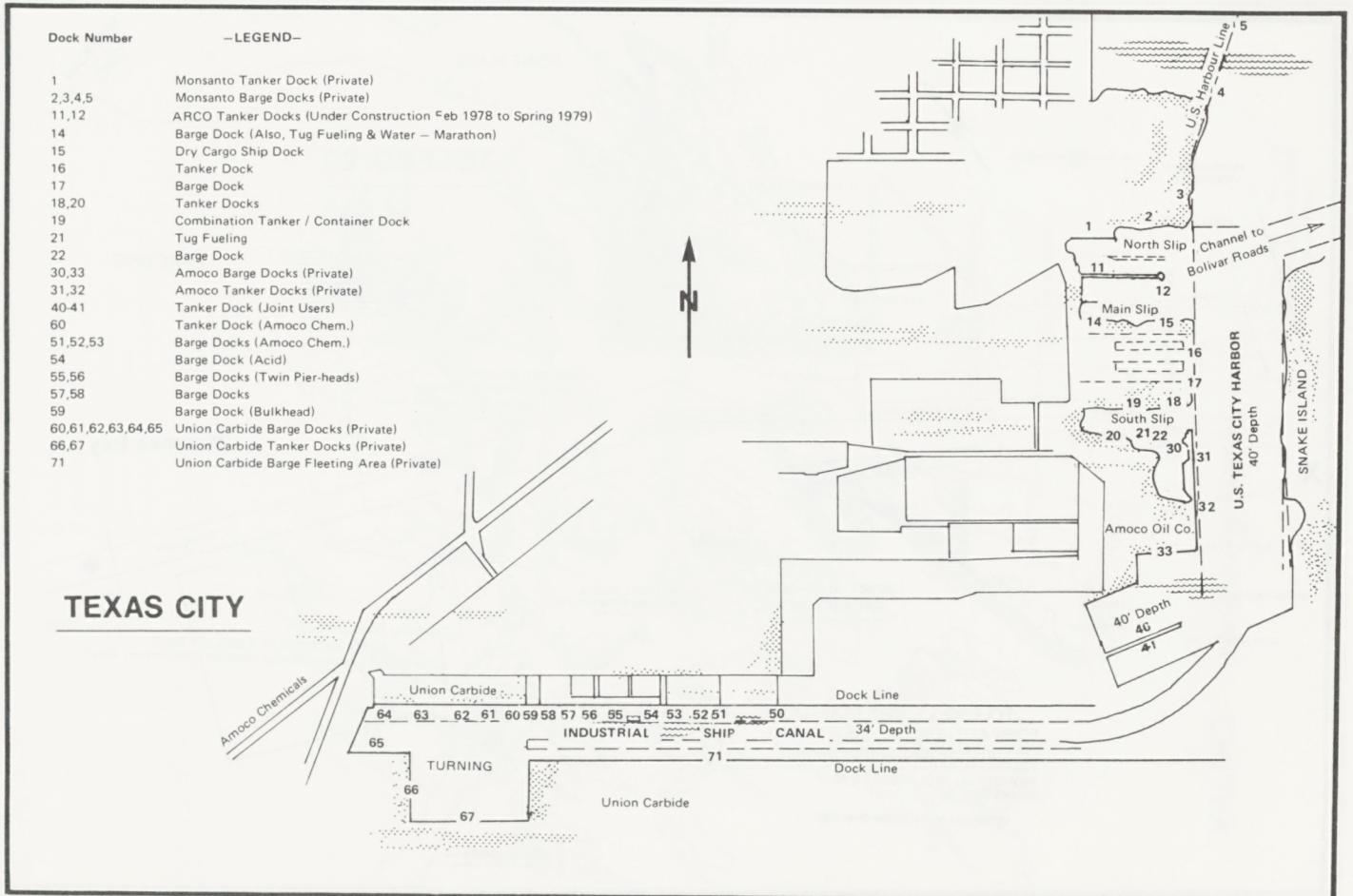
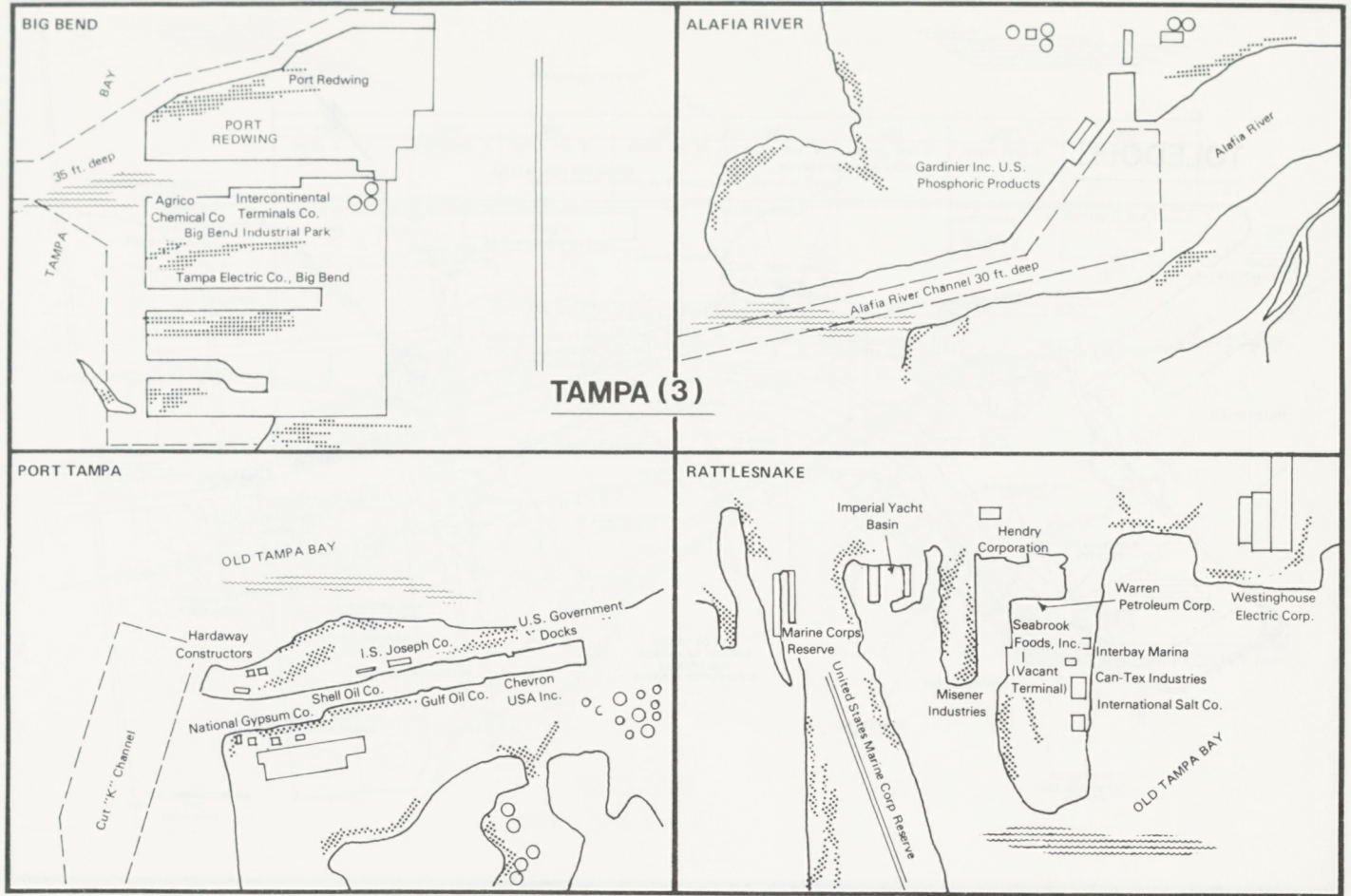


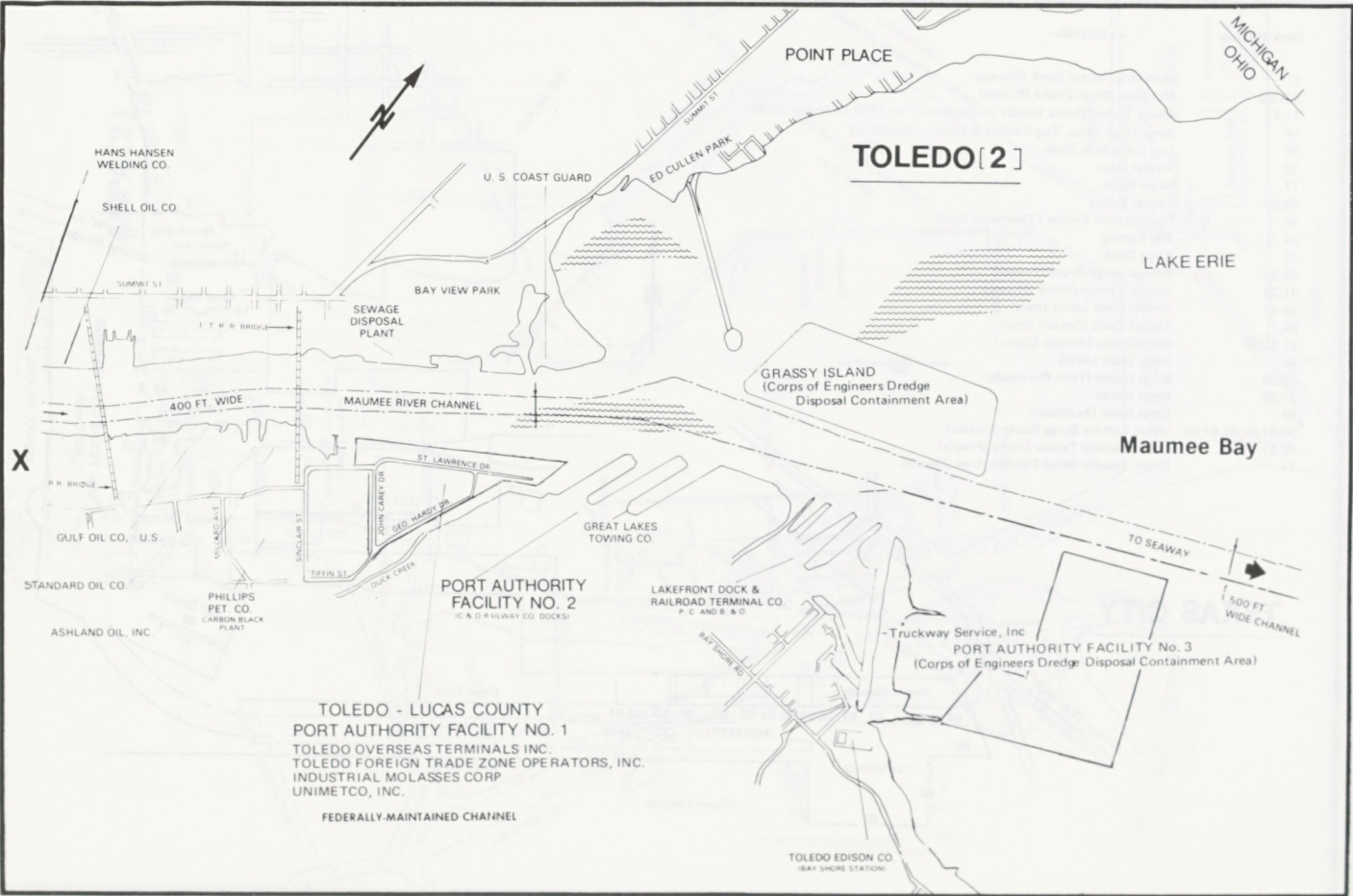
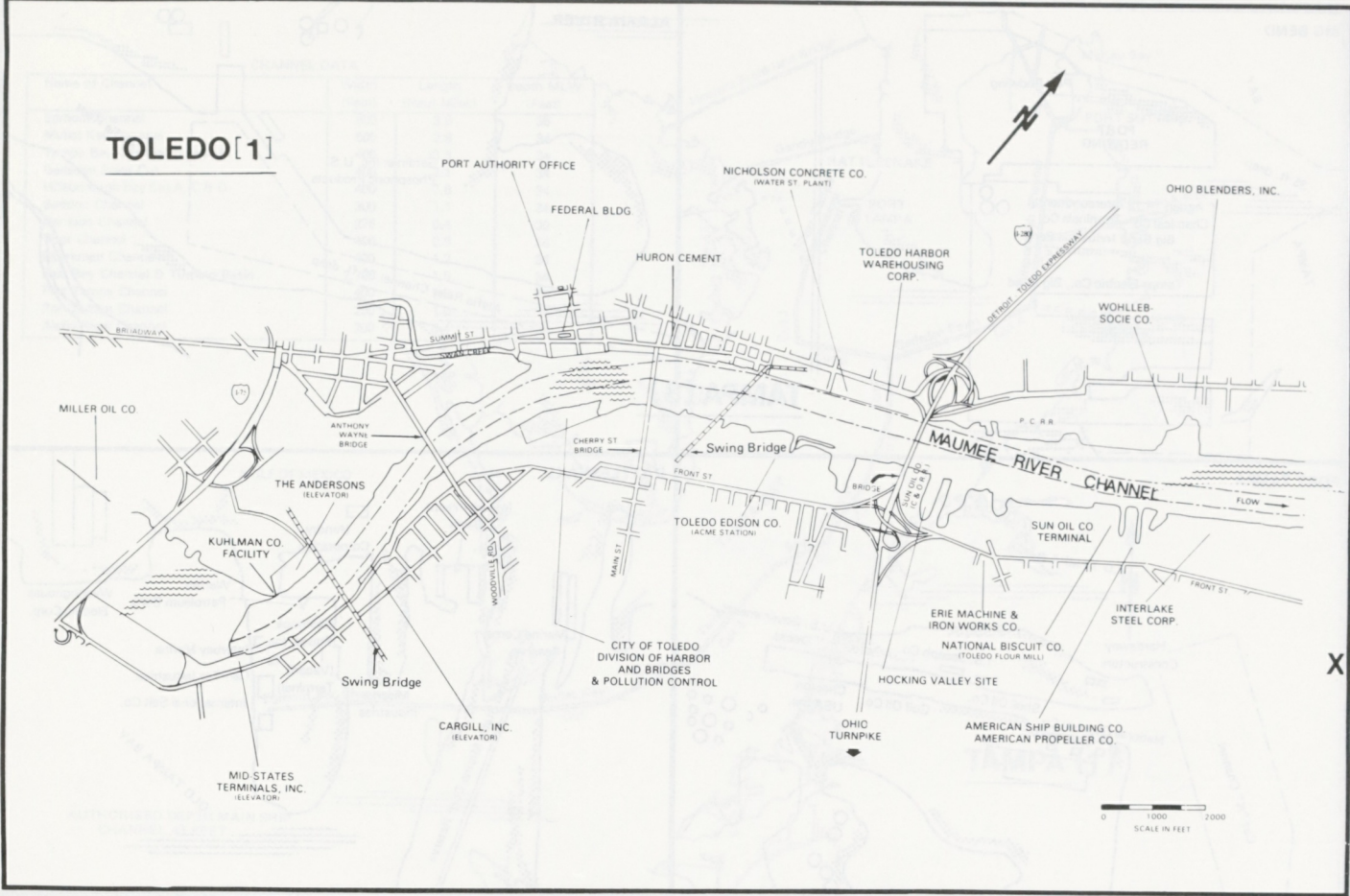


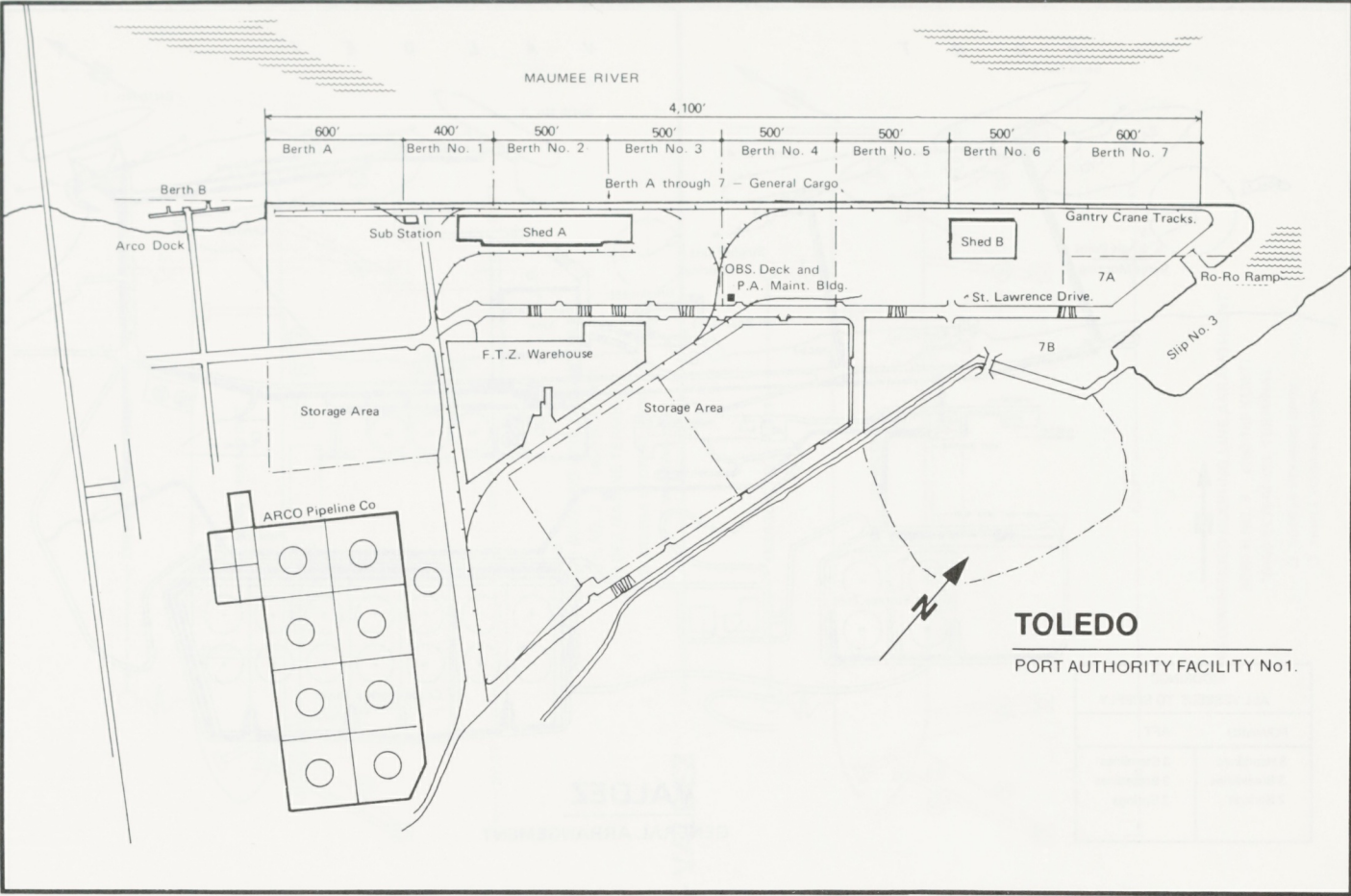


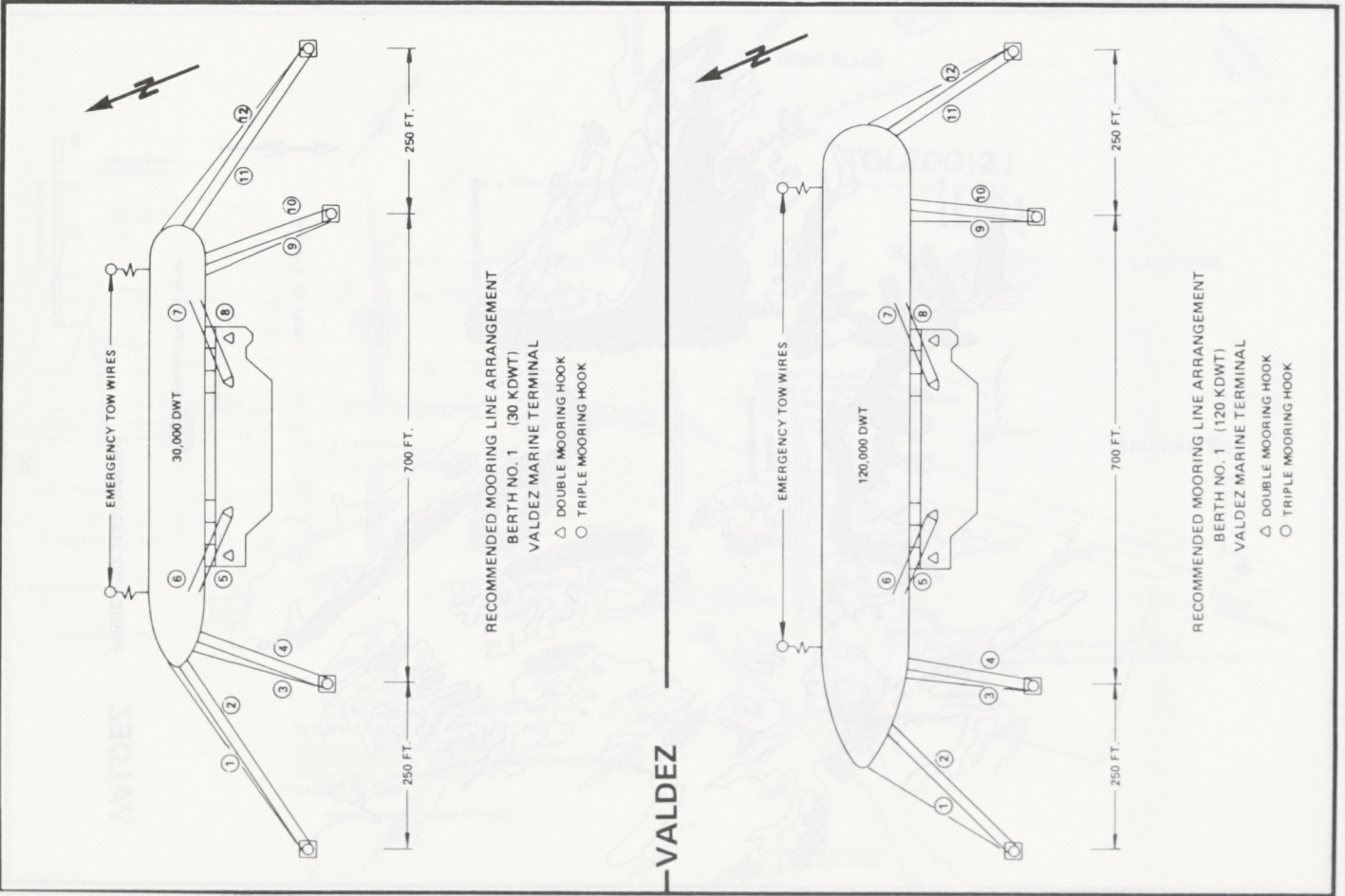
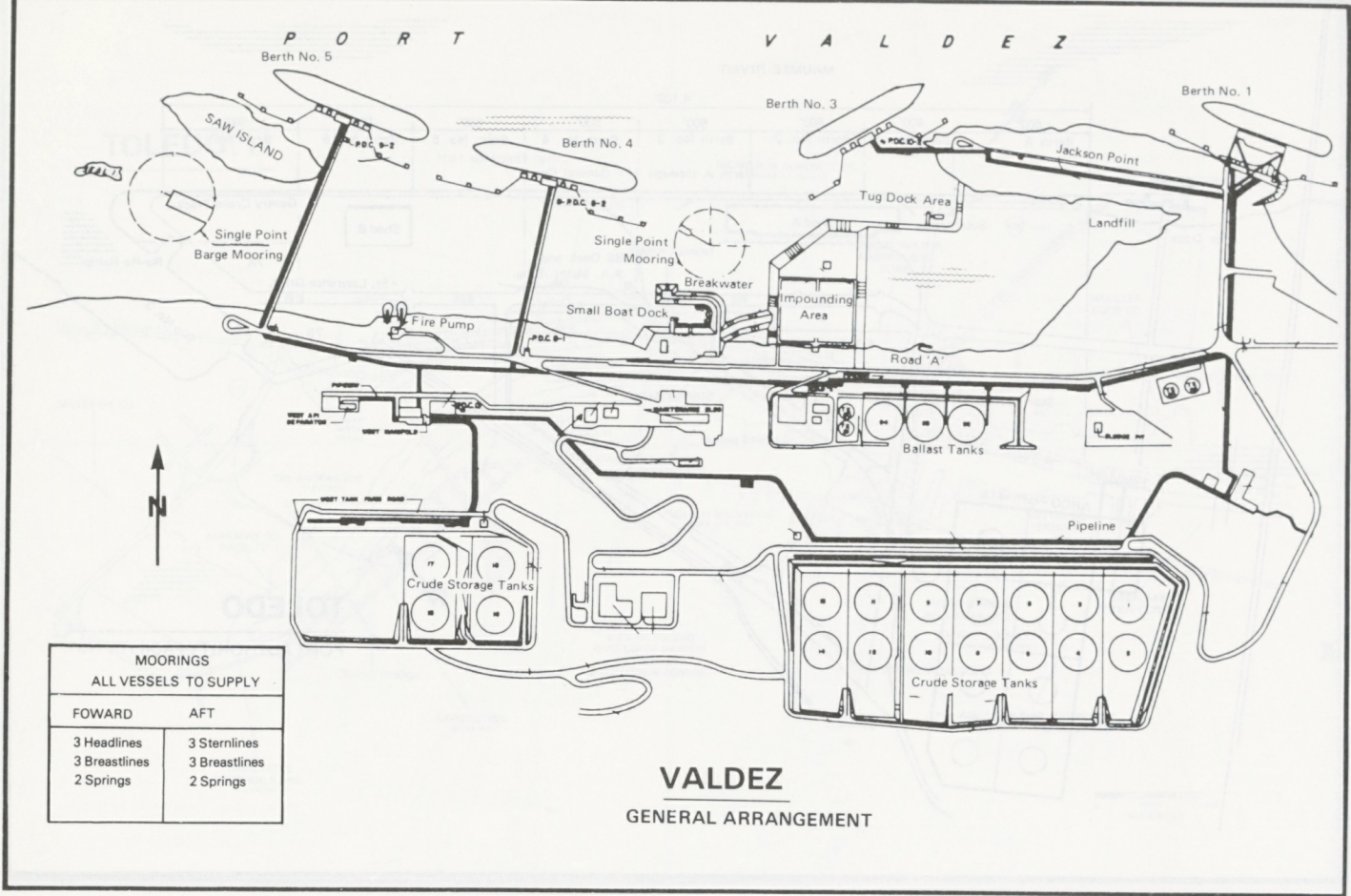


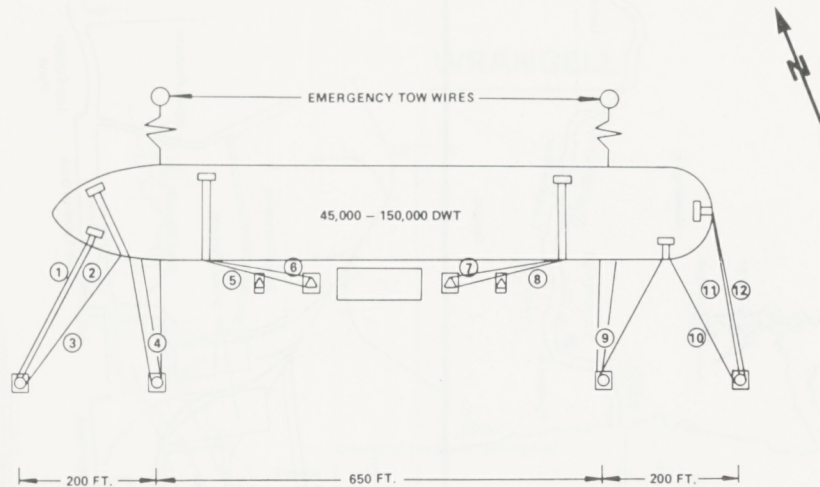




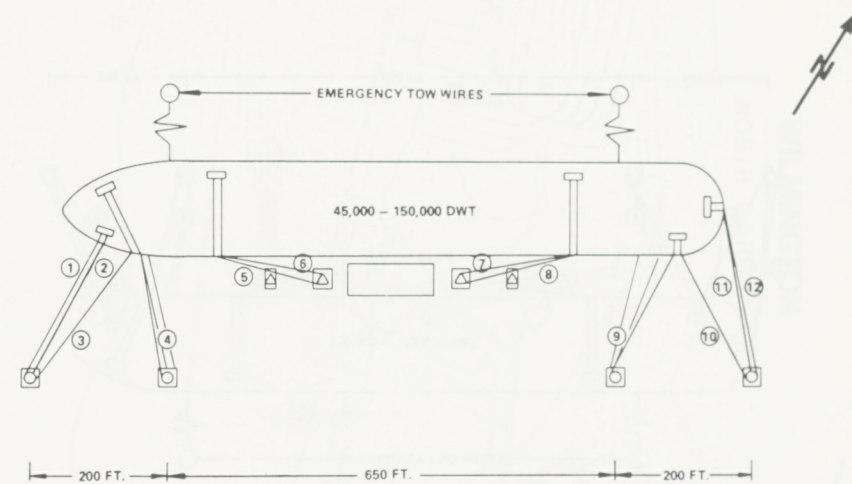
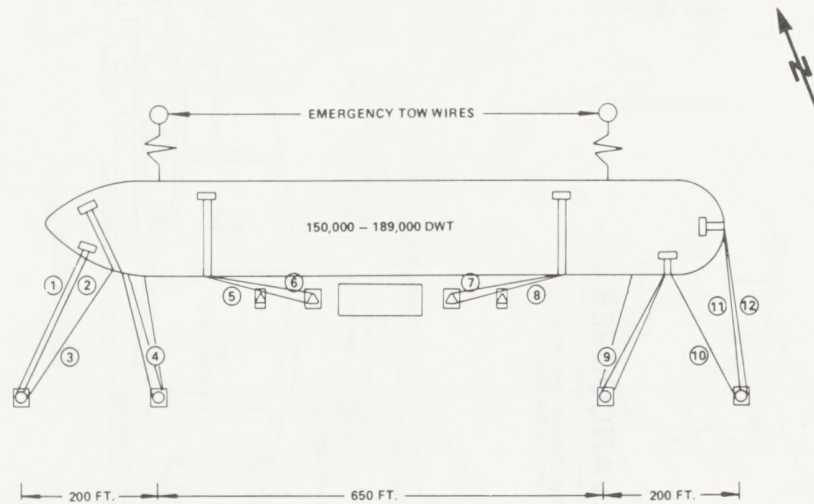




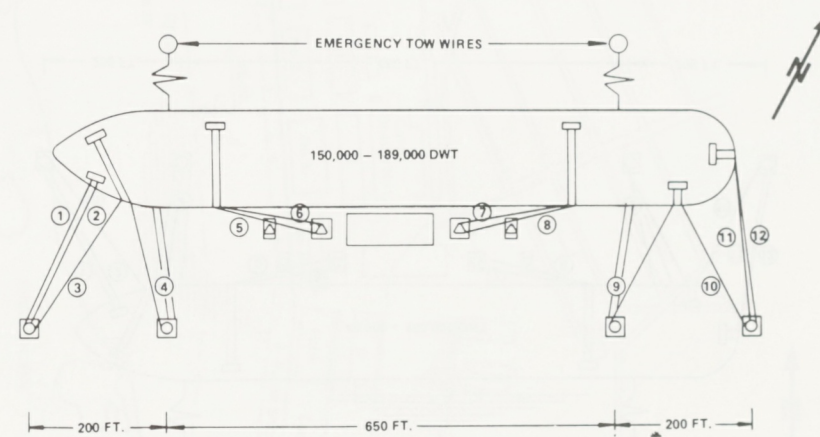


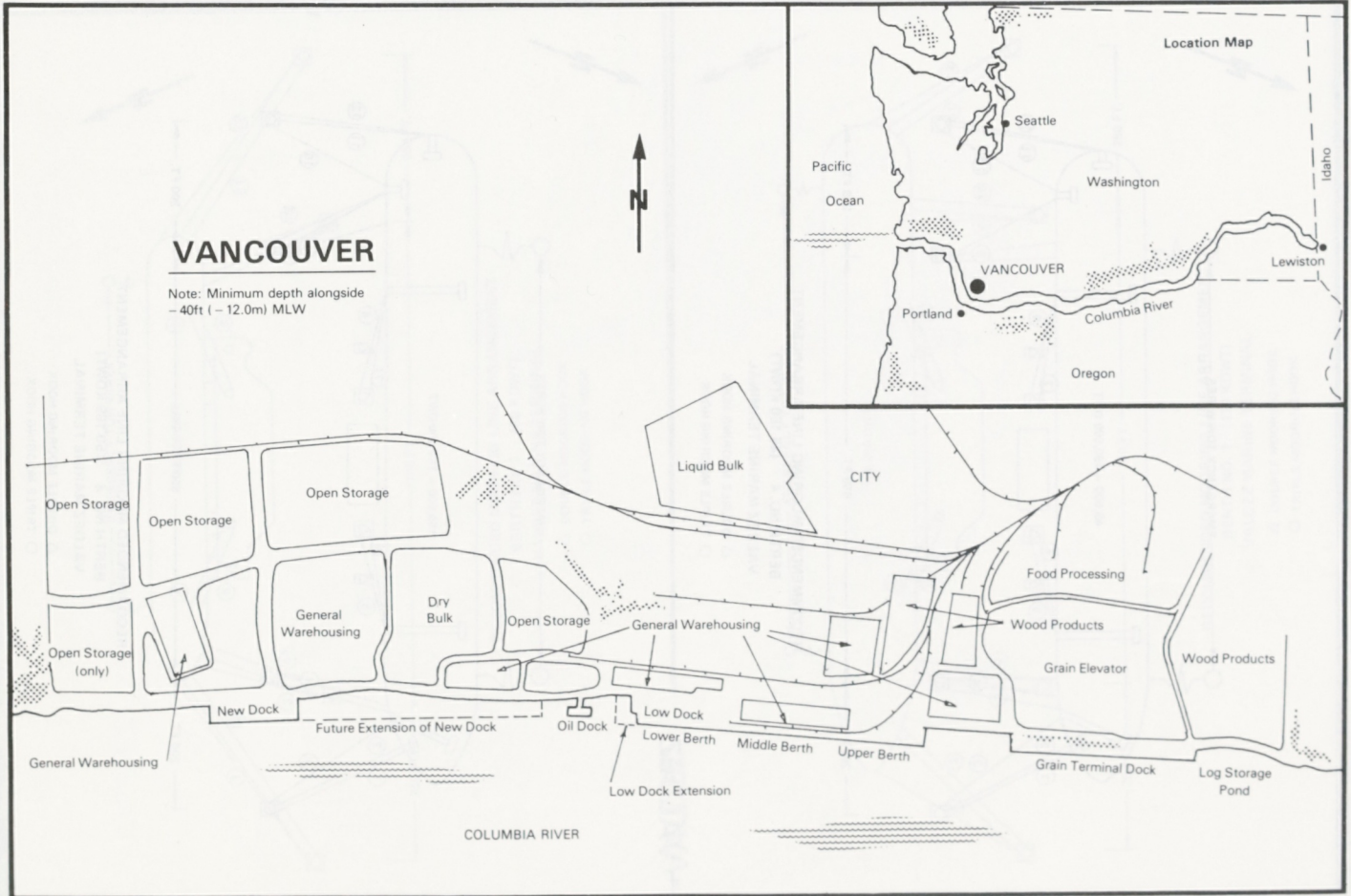
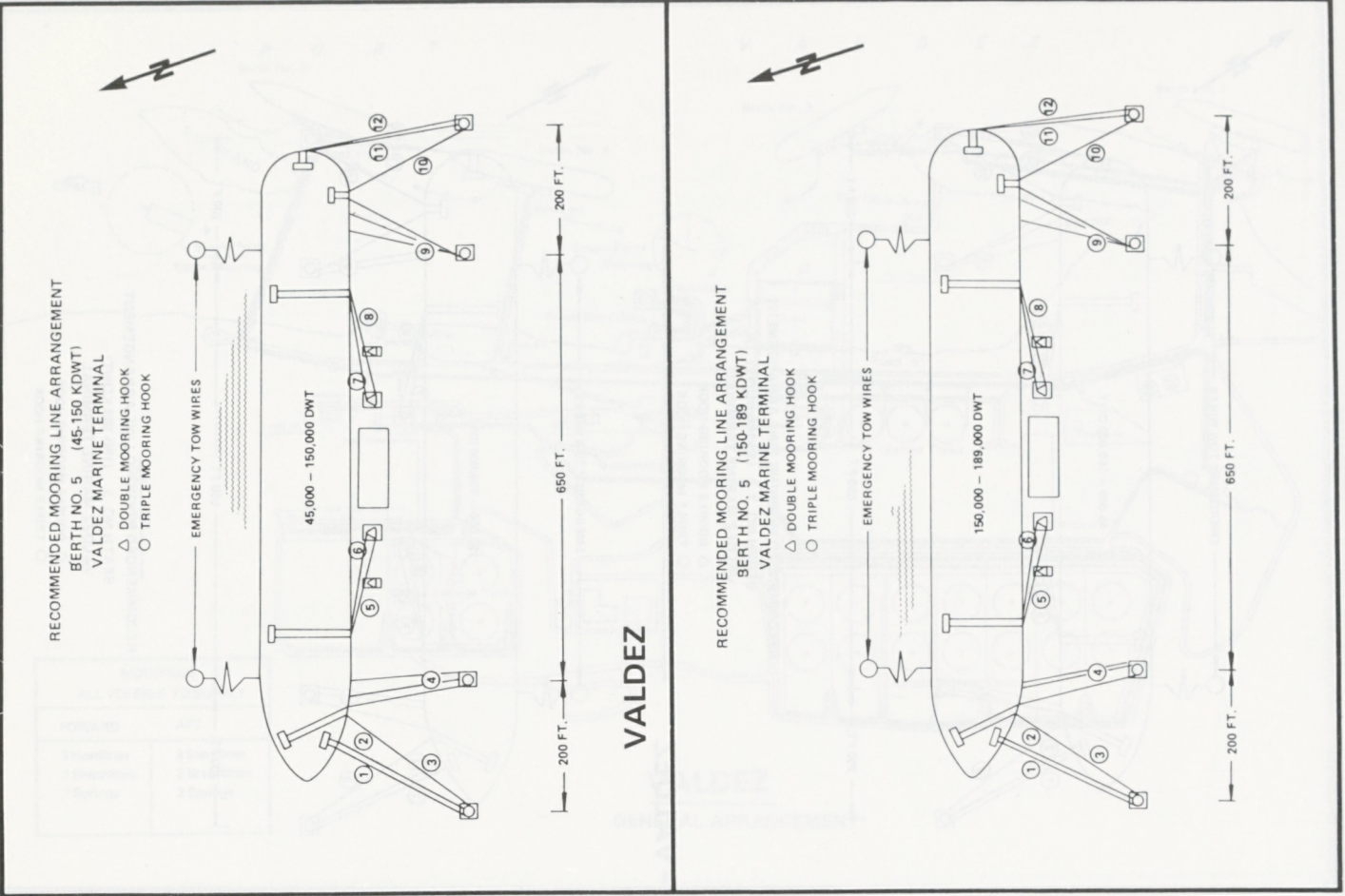


VALDEZ

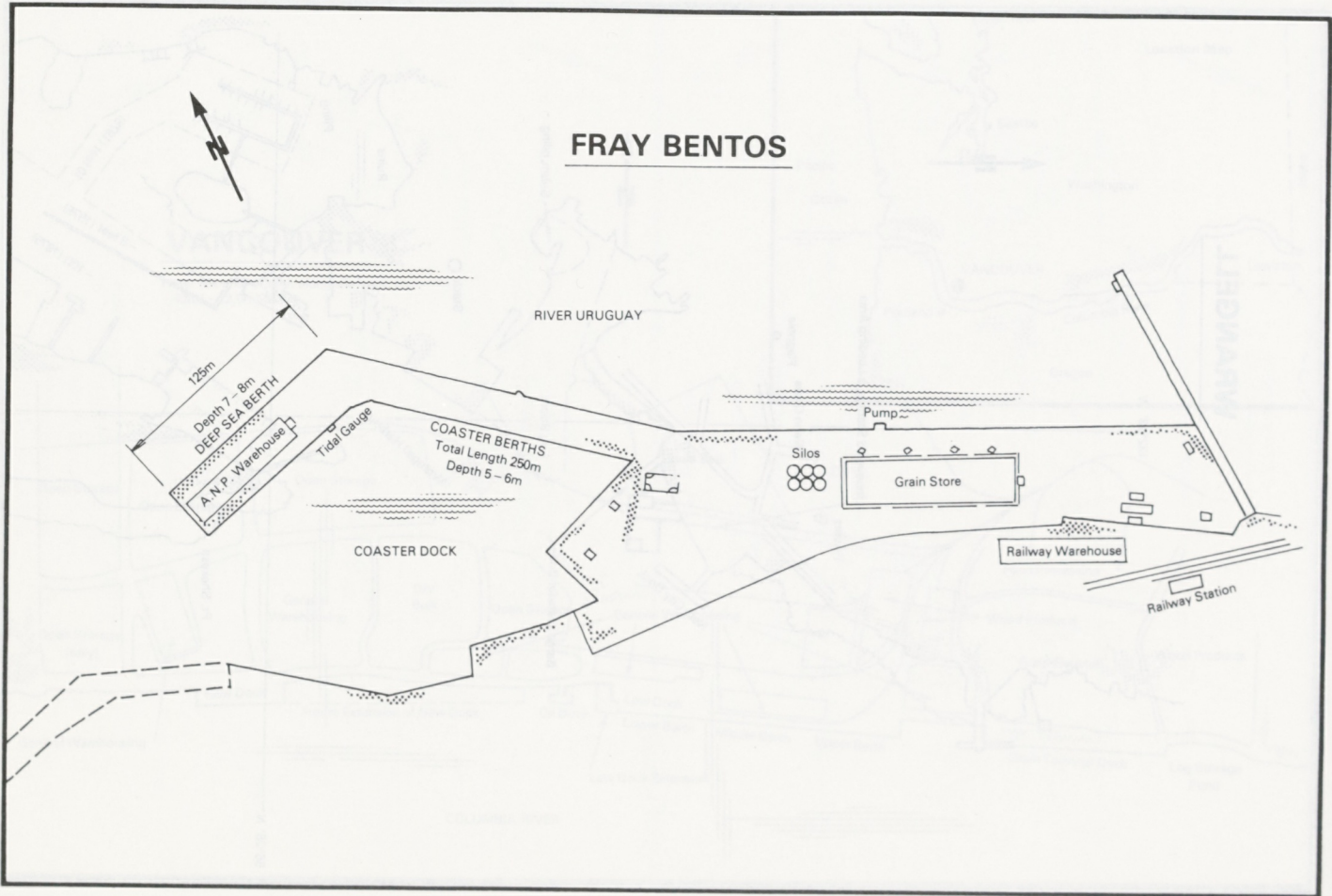
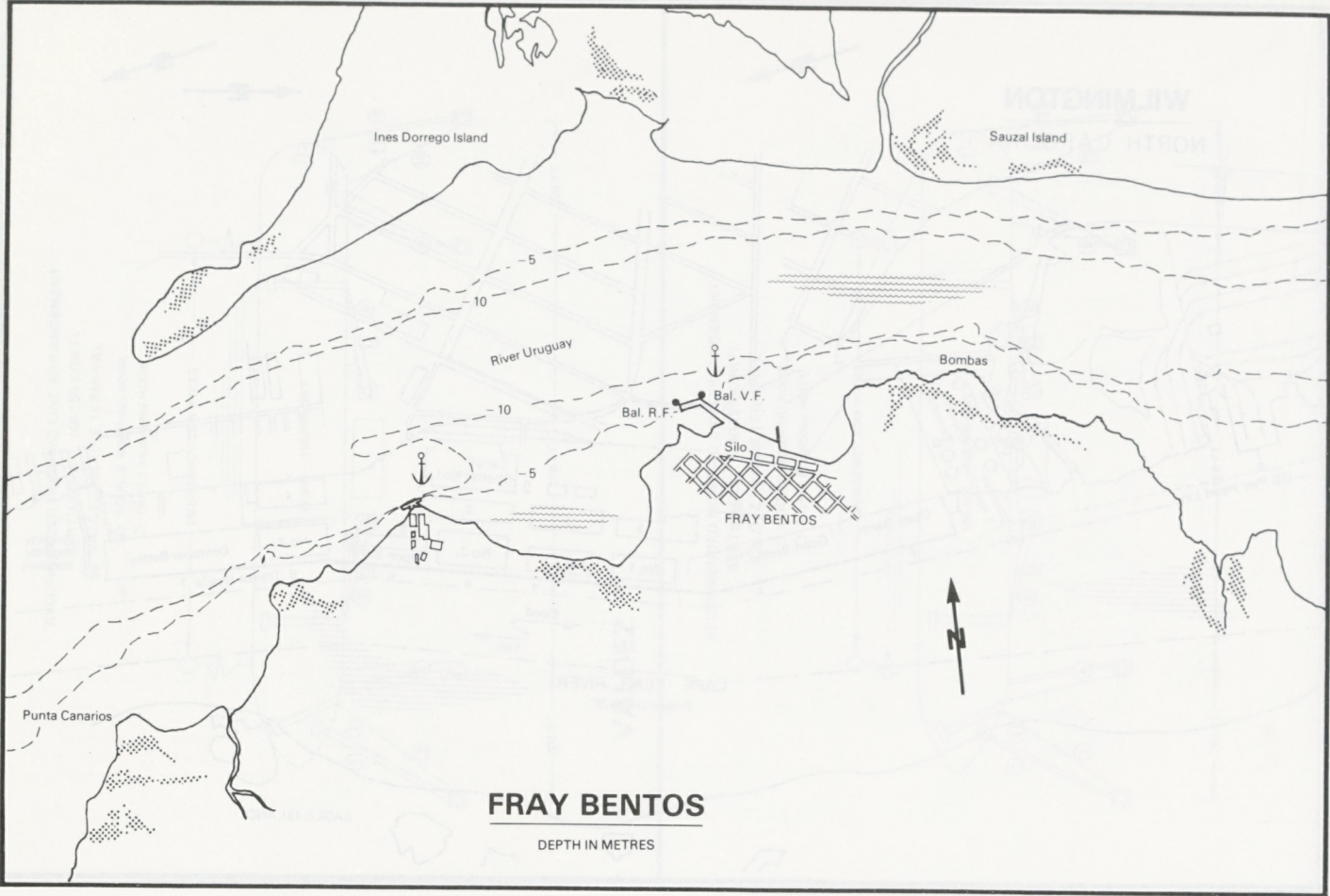


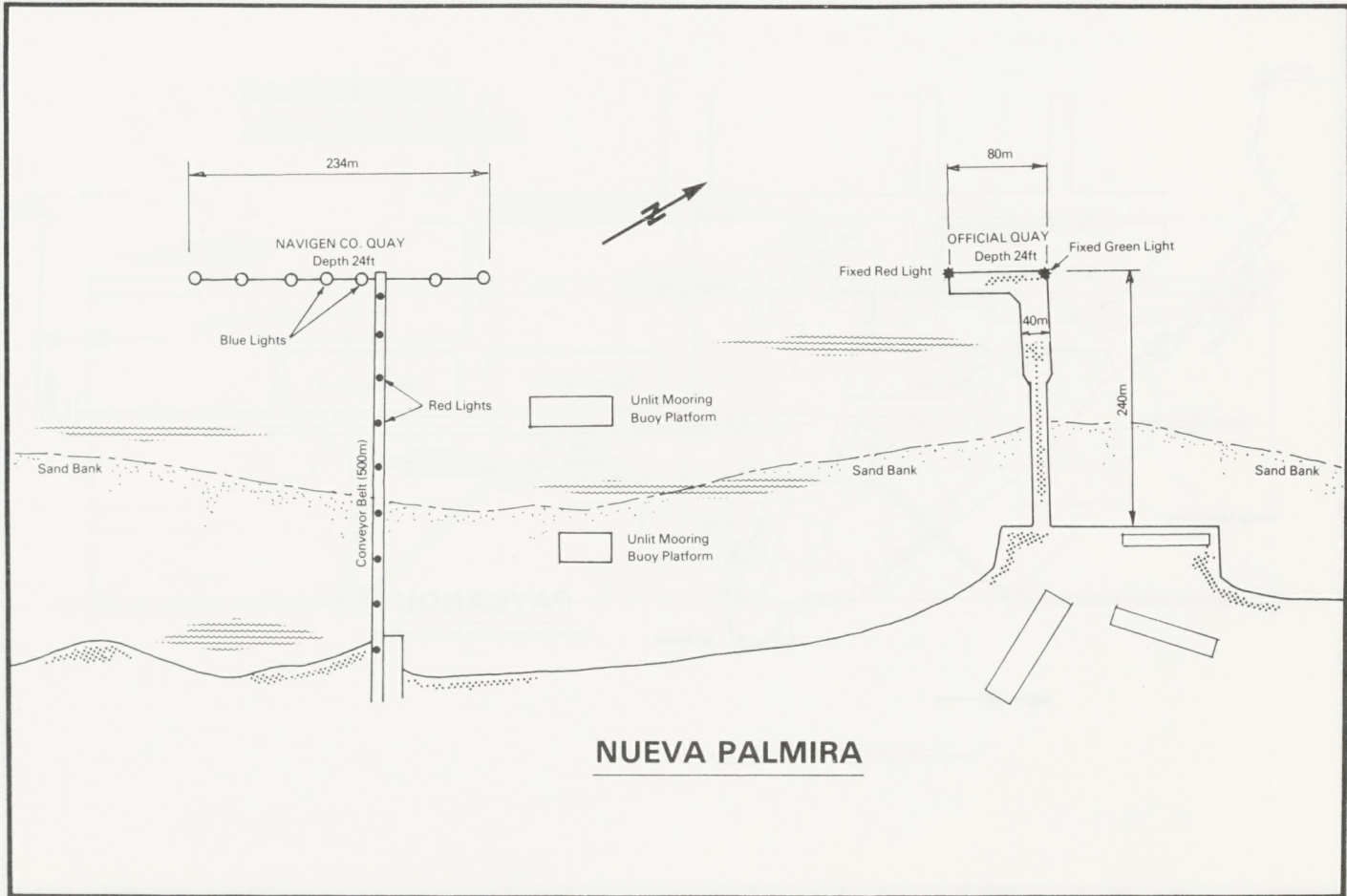
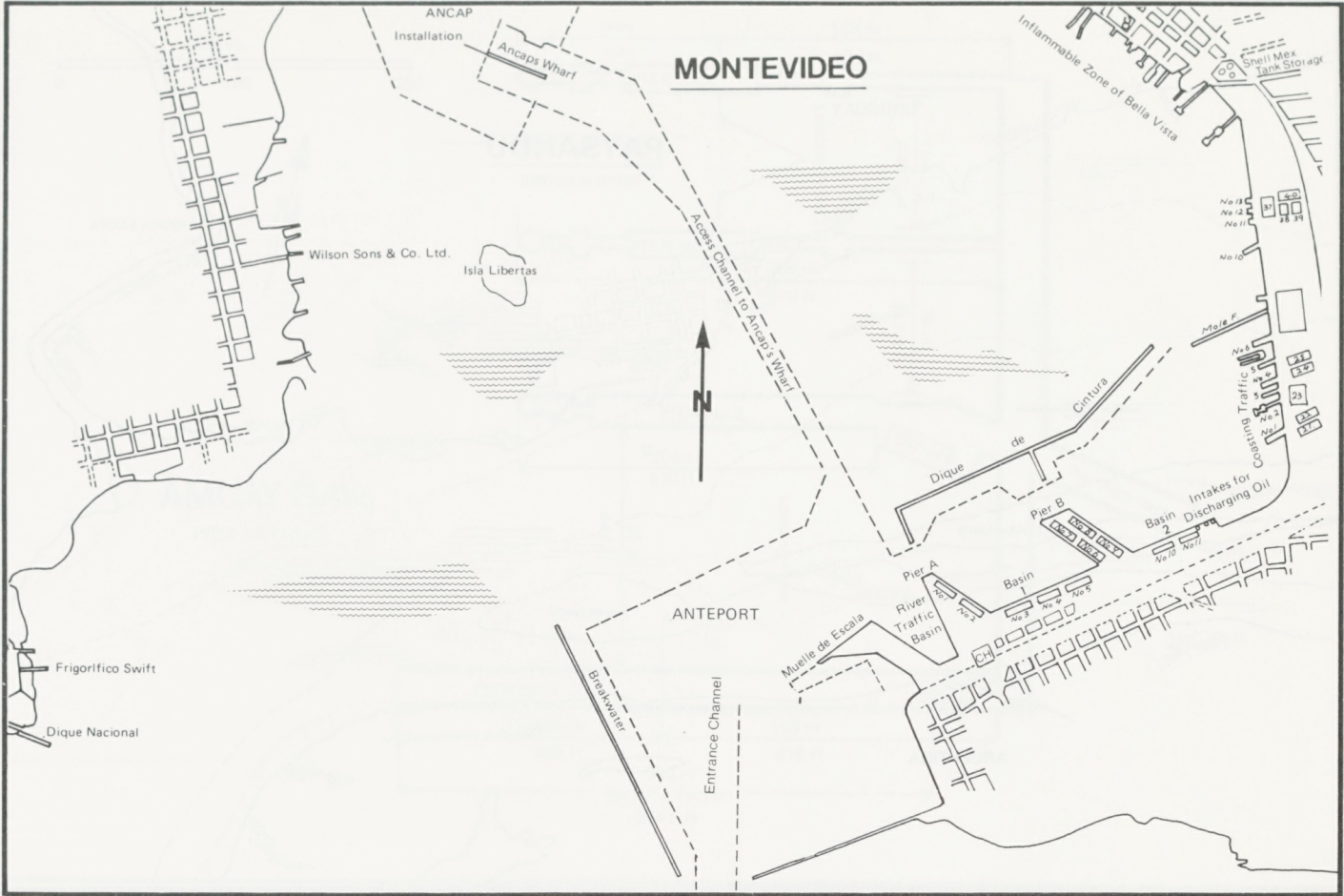
VALDEZ

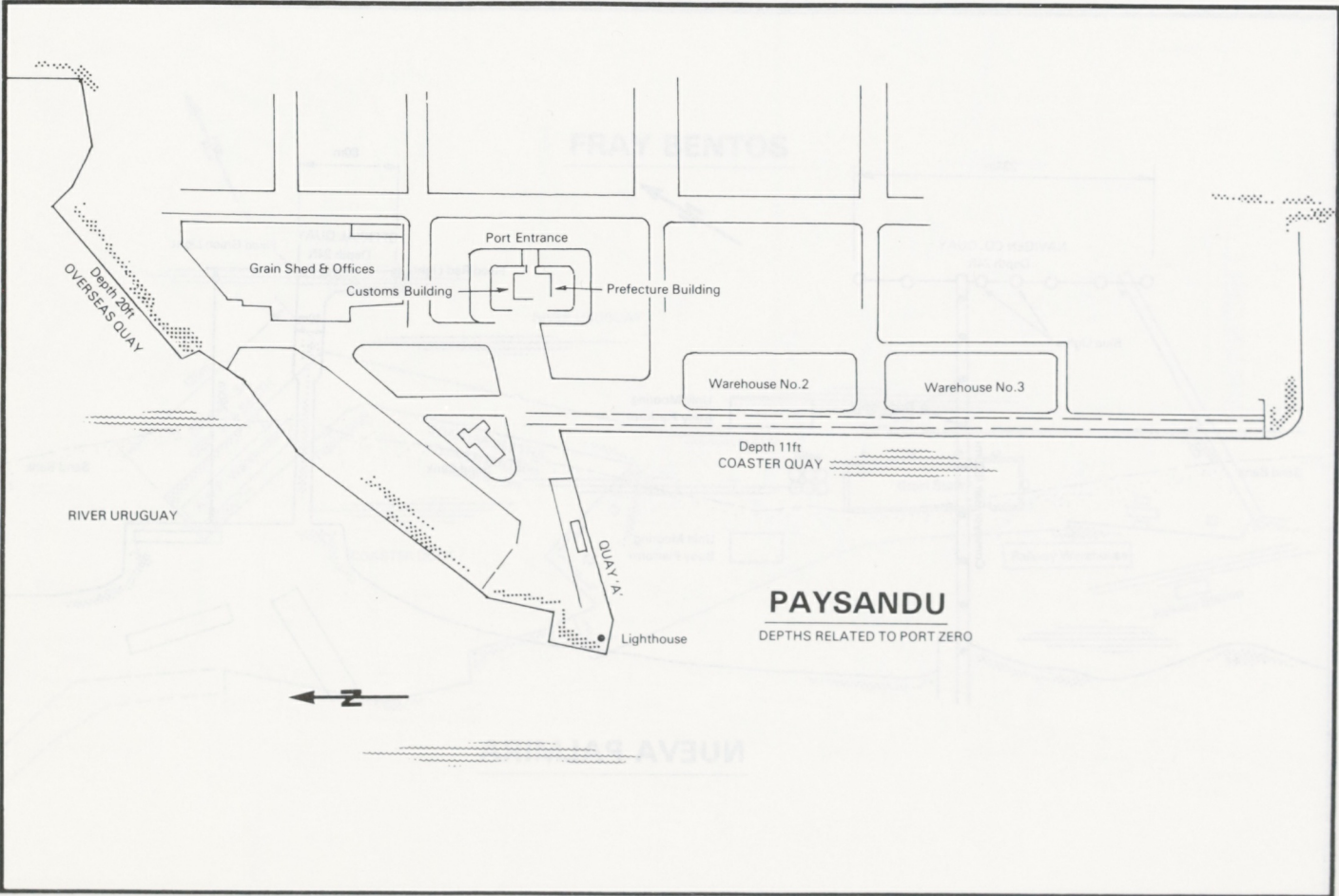
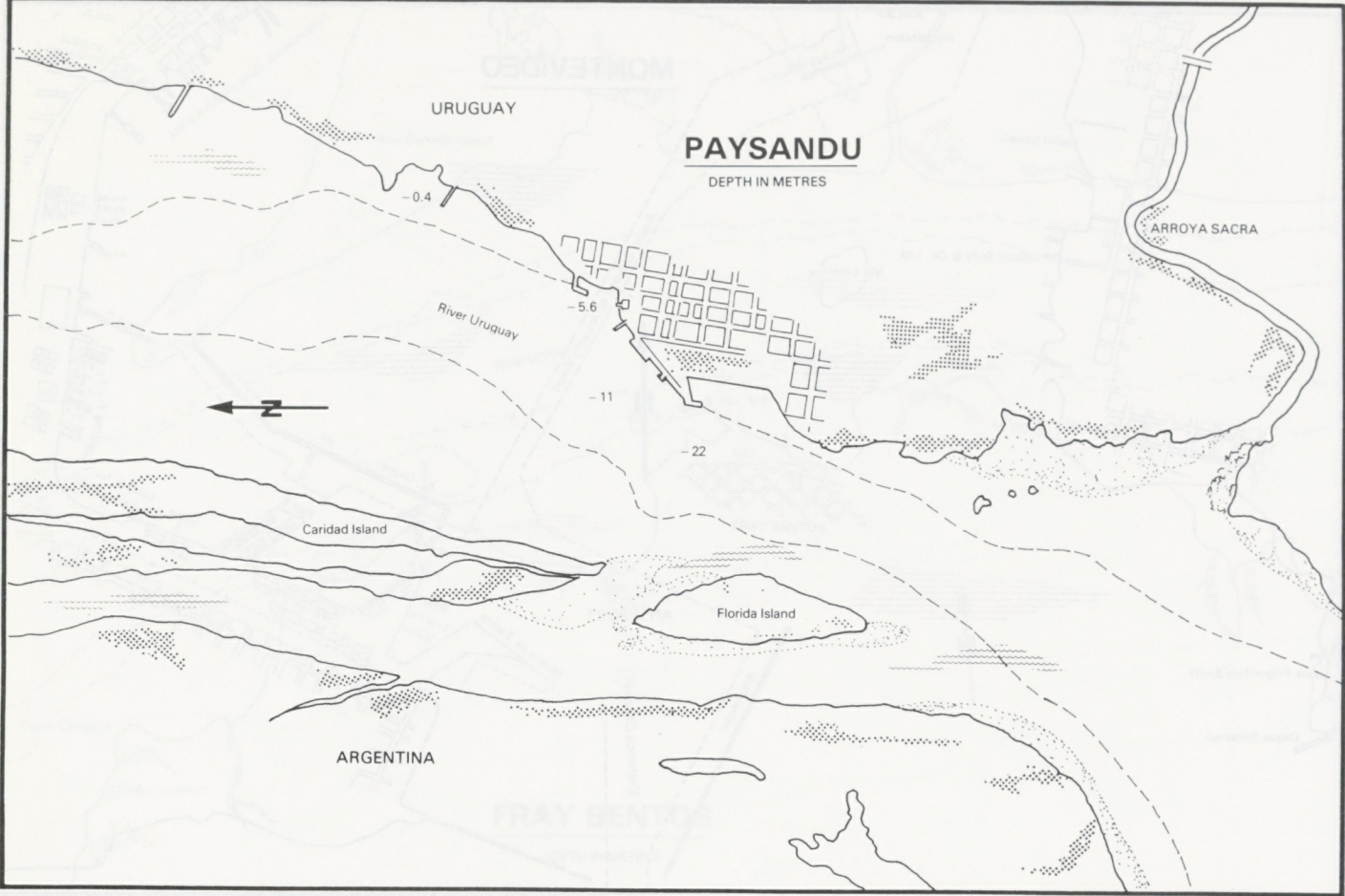


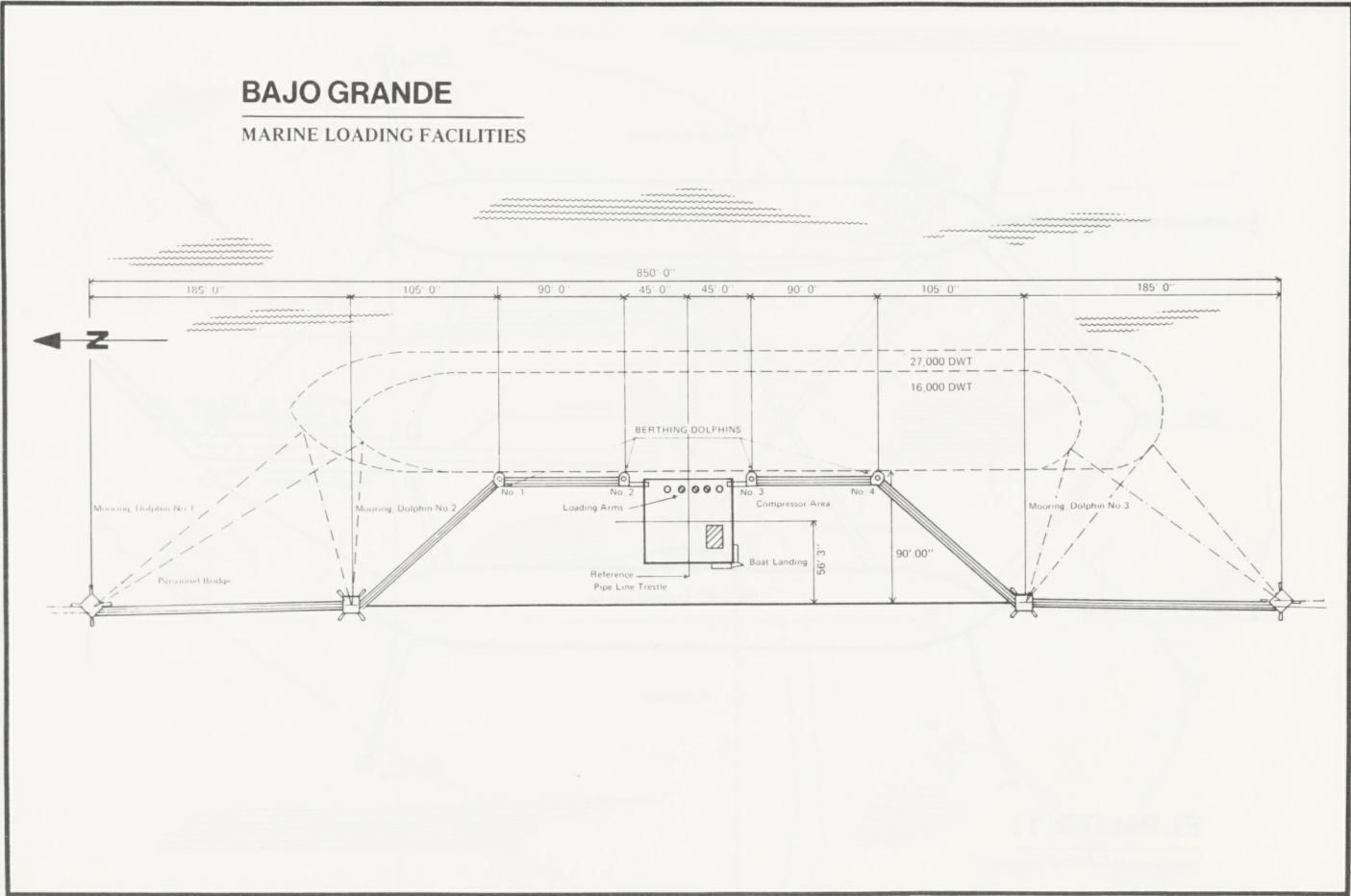
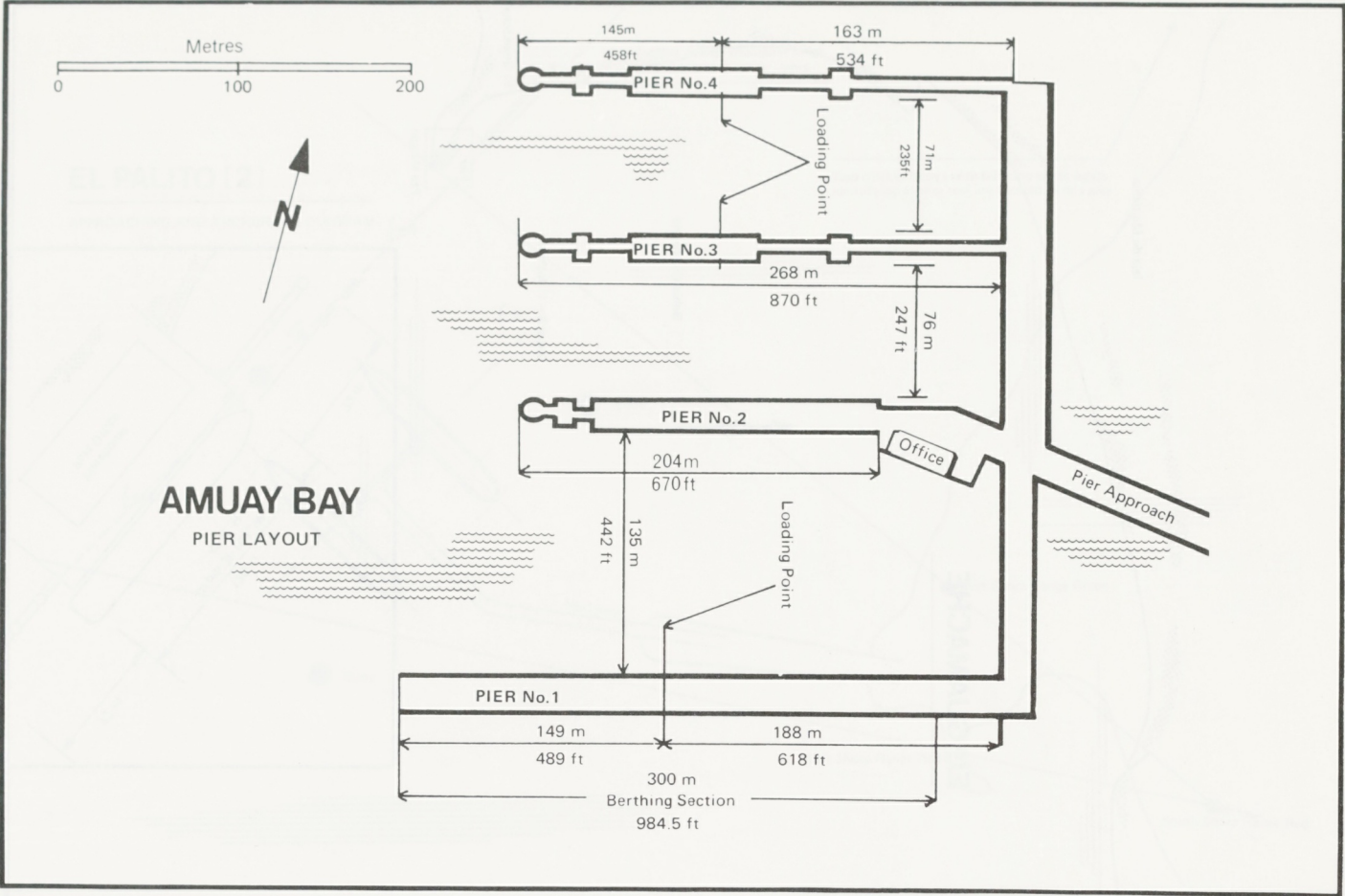


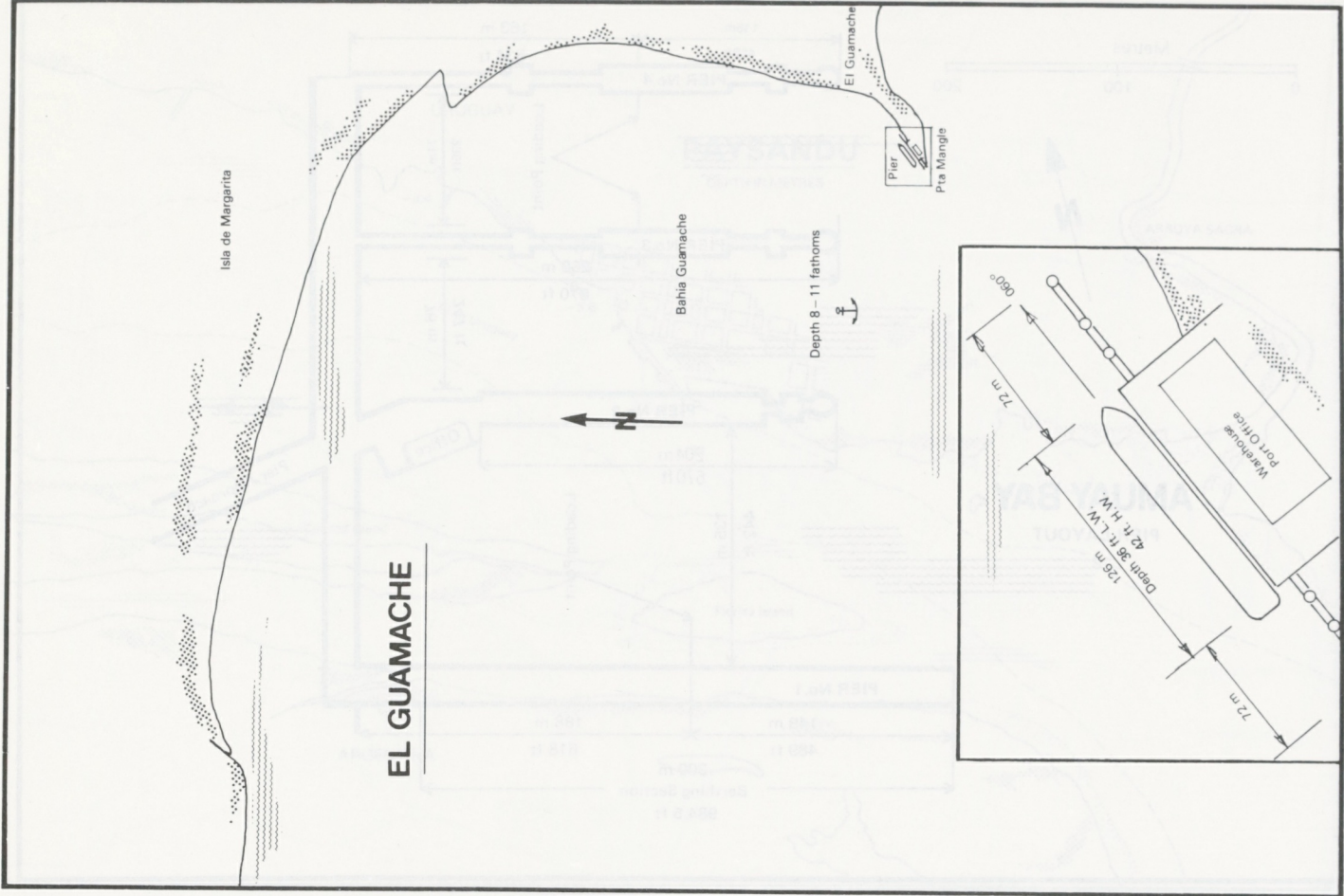




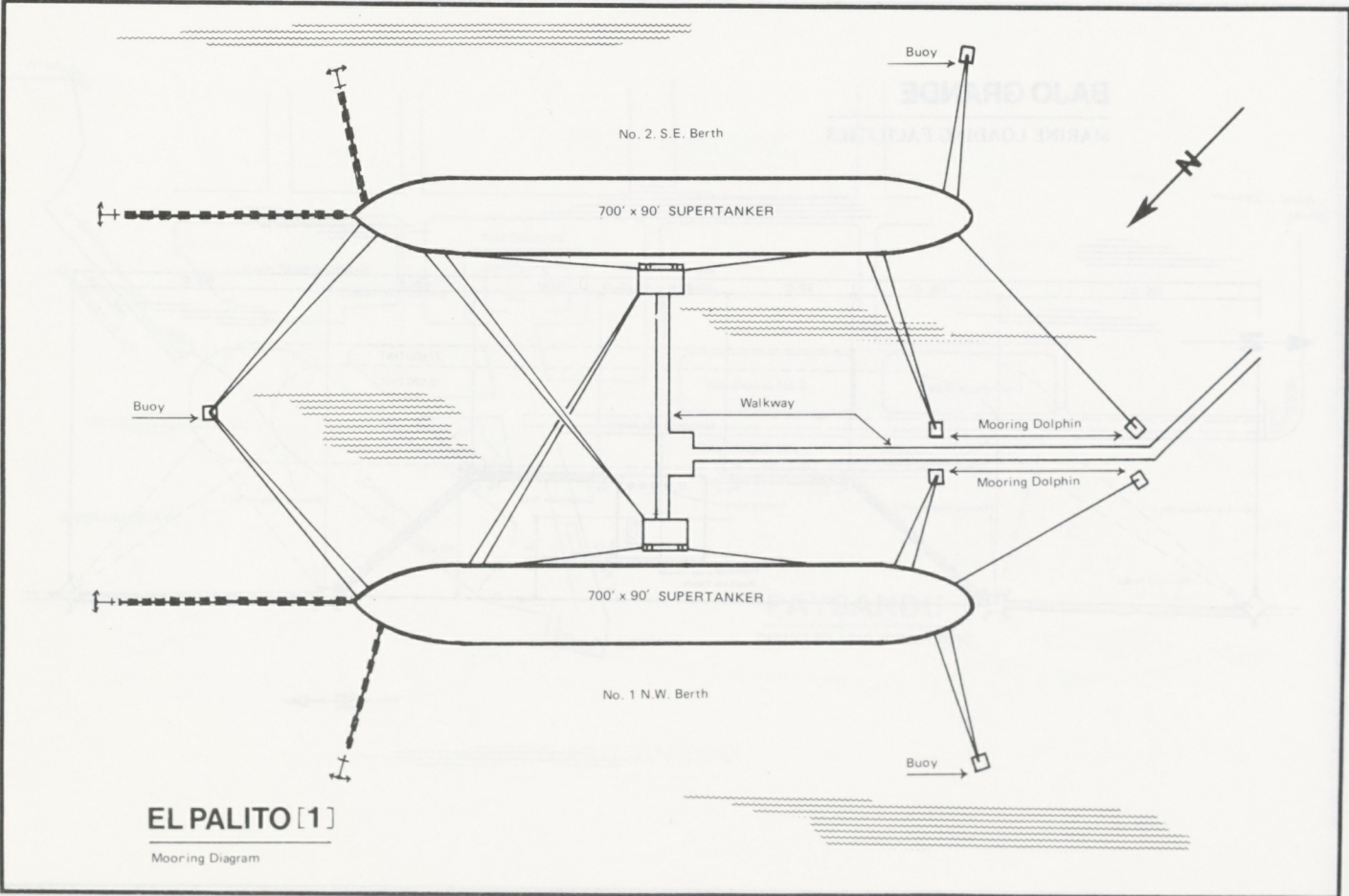






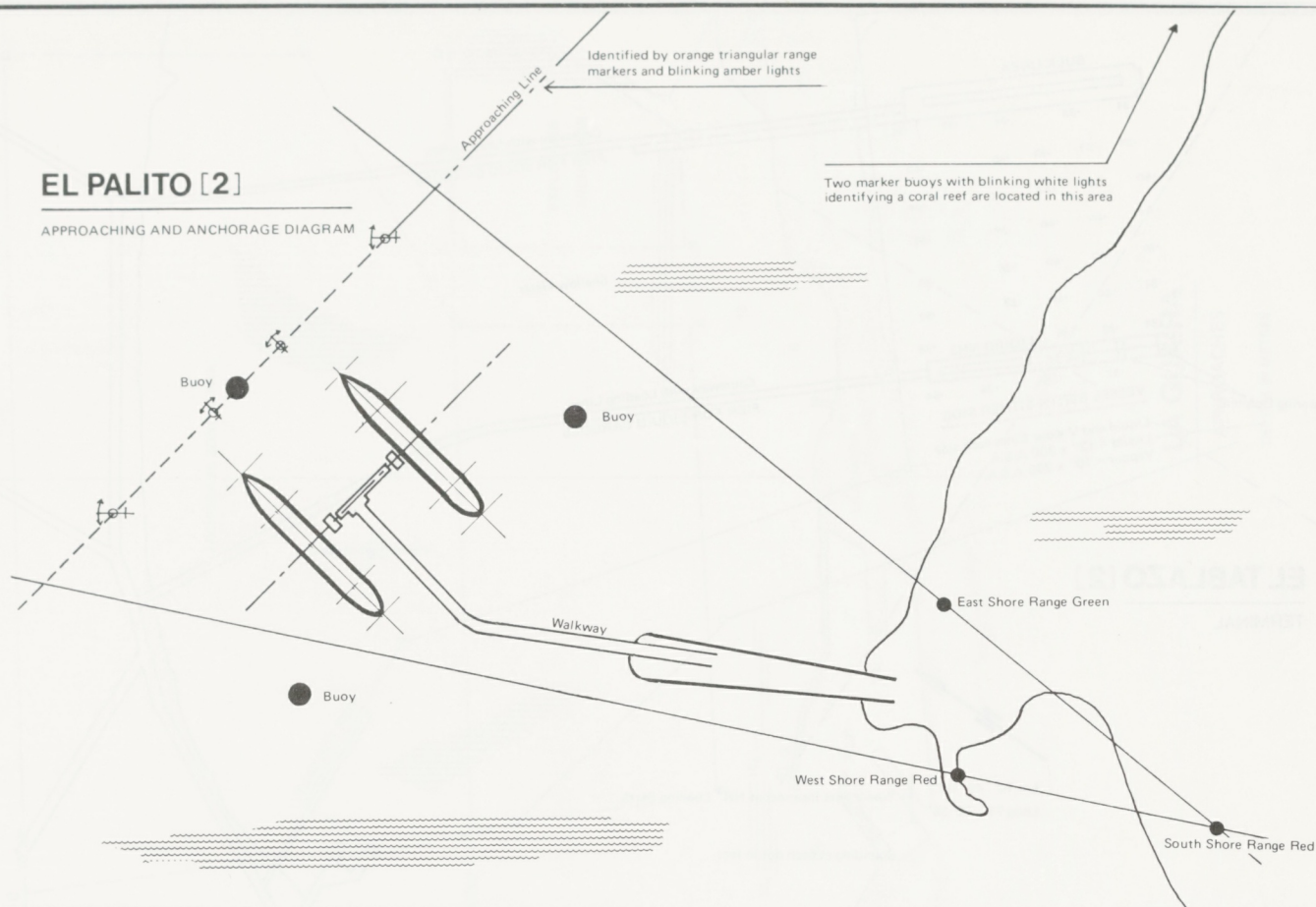


Plan supplied by Ship's Master

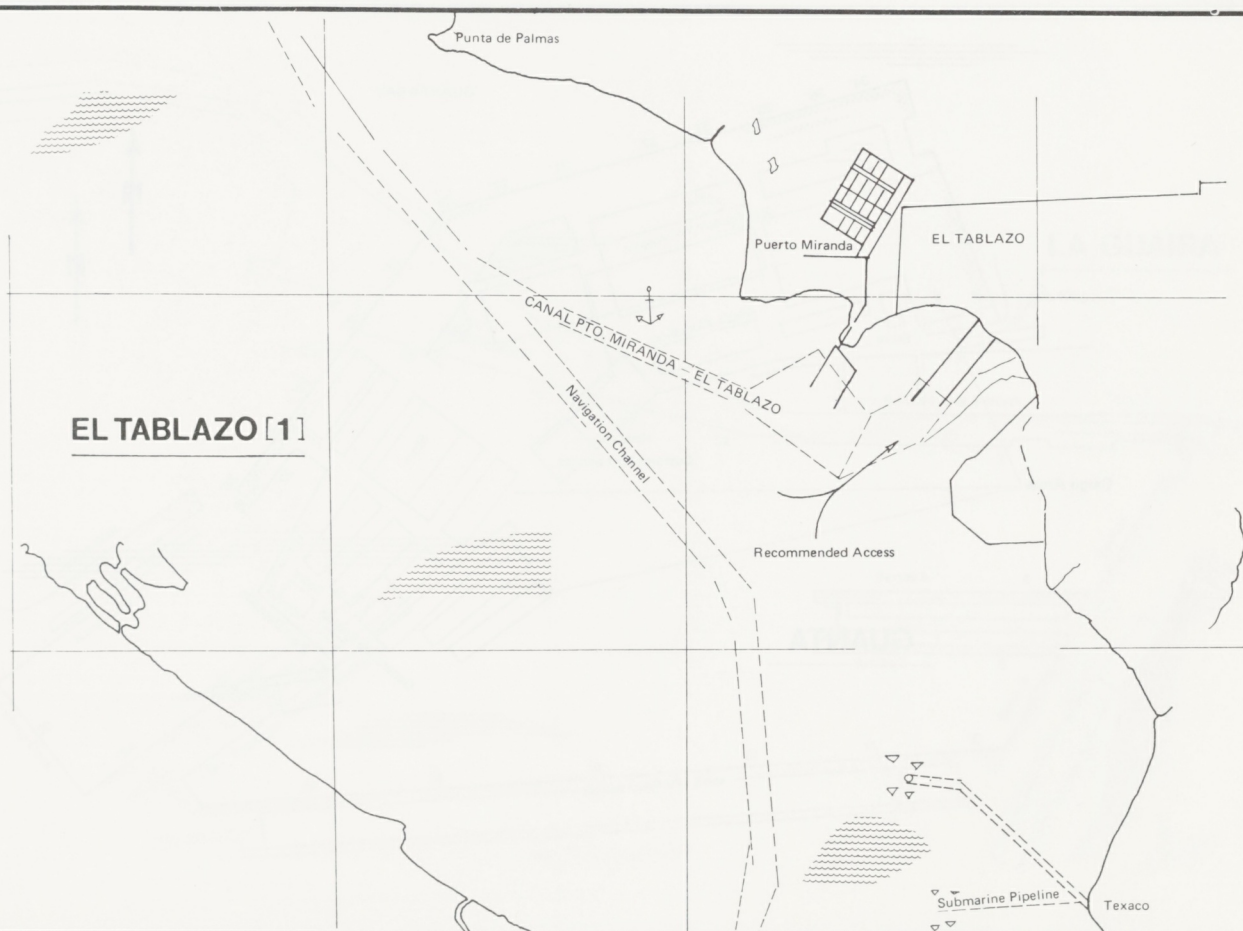


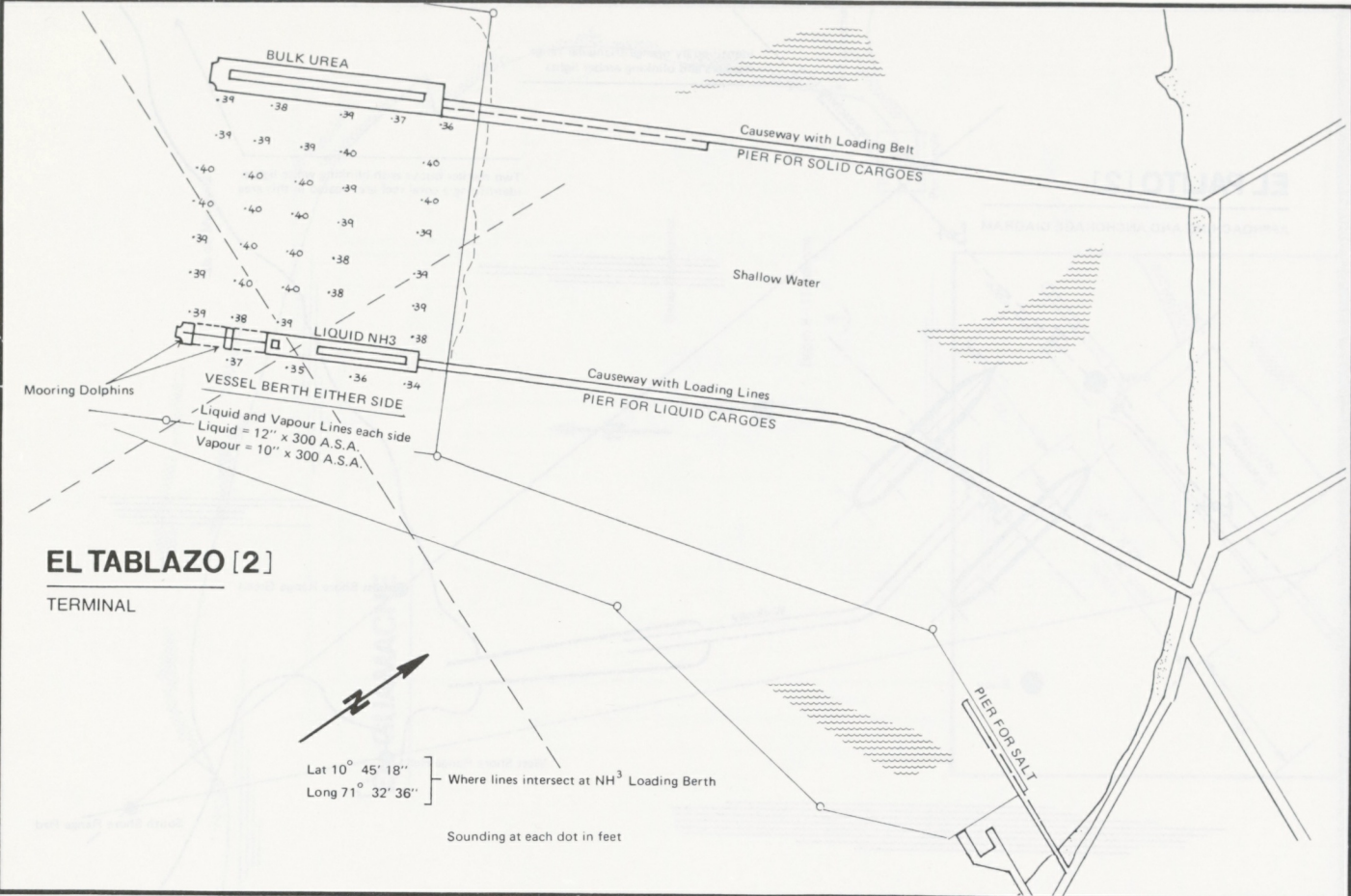
EL PALITO [2]

APPROACHING AND ANCHORAGE DIAGRAM

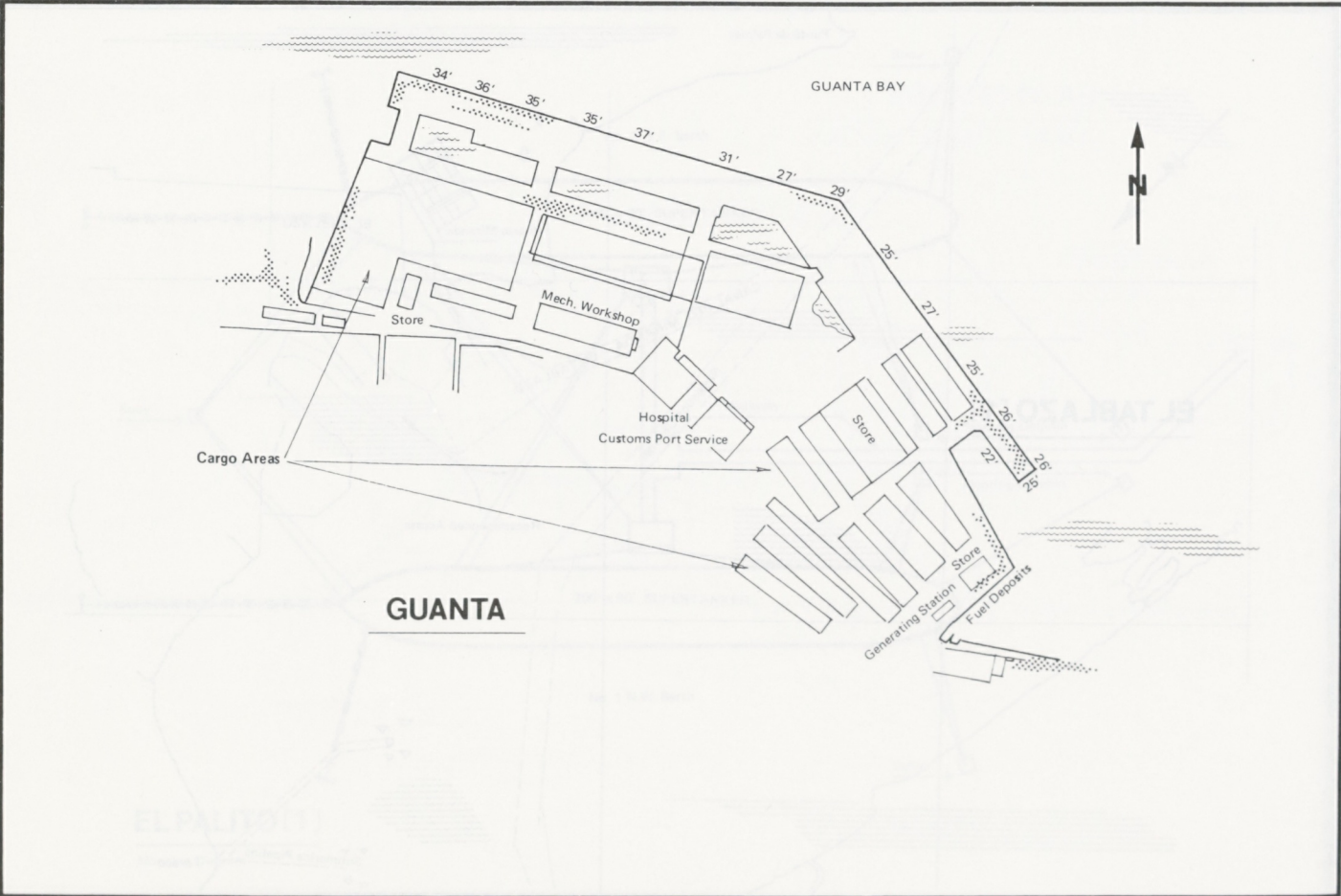


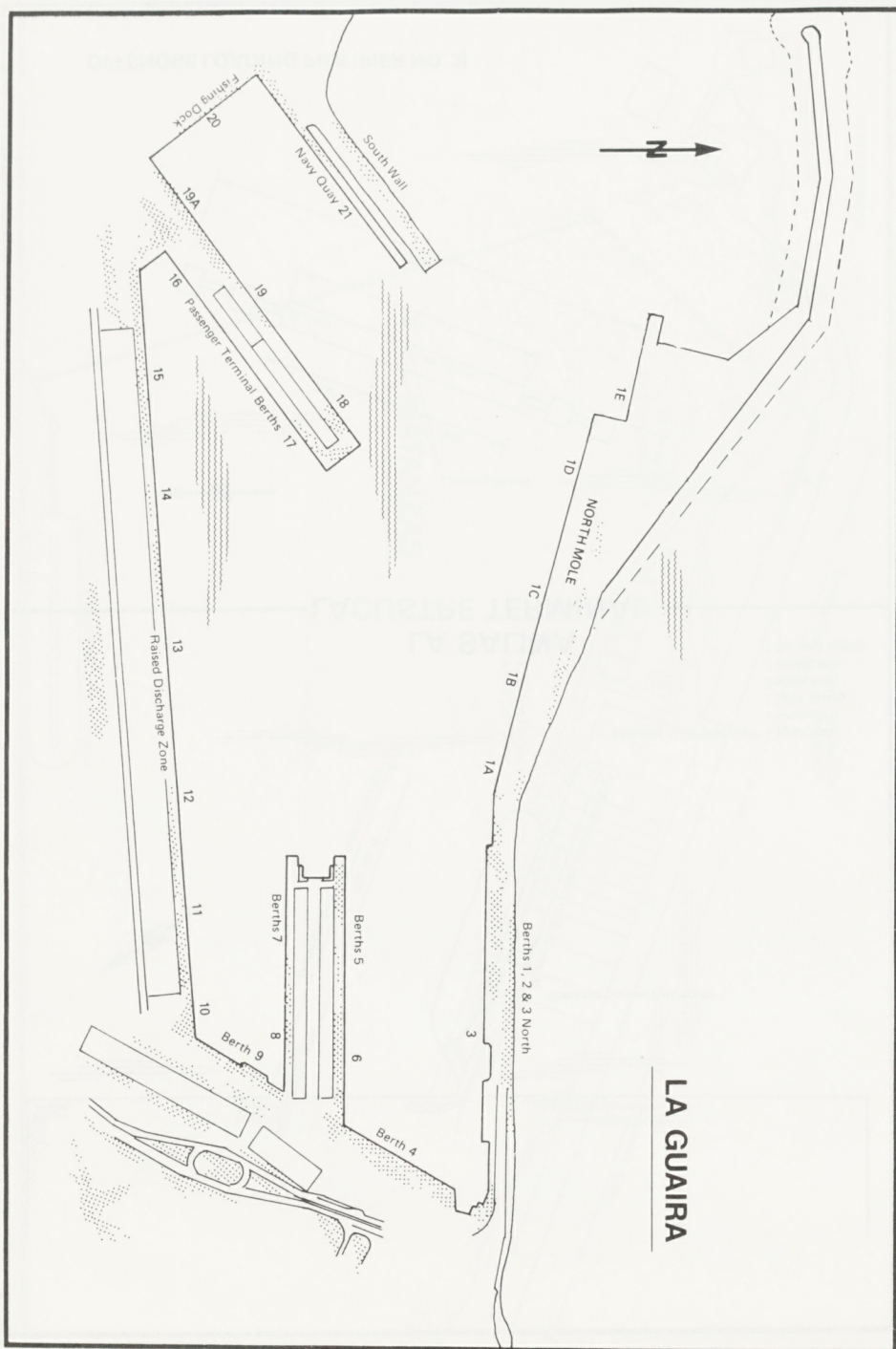
EL TABLAZO [1]

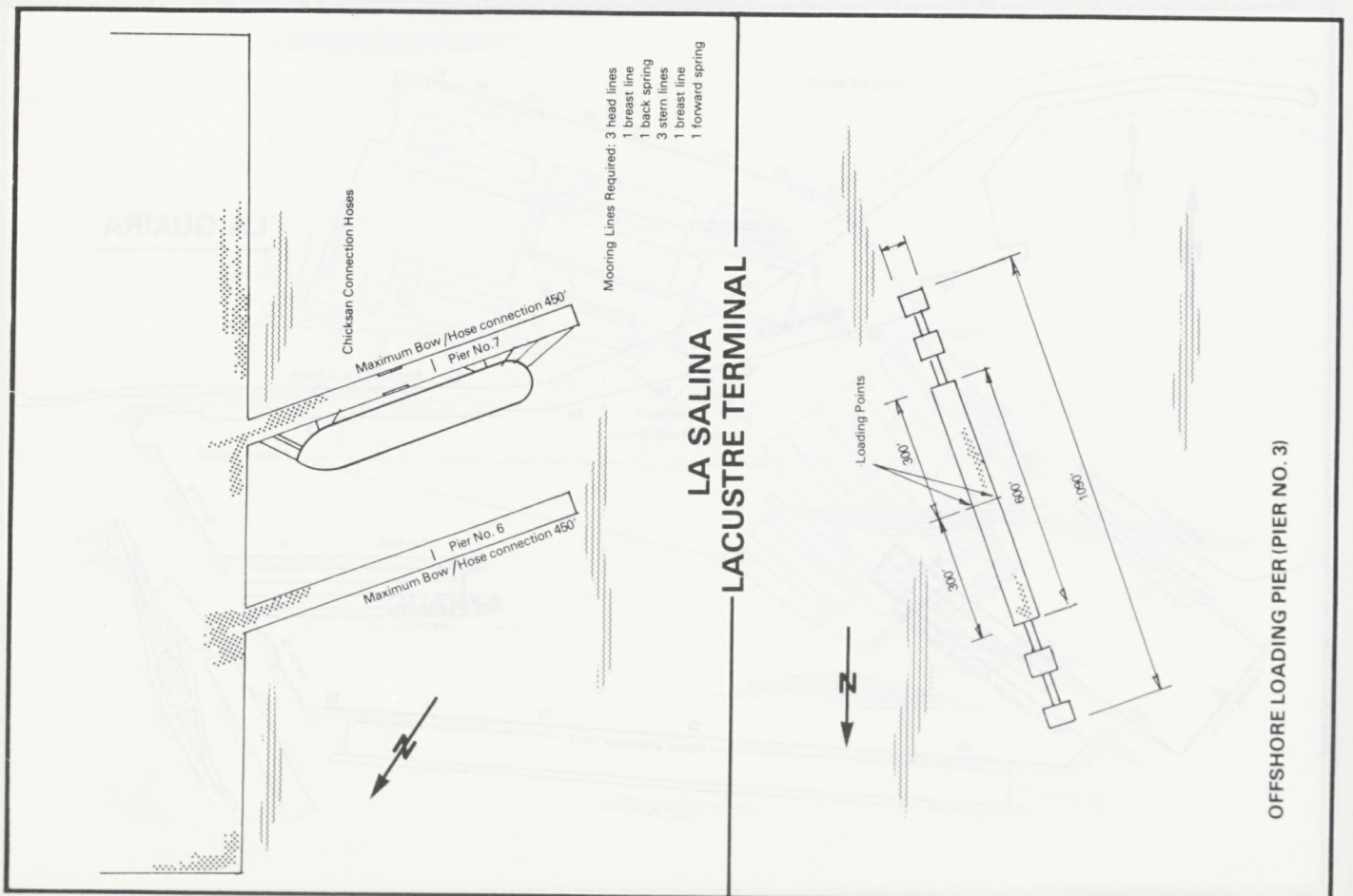
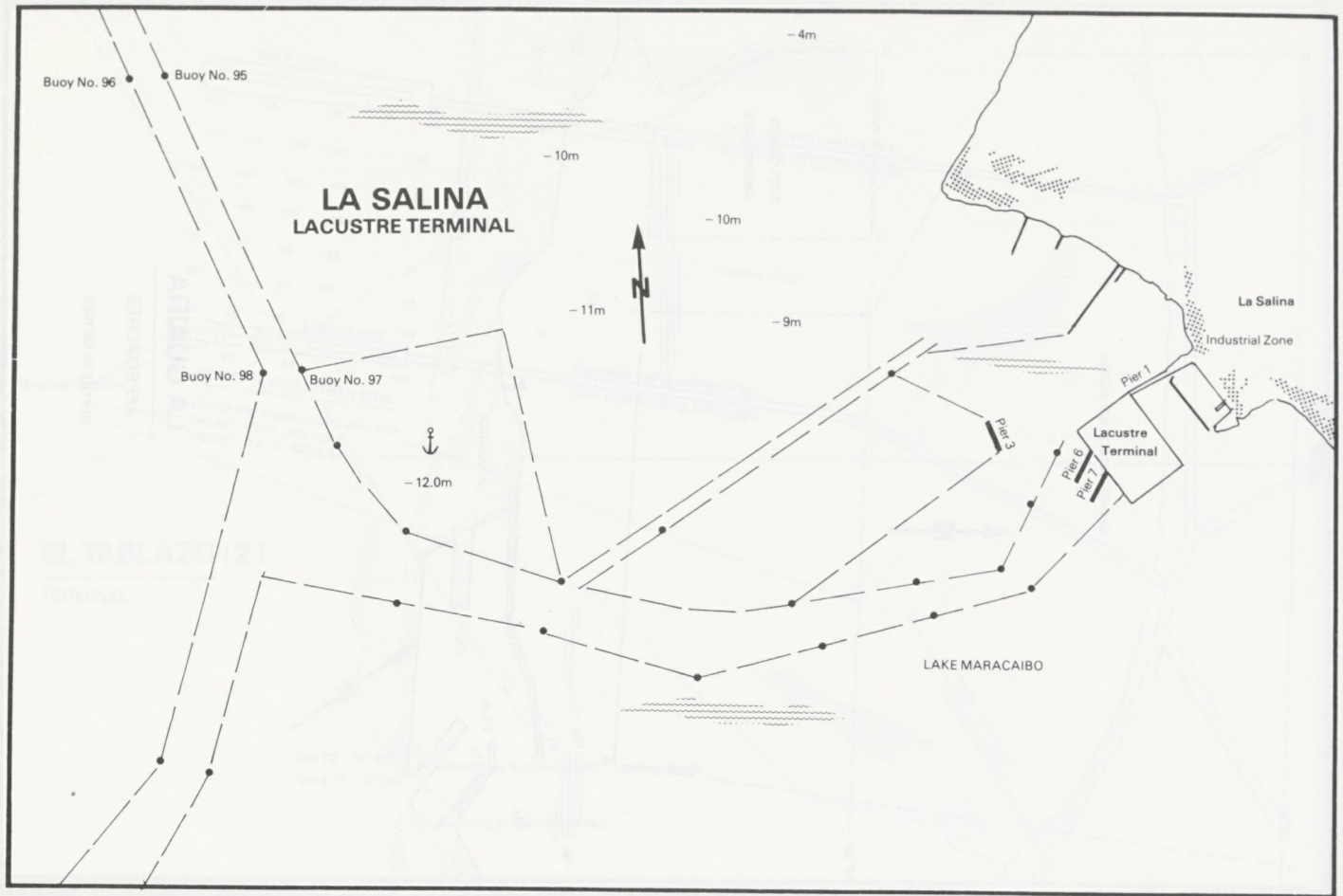


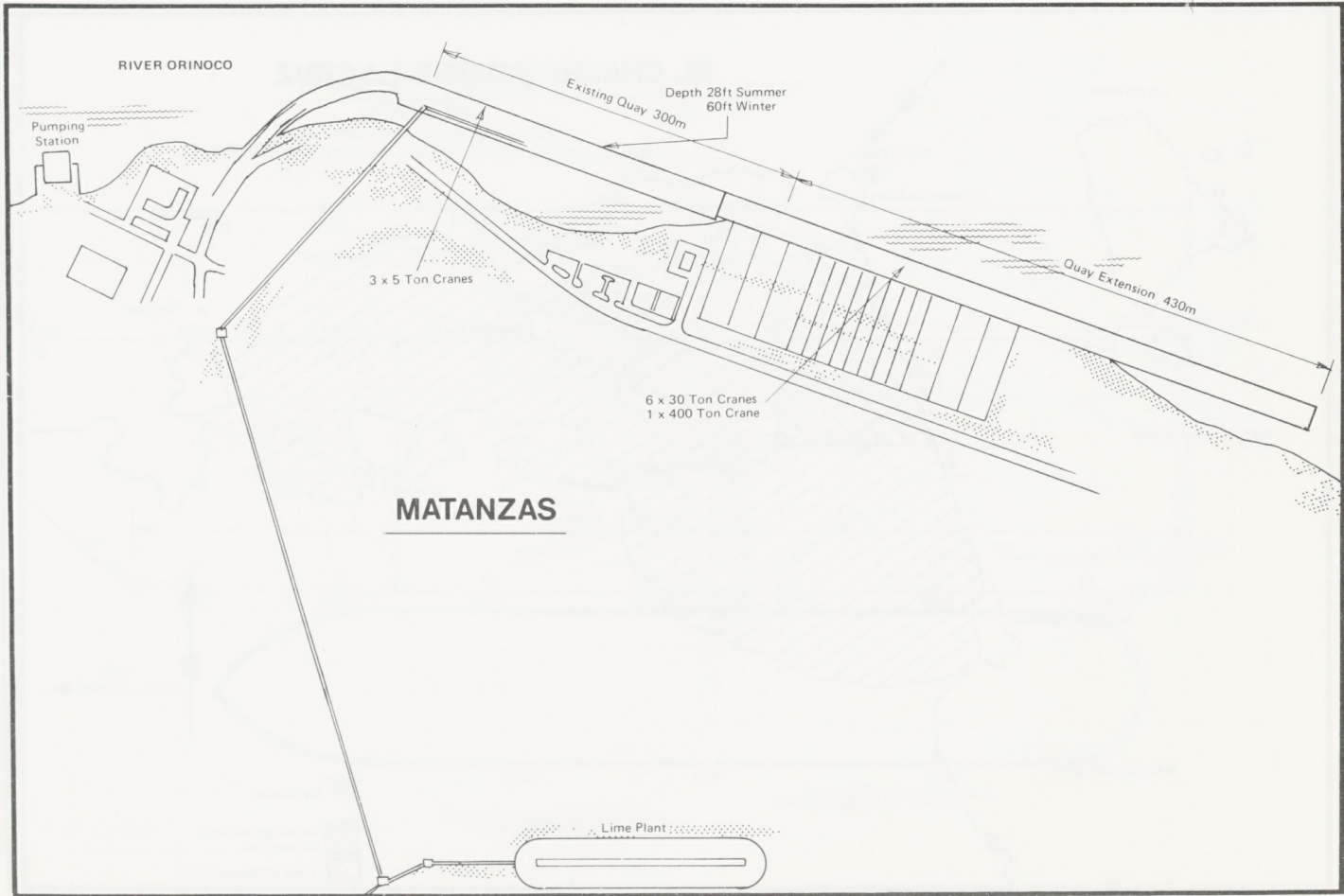
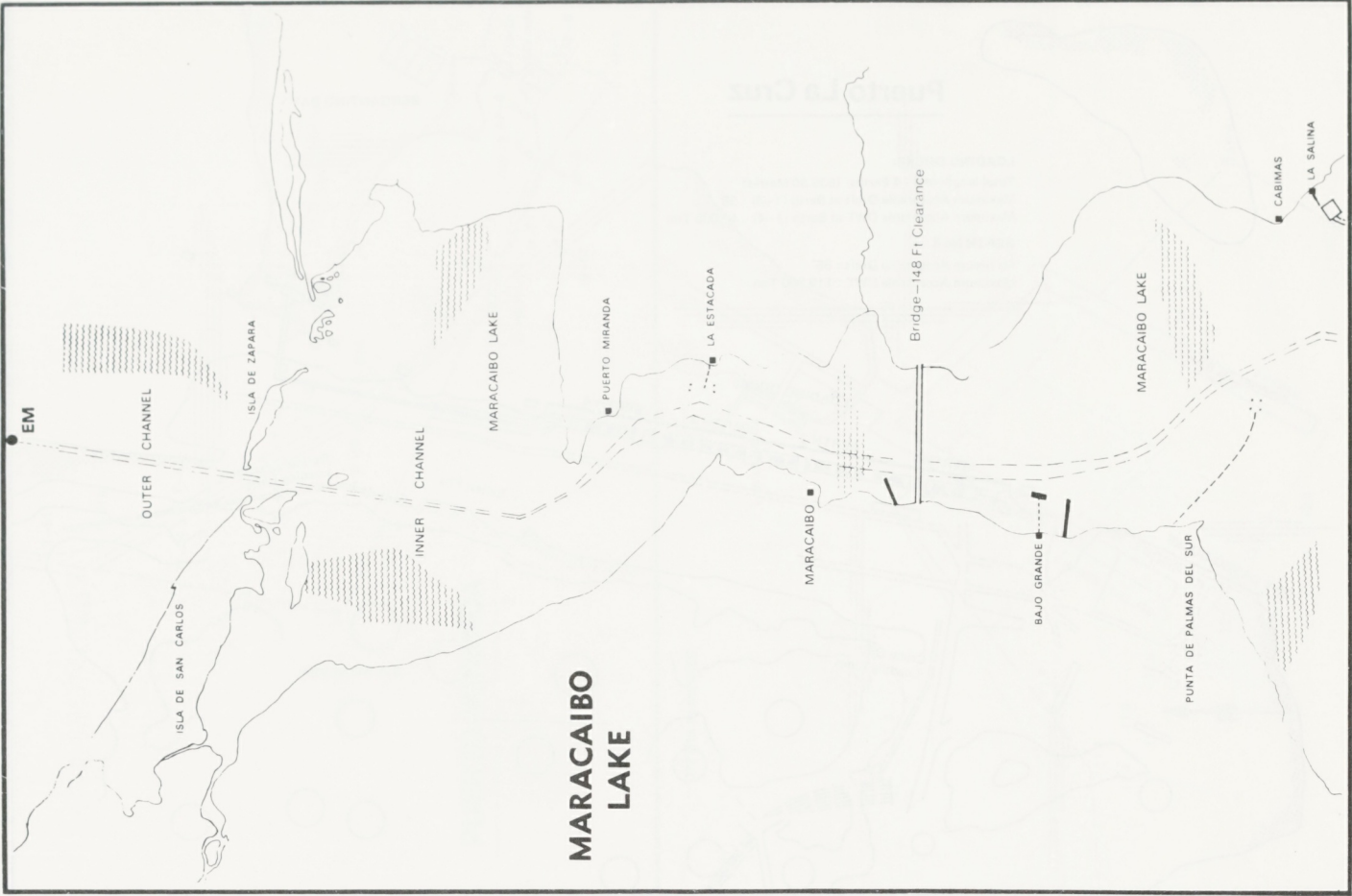


"Plan supplied by Ship's Master"









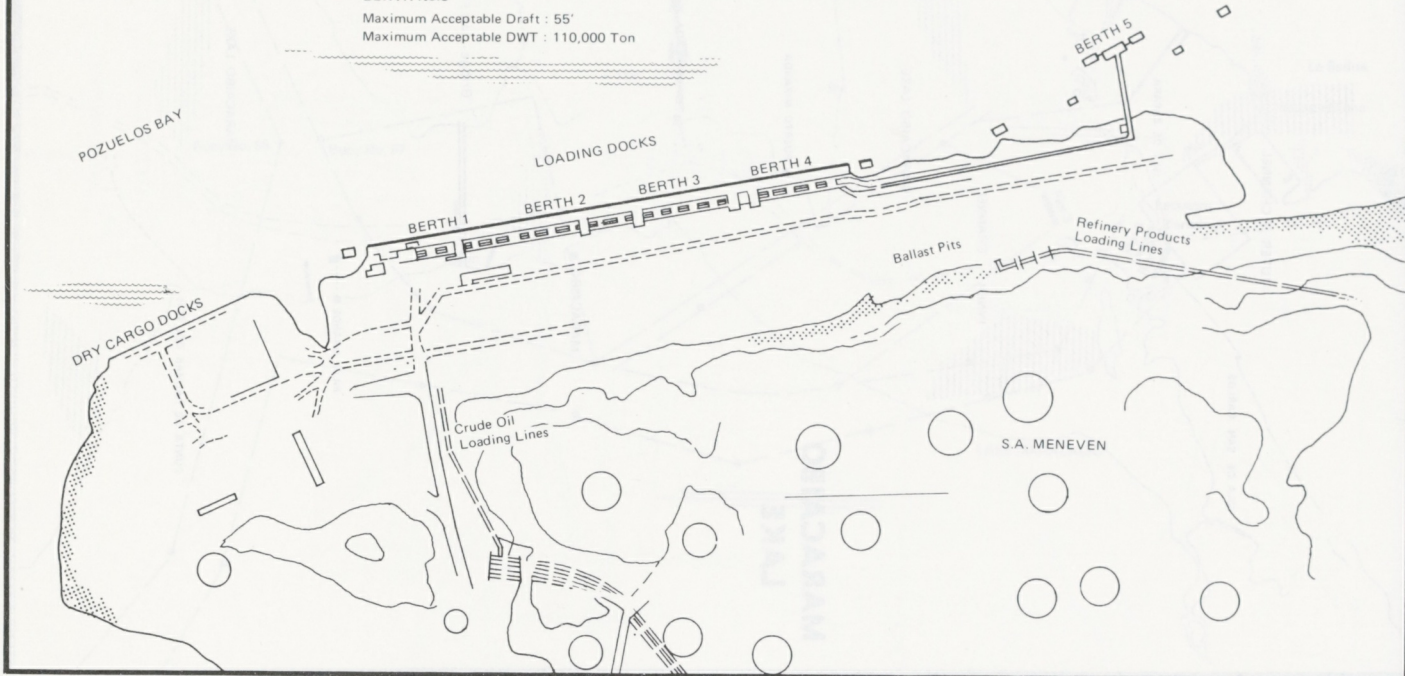
Puerto La Cruz

LOADING DOCKS:

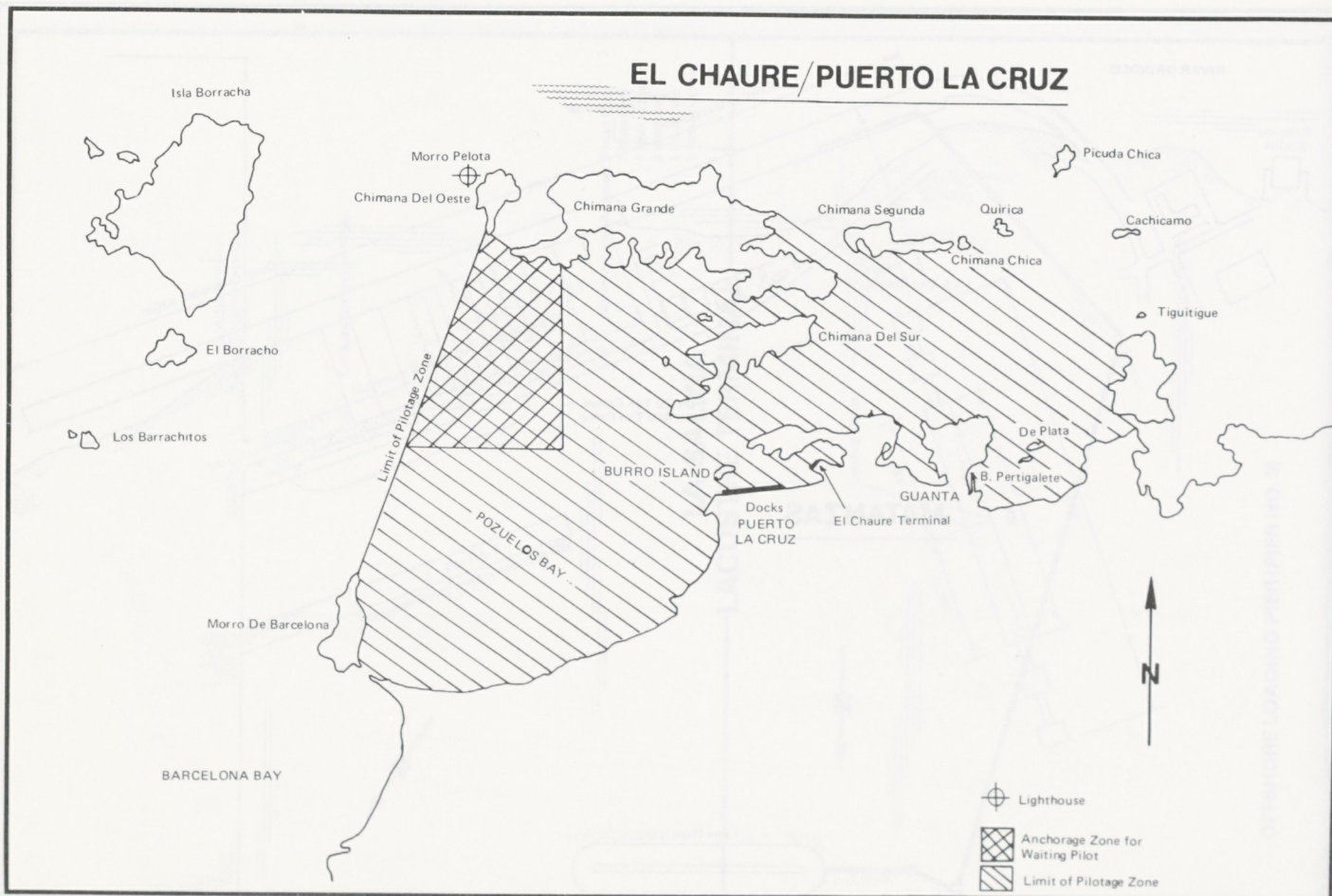
Total length of 1-4 Berths: (639.30 Metres)
Maximum Acceptable Draft at Berth (1-4) : 38'
Maximum Acceptable DWT at Berth (1-4) : 40,000 Ton

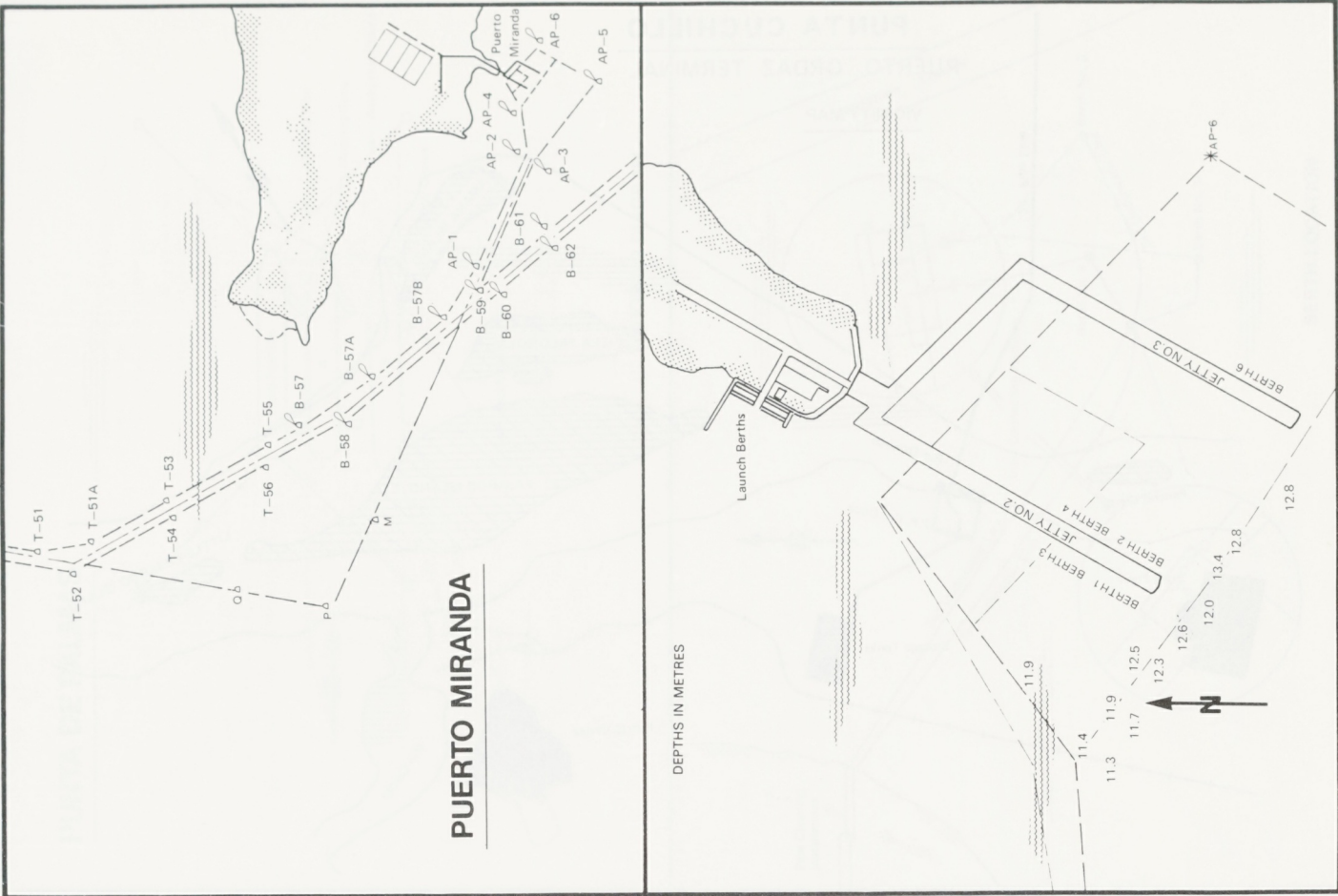
BERTH No.5

Maximum Acceptable Draft : 55'
Maximum Acceptable DWT : 110,000 Ton



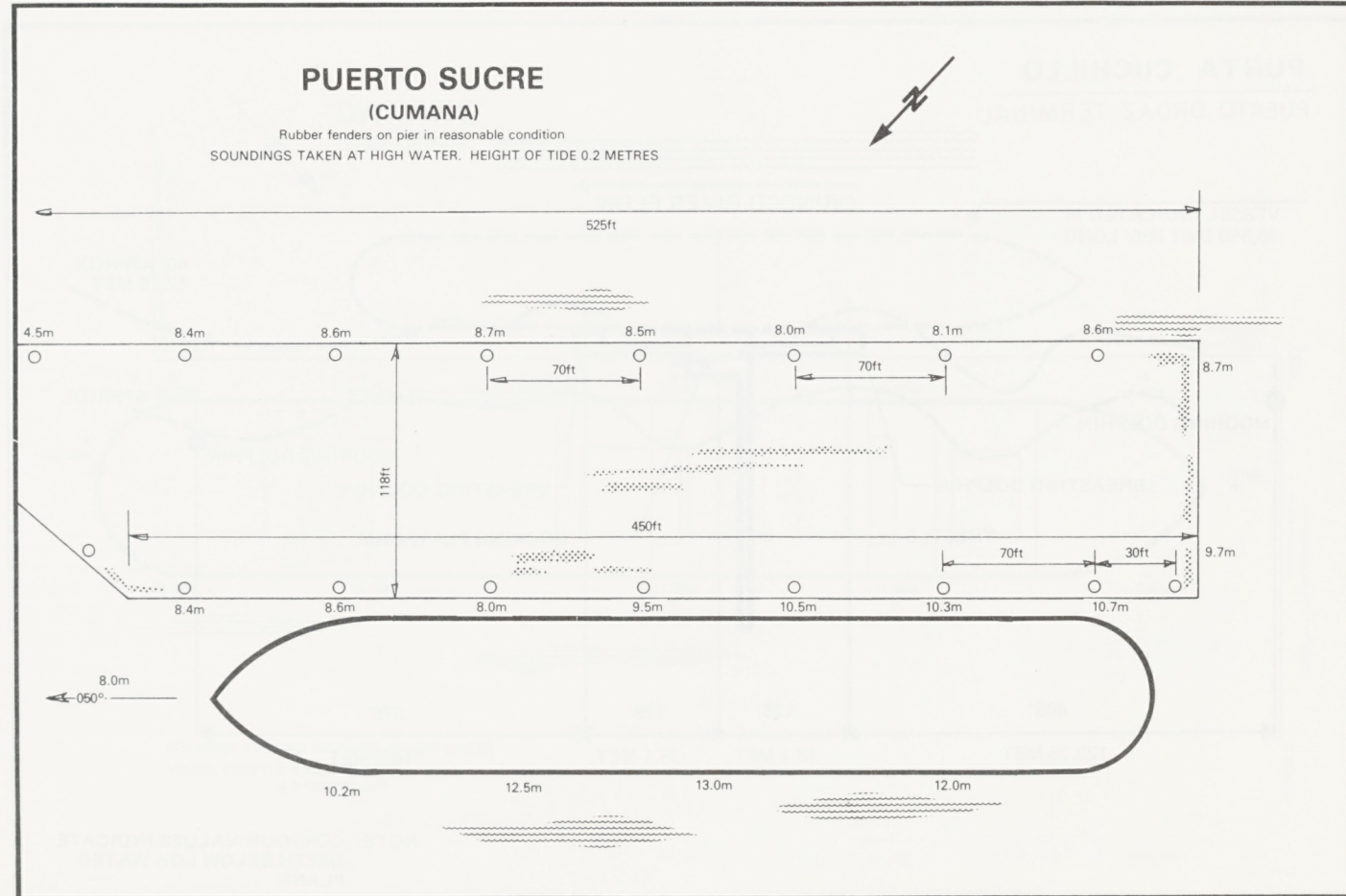
EL CHAURE/ PUERTO LA CRUZ





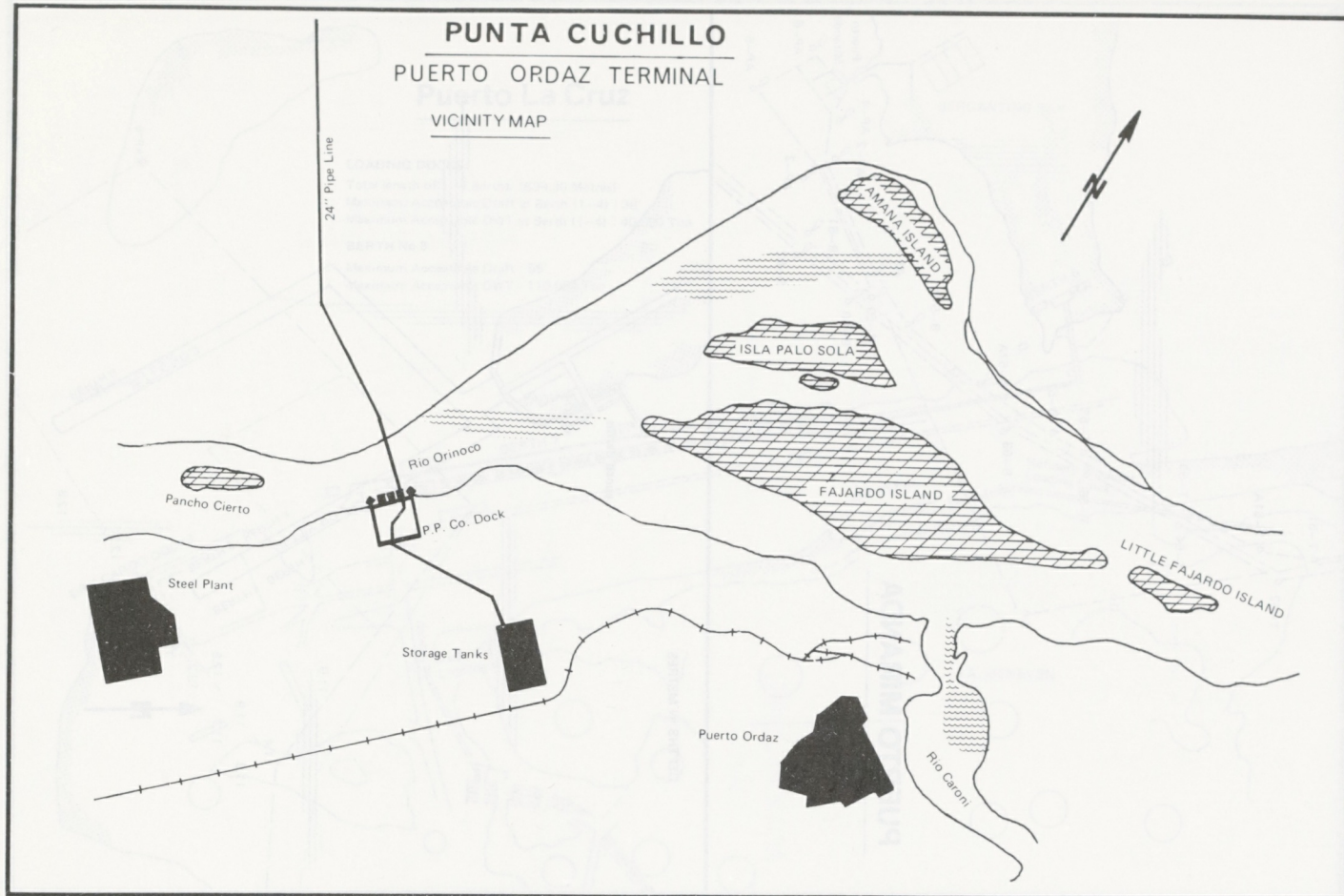
**PUERTO SUCRE
(CUMANA)**

Rubber fenders on pier in reasonable condition
SOUNDINGS TAKEN AT HIGH WATER. HEIGHT OF TIDE 0.2 METRES



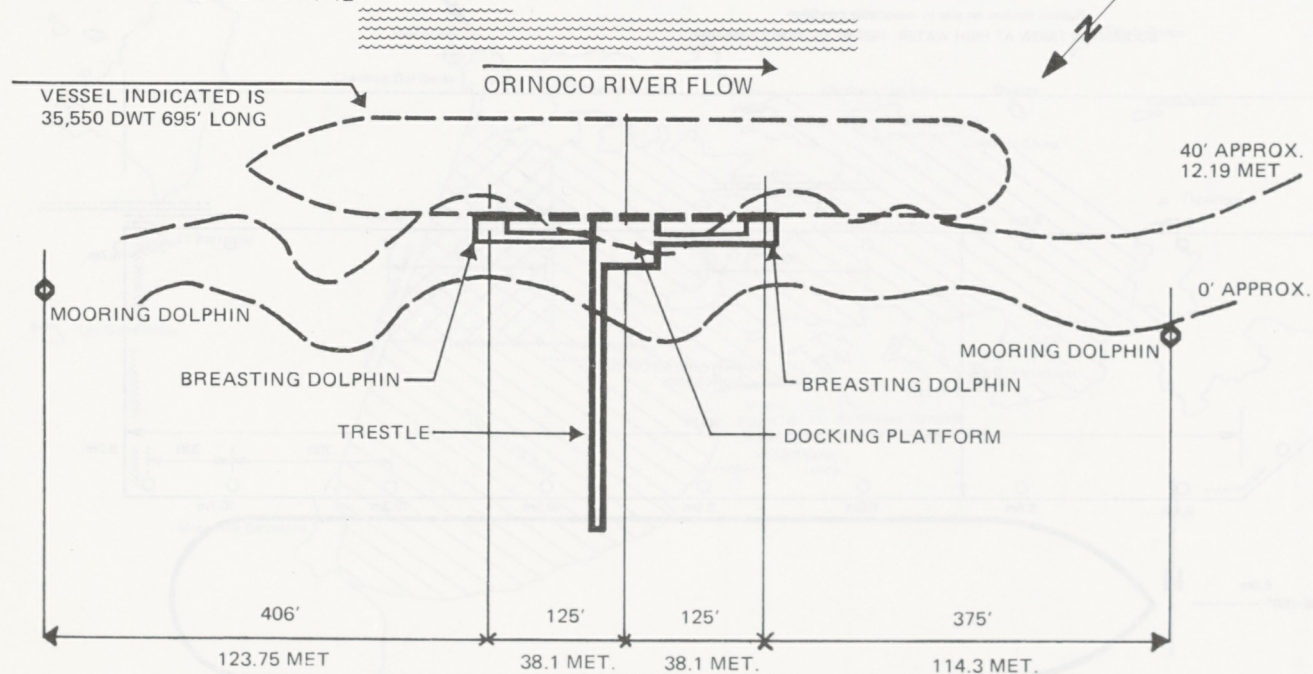
PUNTA CUCHILLO **PUERTO ORDAZ TERMINAL**

VICINITY MAP



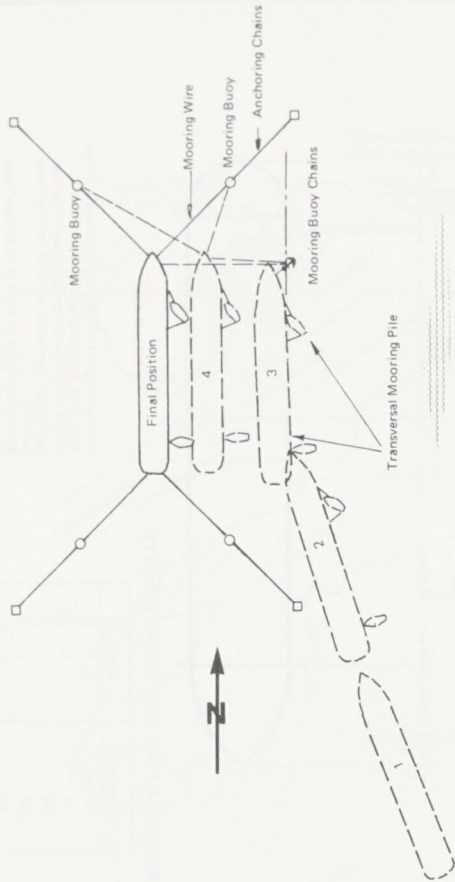
PUNTA CUCHILLO

PUERTO ORDAZ TERMINAL

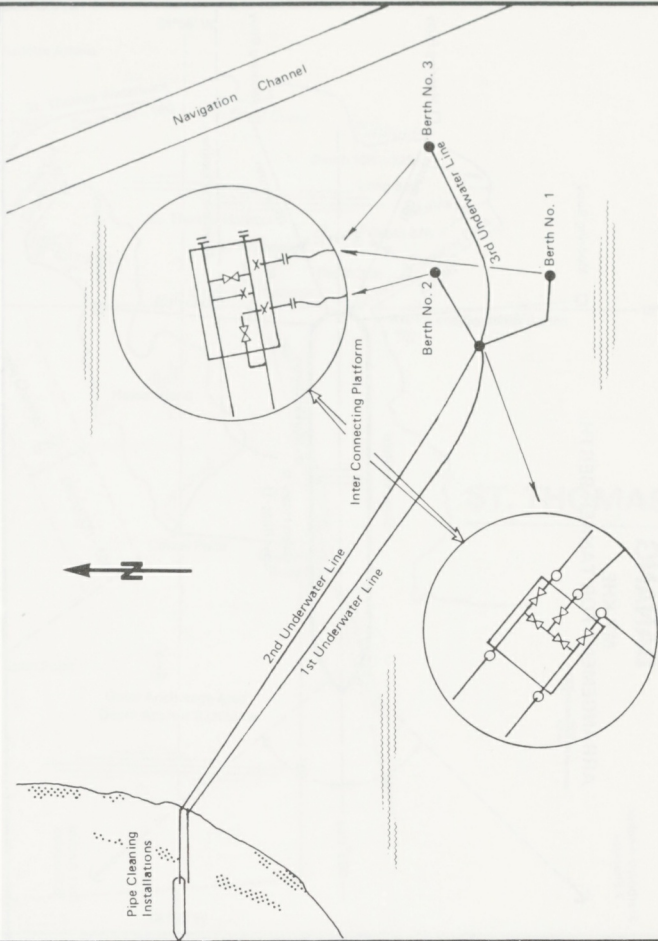


NOTE: CONTOUR VALUES INDICATE DEPTH BELOW LOW WATER PLANE.

PUNTA DE PALMAS

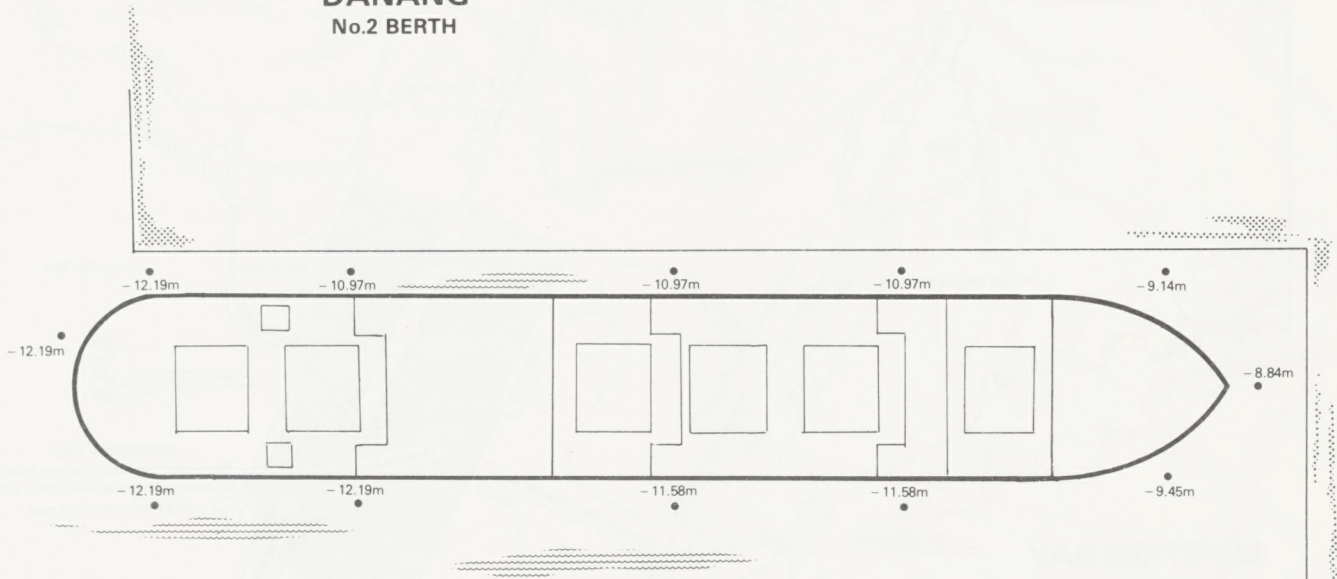


MOORING DIAGRAM

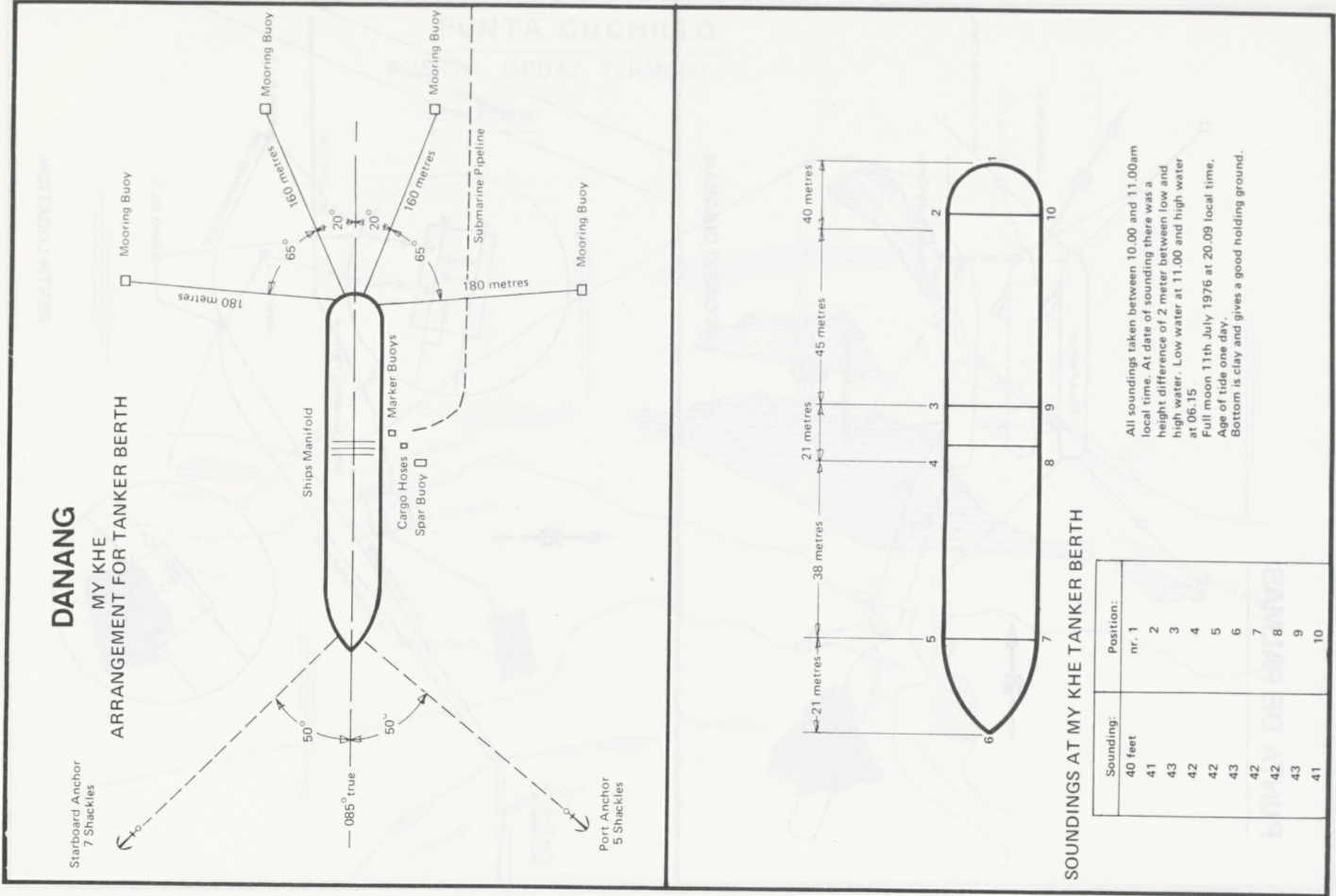


BERTH LOCATION

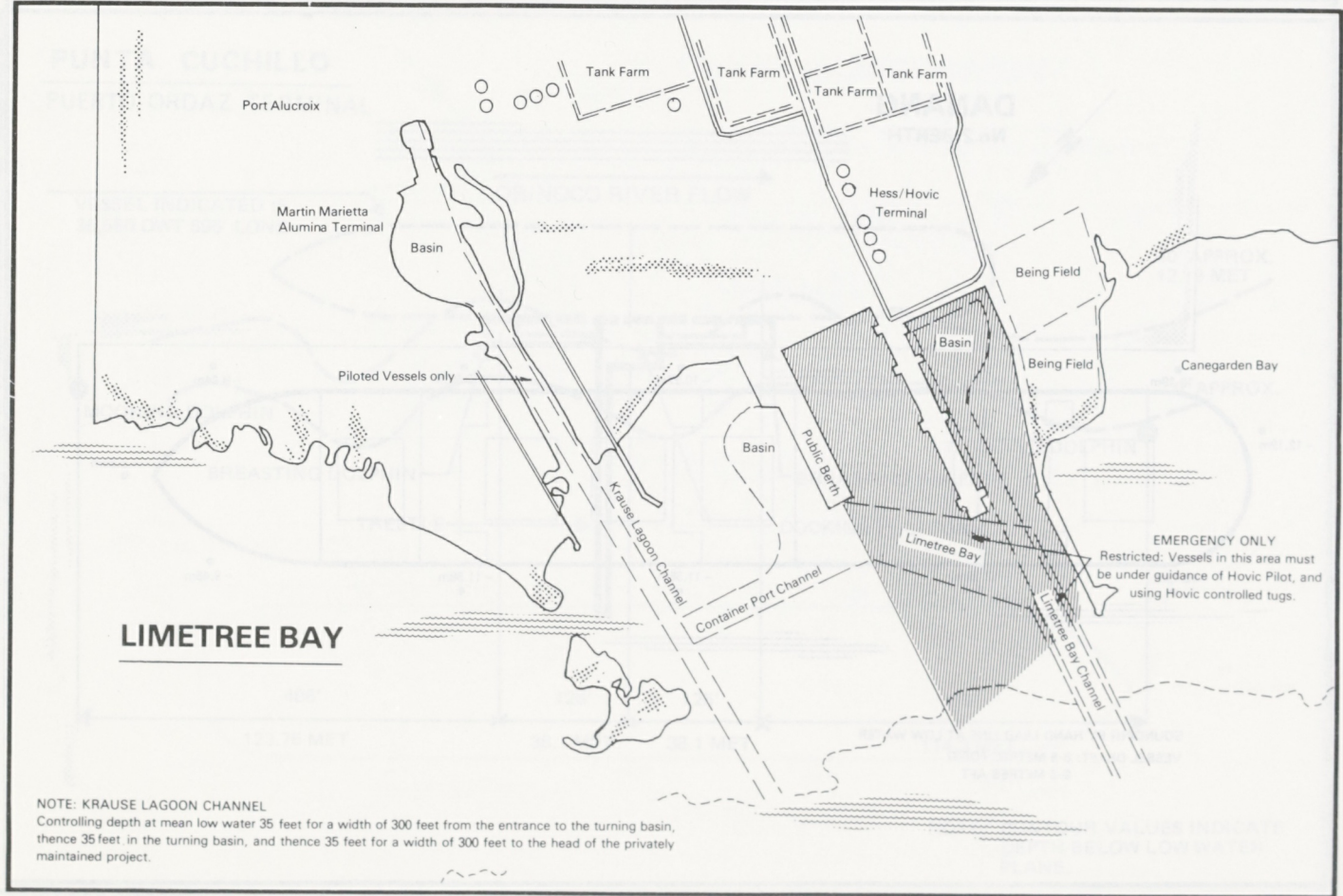
DANANG
No.2 BERTH

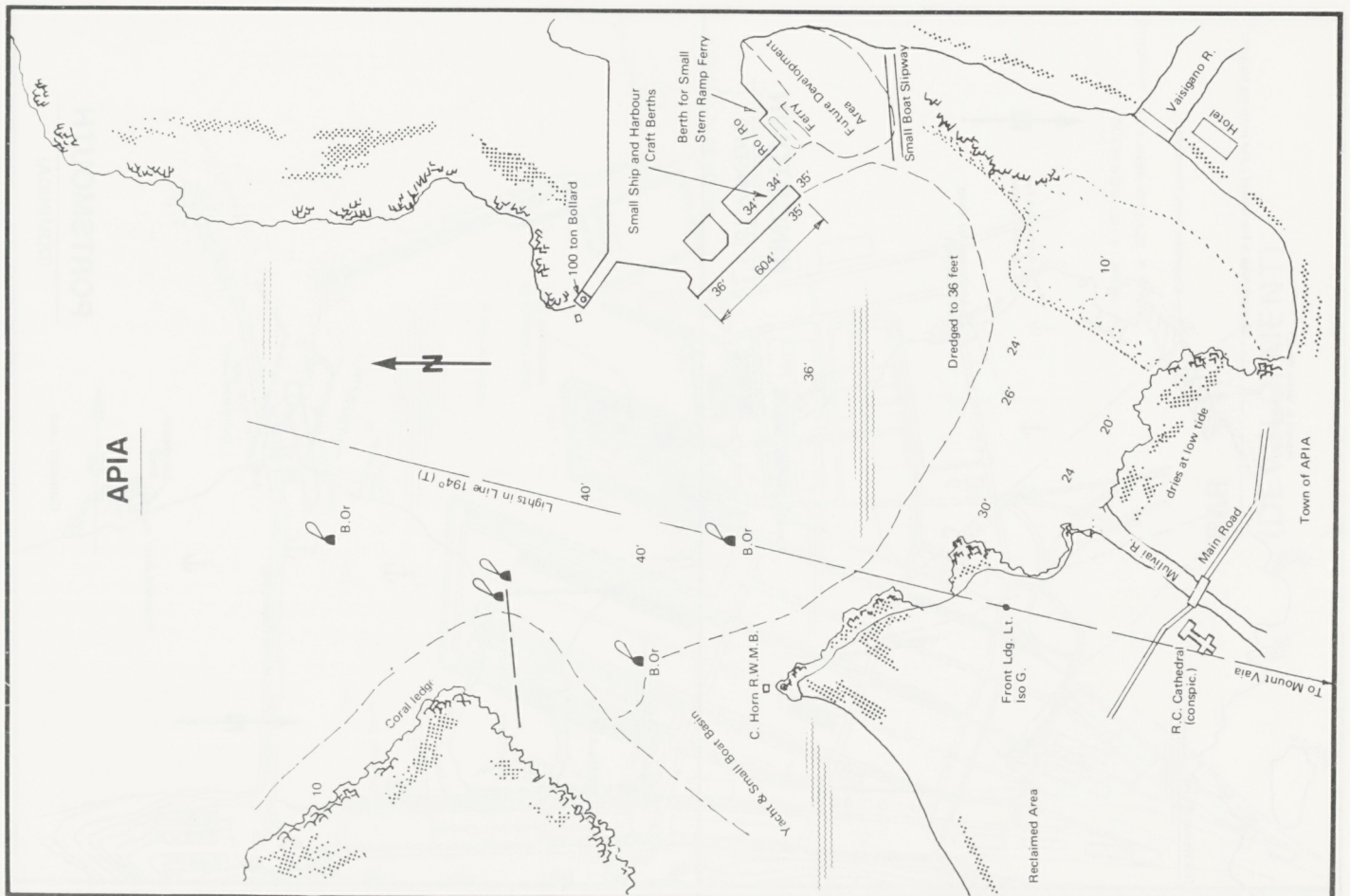
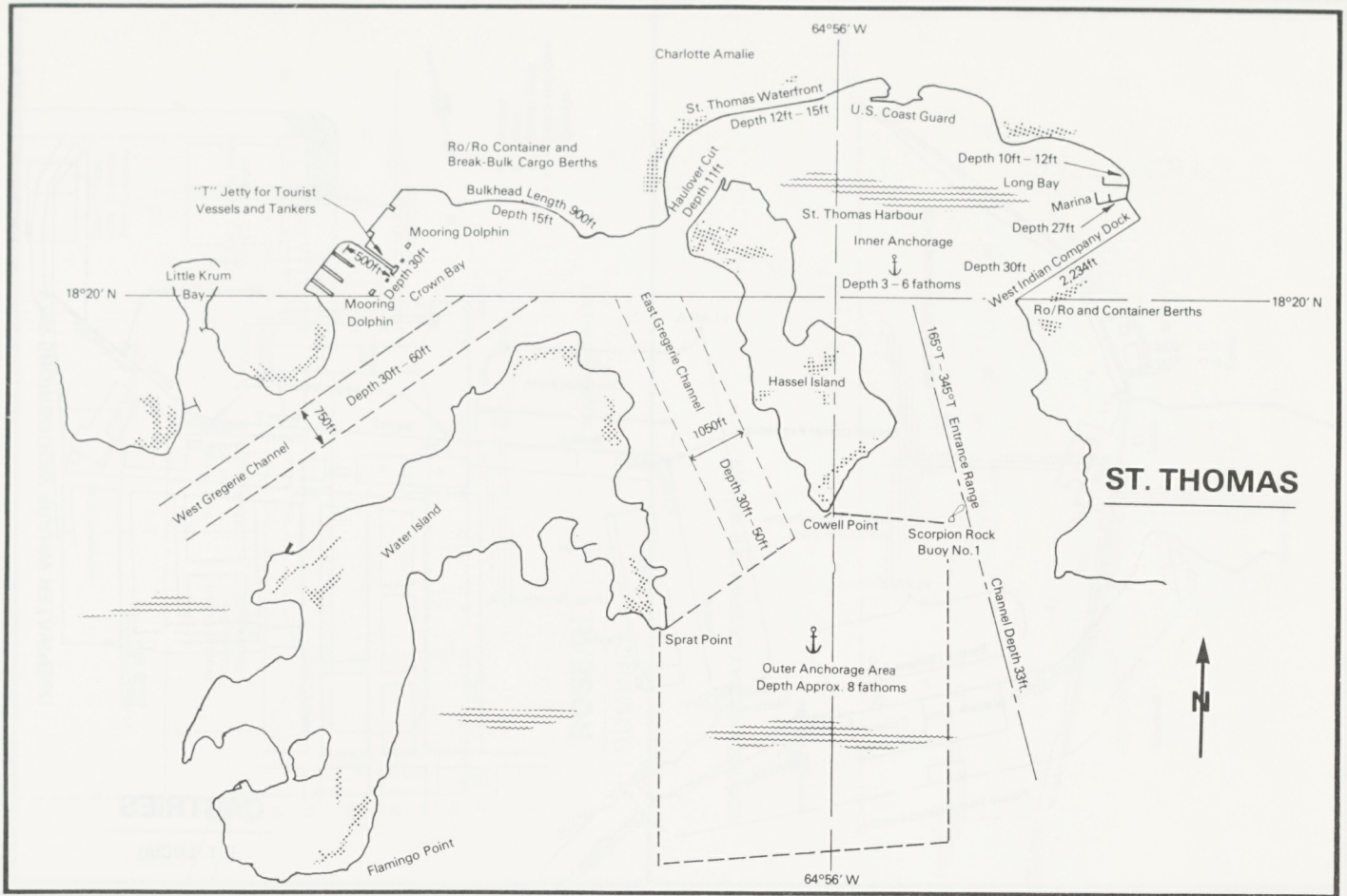


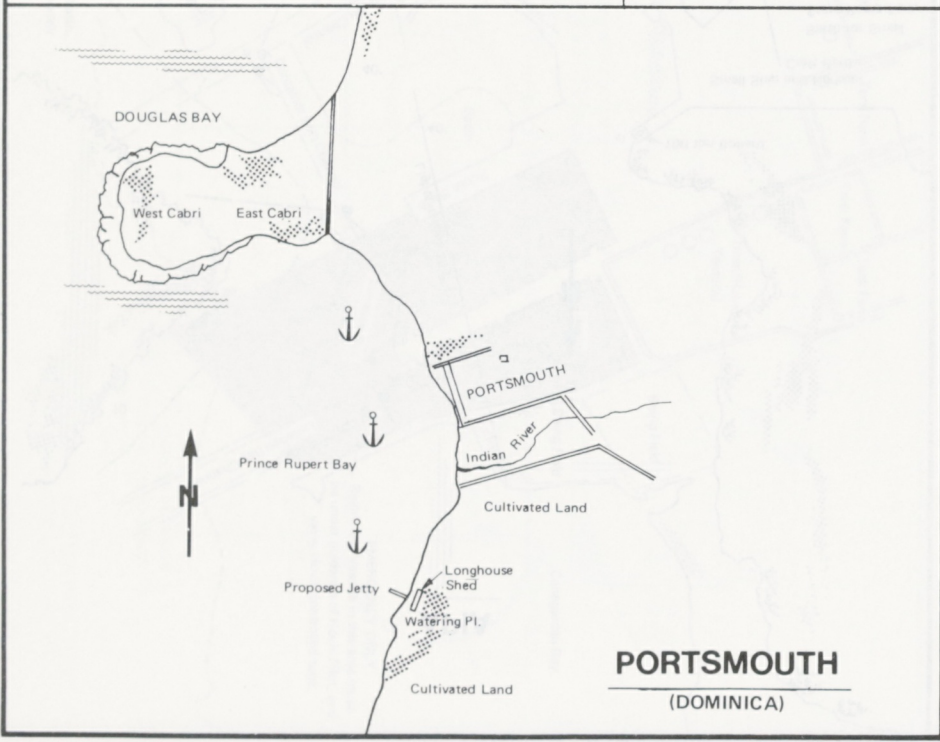
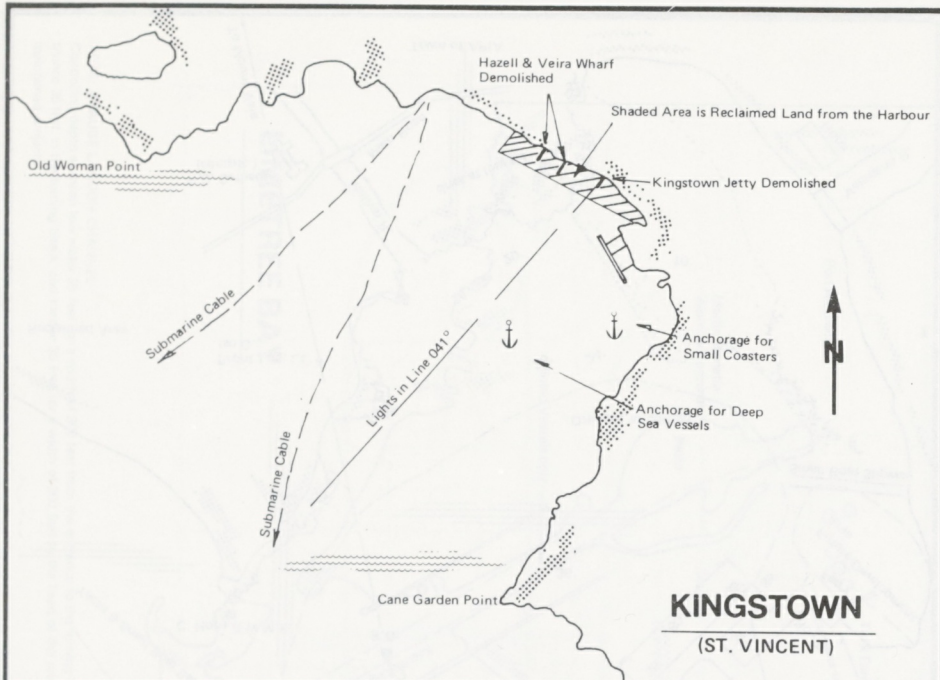
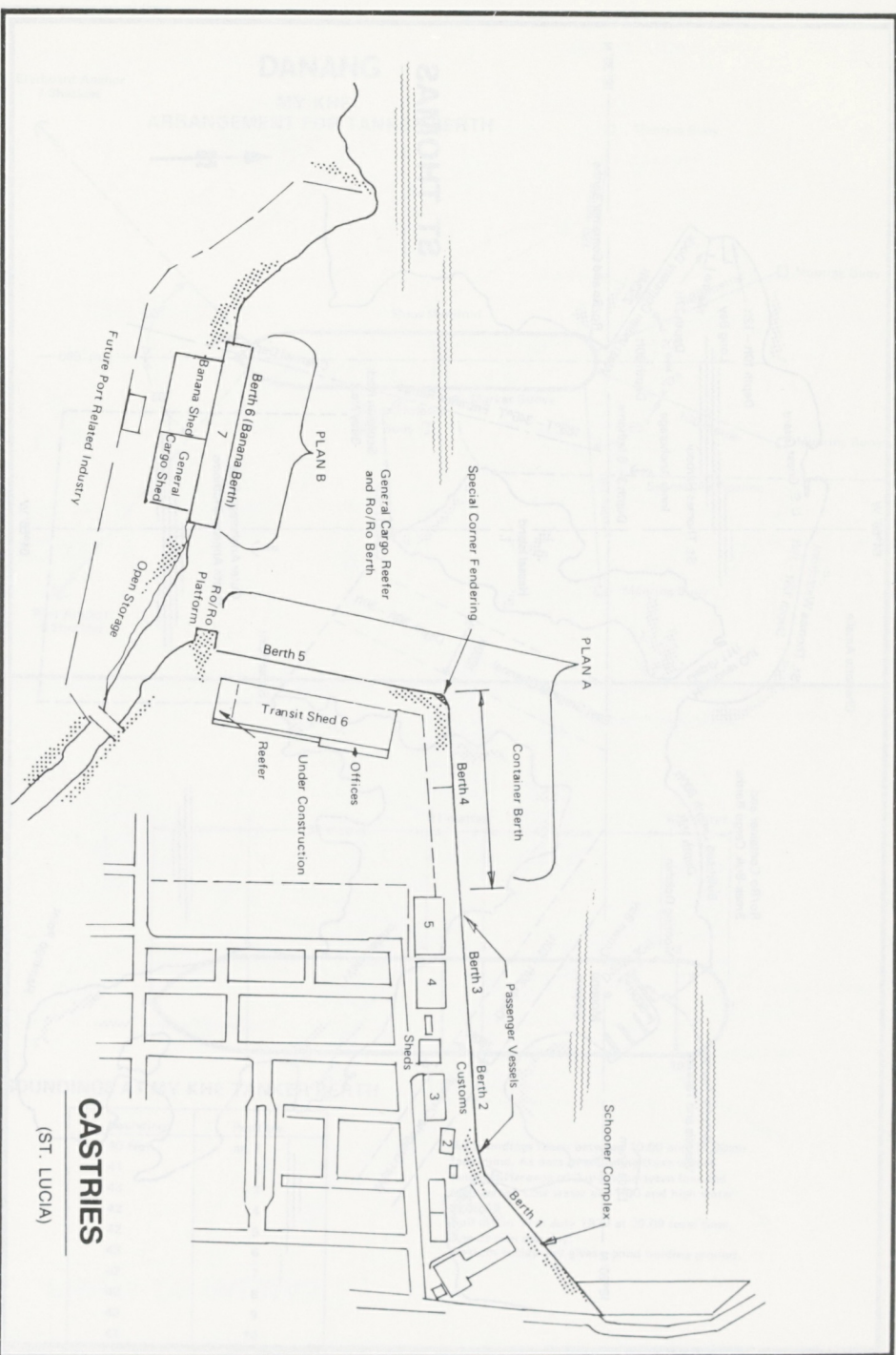
SOUNDING BY HAND LEAD LINE AT LOW WATER
VESSEL DRAFT: 8.5 METRES FOR'D
9.8 METRES AFT

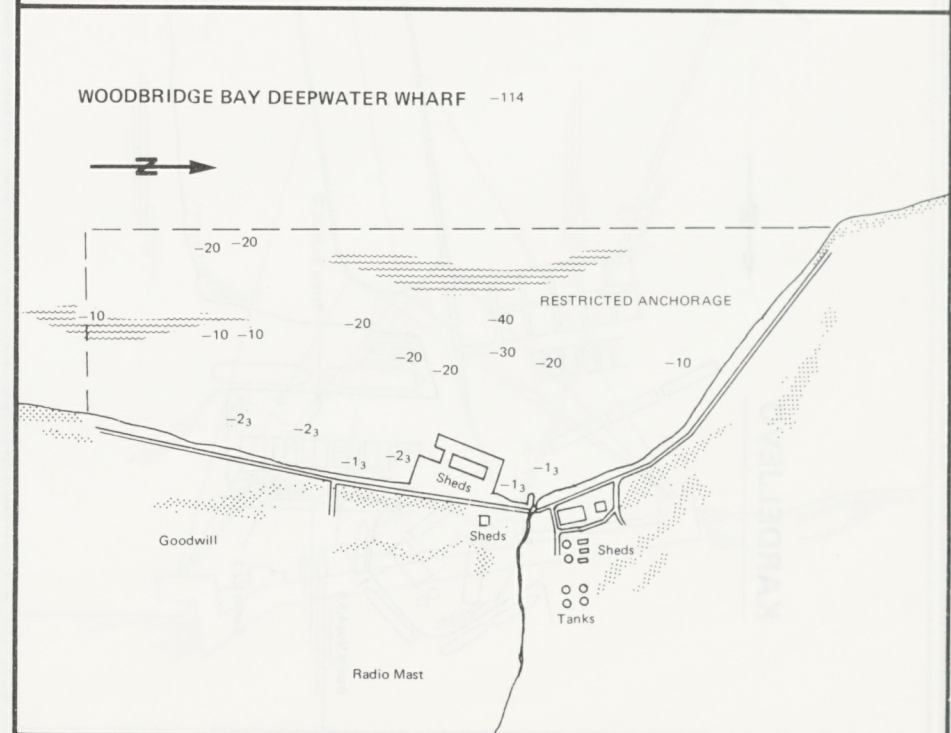
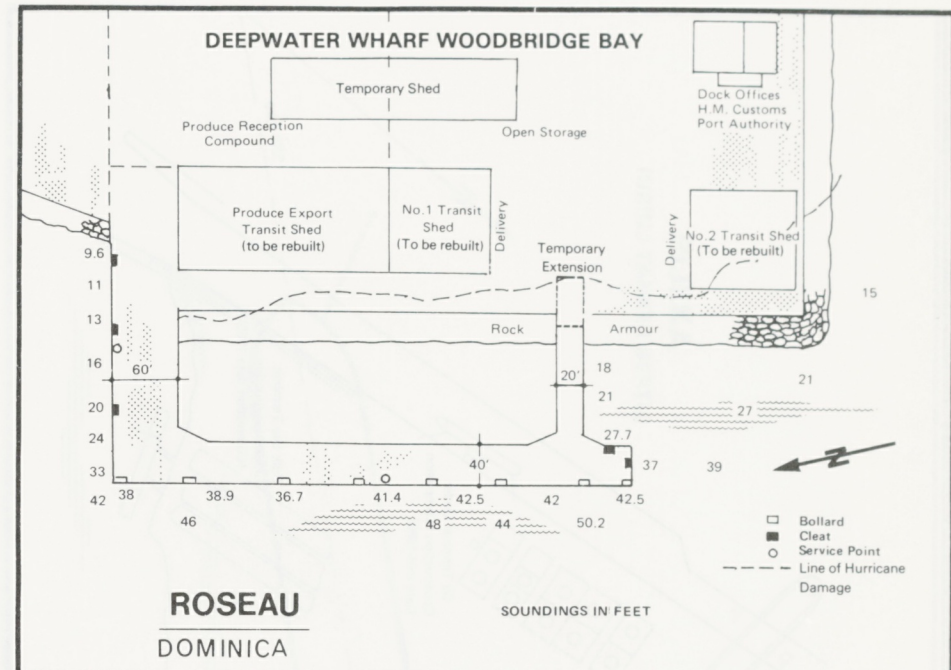
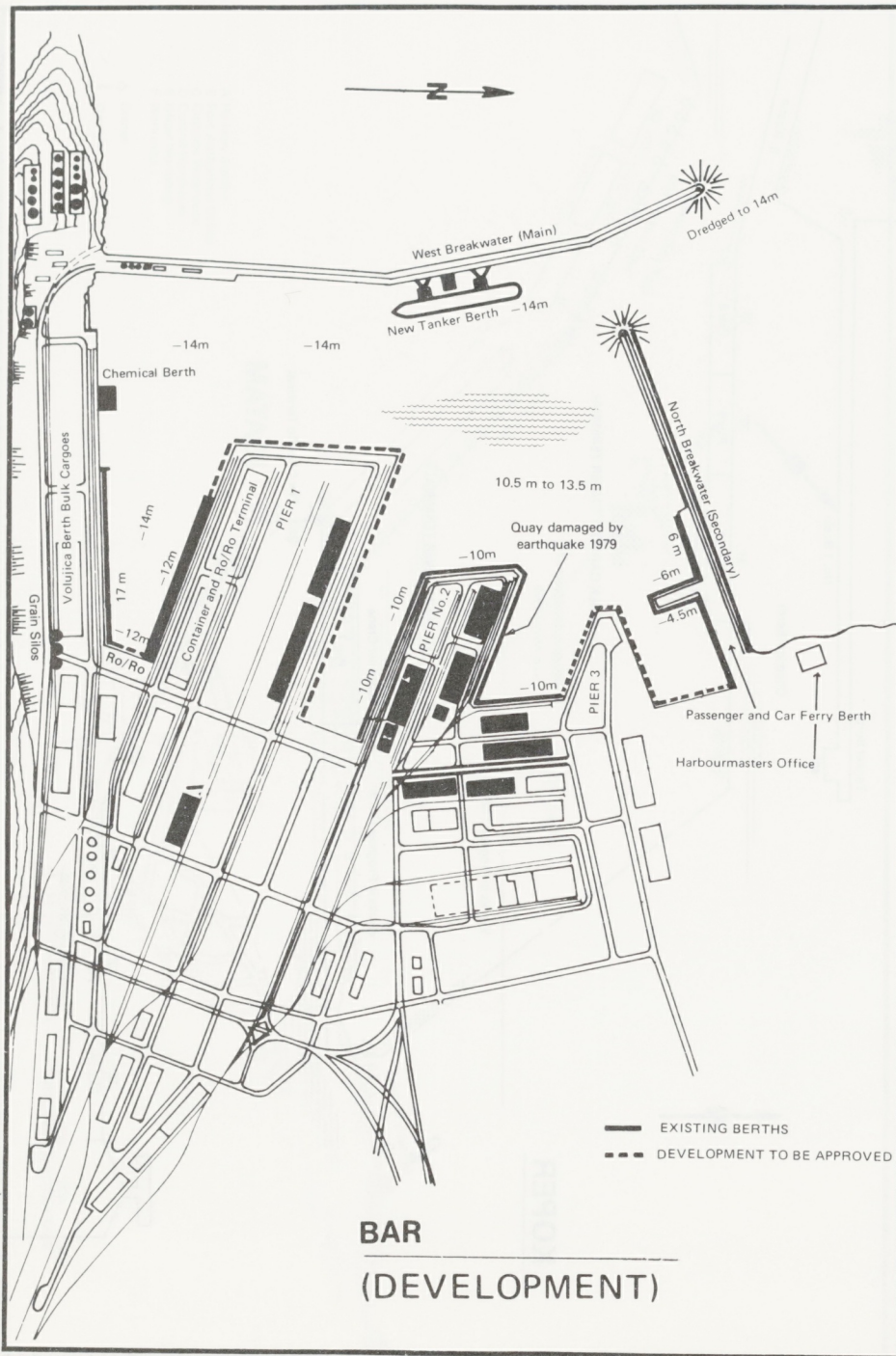


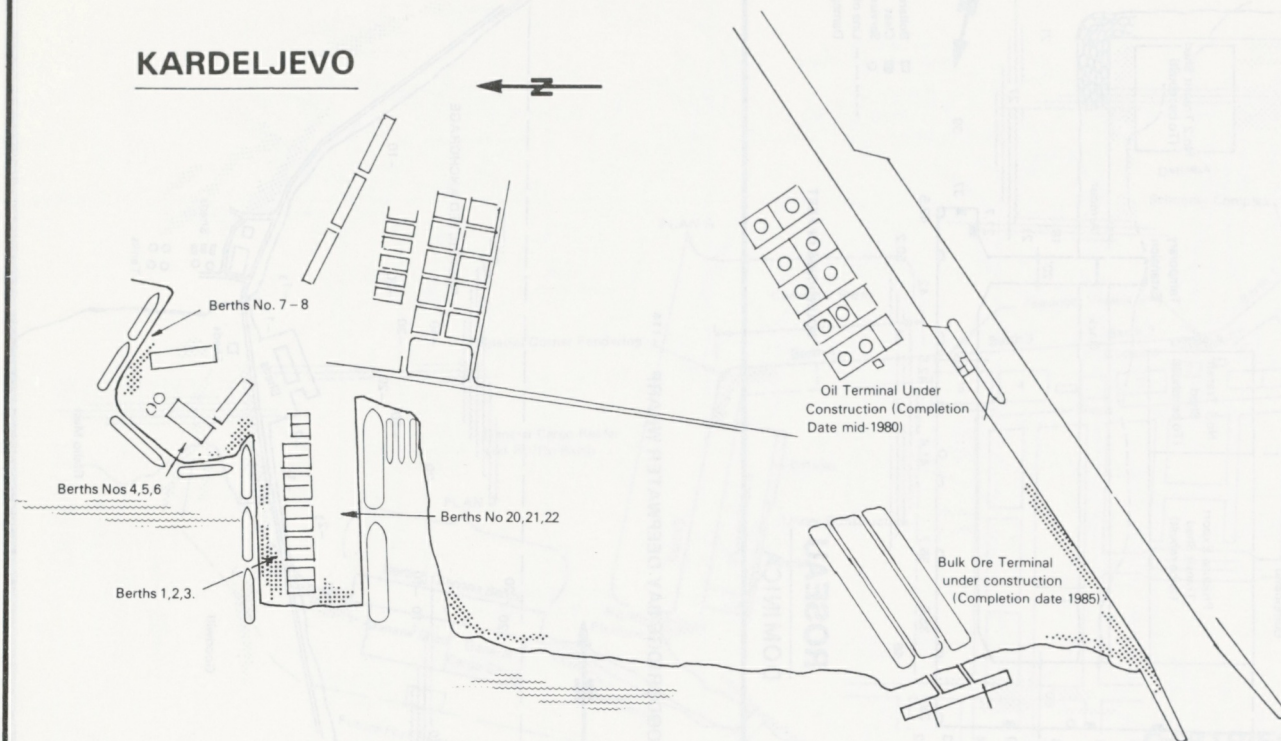
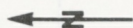
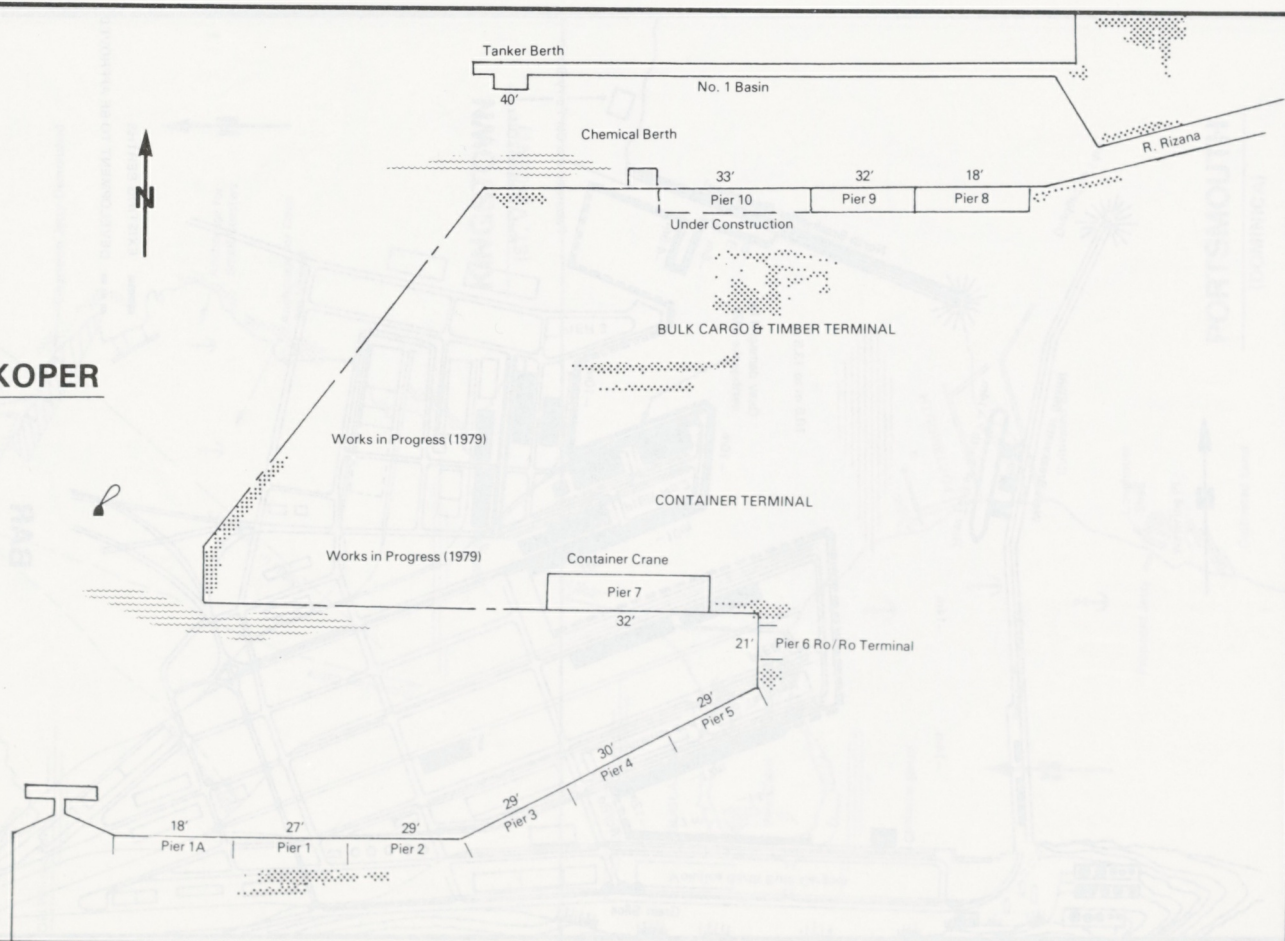
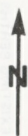
“Plan supplied by Ship’s Master”

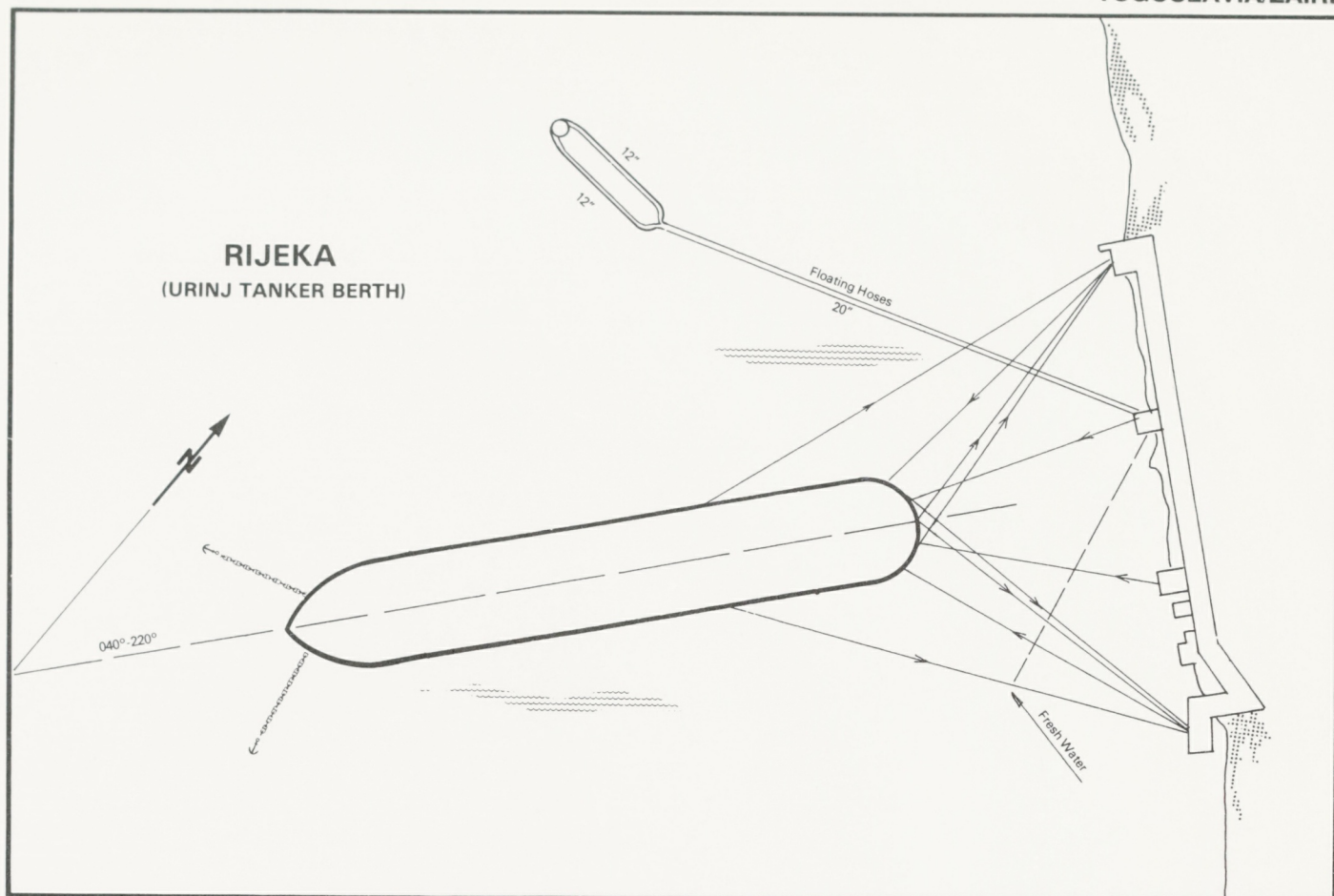




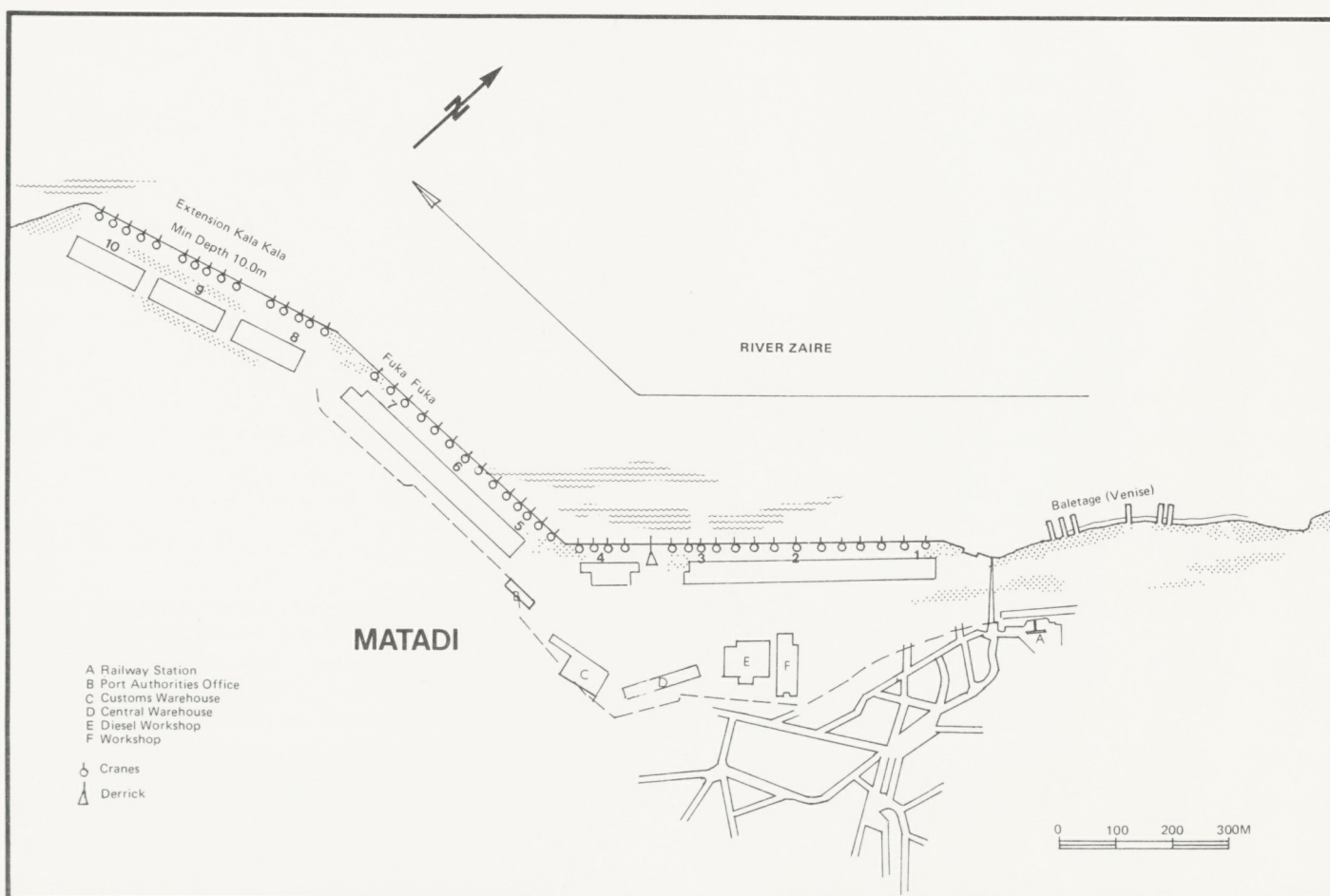




KARDELJEVO**KOPER**



"Plan supplied by Ship's Master"





Source: 1-100, 1-100, 1-100, 1-100



PLAN INDEX

PLAN INDEX

A

Aabenraa P155
 Aalborg P155
 Aberdeen P618
 Abidjan P332
 Abu-Al-Bu-Khoosh P608
 Acajutla P175
 Adelaide P15
 Agadir, see late plans LP19
 Agotnes P444
 Aguadulce P459
 Aguilas P530
 Ahus P550
 Ain Sukhna P172
 Aioi P335
 Aitape P466
 Ajaccio P193
 Alameda P679
 Alba Marine Facility, see Sitra P66
 Al Bakr Terminal P297
 Albany, New York P679
 Albany, Western Australia P16
 Alesund P445
 Alexandria, Egypt P173
 Alexandria, Virginia, U.S.A. P680
 Algeciras P531/533
 Algiers P1
 Aliaga P592
 Alicante P534
 Almeria P534
 Almirante Soares Dutra Terminal,
 see Tramandai P84
 Almirante, Panama, P460
 Alotau P466
 Ambes, see Bordeaux P194/197
 Amherstburg P90
 Amlwch P619
 Amsterdam, P412
 also see North Sea Canal P416/417
 Amuay Bay P781
 Anacortes P680
 Anchorage P681
 Ancona P311/312
 Angle Bay,
 see Milford Haven P657/659
 Antibes P193
 Antifer, see Le Havre P208/210
 Antilla, see late plans LP2/LP3
 Antimonan P478
 Antofagasta P139
 Antwerp P69
 Aparri P478/480
 Apia P793
 Apra, see Guam P401
 Aqaba P368/369
Arabian Gulf P287
 Arbatax P312
 Ardalstangen P445
 Ardjuna P272/273
 Ardrossan P619
 Arendal P446
 Arhus P156
 Arzanah Island P609
 Ashdod P308
 Ashtabula P681
 Asry Dry Dock, see Mina Sulman P64
 Astoria P682
 Auckland P429
Australia P14
 Aveiro P495
 Aviles P535
 Ayr P620

B

Baddeck P90
 Bagnoli P313
 Bahia Blanca, Galvan P4
 Bahia Blanca, Ingeniero White P4
 Bahia Las Minas, Panama P461
 Bajo Grande, P781
 also see Maracaibo Lake P787
 Bahia Honda,
 see Mariel, late plans LP8
 Balboa P461
 Ballast Head P16
Baltic Entrance P154
 Baltimore P682
 Bandholm P156
 Bandirma P592
 Bangkok P585/586
 Bangor, U.S.A. P683
 Banias P582
 Banjul P233
 Bantry P297
 Bandar Abbas P288
 Bandar Imam Khomeini P289
 Bandar Mahshahr P288
 Bar P795
 Baracoa, see late plans LP3
 Barbers Point H.I.R.I. Sea Berth,
 see Honolulu P727/728
 Barbours Cut, see Houston P729/730
 Barcadera P423
 Barcelona P535
 Barranquilla P146/147
 Barrow-in-Furness P620
 Barrow Island P17
 Barry P621
 Basse Terre, Guadeloupe P228
 Basseterre, Leeward Islands P381
 Bata P176
 Batumi P600
 Bayonne P194
 Bayport, see Houston P729/730
 Beaumont P684
 Beauty Point, see Launceston P41/44
 Beira P411
 Bejaia, see Bougie P1
 Belawan P273
 Belekeri P266
 Belem P75
 Belfast P621/622
 Bell Bay, see Launceston P41/44
 Bellingham P684
 Benicia P685
 Berbera P525
 Berdyansk P600
 Bergen P446
 Bilbao P536/538
 Birkenhead, see Liverpool P647/651
 Bitung P274
 Bizerte P590
 Bluff P430
 Blyth P623
 Bombay P266/267
 Bonaire Terminal P424
 Bonny P440
 Boqueron,
 see Guantanamo, late plans LP5
 Bordeaux P194/197
 Borj Islam Terminal P582
 Boston P686/688
 Botany Bay P17
 Botas, see Golovasi P594/597
 Botwood Harbour P91
 Bougie P1
 Boulogne P197
 Bowen P18
 Brake P235

Brasil,

 see Bonaire Terminal P424
 Bremen P235
 Bremerhaven P236
 Brest P198
 Brevik P447
 Bridgeport P689
 Bridgetown P68
 Bridgewater, N.S. P91
 Brisbane P18/22
 Bristol P624
 Brofjorden P551/552
 Broome P22/23
 Brownsville P689/690
 Brussels P70
 Brunsbuttel, P237/239
 also see late plans LP15/16
 Buchanan P382
 Buenaventura P148
 Buenos Aires P5
 Buffalo P690
 Buka P467
 Bullen Bay P424
 Bunbury P23
 Bundaberg P24
 Burnie P25
 Burns Harbour P691
 Burutu P441
 Bushire P290

C

Cabanas, see Mariel, late plans LP8
 Cadiz P539
 Caen P199
 Cagliari P313/315
 Caimanero,
 see Guantanamo, late plans LP5
 Cairns P25
 Calais P199
 Calcutta P267
 Callao P472
 Campana P5
 Campbelltown P624
 Cape Cod Canal P691/692
 Cape Cuvier P26
 Cape Lopez P229/230
 Capetown P525
 Caraquet P92
 Cardenas, see late plans LP4
 Cardiff P625
 Carmopolis P75/78
 Caronte, see Marseilles P211/214
 Carrickfergus P625
 Cartagena, Colombia P148/149
 Cartagena, Spain P539
 Casablanca P408
 Casilda Bay,
 see Cienfuegos, late plans LP5
 Castellon de la Plana P540
 Castletown Bere P298
 Castries, St. Lucia P794
 Catania P315
 Catbalogan, see Tacloban P490
 Cayman Brac P138
 Cayo Juan Claro,
 see Puerto Padre, late plans LP11
 Cebu P480
 Ceiba Hueca,
 see Manzanillo, late plans LP7
 Ceyhan, see Golovasi P594/597
 Chancay P472
 Charleston P692/694
 Charlottetown P92
 Cherbourg P200

PLAN INDEX

Chiba P335/336
Chicago P694
Chicoutimi P93
Chimbote P473
Chioggia P316
Christmas Island P145
Chungjin, see late plans LP17
Churchill, Manitoba P93
Cienfuegos, see late plans LP4/5
Cinta Terminal P274
Ciro Marina P316
Cleveland P695
Clifton Ridge Terminal,
see Lake Charles P734/735
Clydeport P626/628
Colchester P628
Colombo P550
Colon P462
Come By Chance P94
Concarneau P200
Concepcion del Uruguay P6
Constantza P506
Contrecoeur P94/95
Copenhagen P157/158
Corinto P440
Cork P298/301
Corpus Christi P696/714
Corunna P540
Cotonou P74
Cristobal P462/463
Cumana, see Puerto Sucre P789
Curacao P425
Cuxhaven P239/240
Cyrus Terminal P290/291

D

Dadiangas P481
Dakar P515
Dalhousie, N.B. P96
Dammam P508
Dampier P26/28
Danang P791/792
Darius Terminal,
see Kharg Island P291/294
Dartmouth, U.K. P629
Daru P467
Darwin P29
Davao P481
Das Island P609/610
Deauville, see Trouville P227
Delfzijl P413
Derby P29
Deseado P6
Detroit P715
Devonport, Tasmania P30
Diamante P6
Dieppe P201
Digby P96
Djakarta, see Tanjung Priok P286
Djeno P150/151
Djibouti P169
Donaldsonville P716
Donges,
see Nantes-St. Nazaire P215/218
Dordrecht P413
Douala P88
Douglas P629
Dover P630
Drammen P447
Dubai Dry Dock,
see Port Rashid P615
Dublin P302/303

Dumai P275/277
Dun Laoghaire P304
Dundee P630/631
Dunedin, see Otago P434
Dunkerque (Dunkirk) P202/203
Durban P526
E
East London P526
Eemshaven P414
Eilat P308/309
El Chaure P788
El Guamache P782
El Hornillo P530
El Jadida P409
El Palito P782/783
El Tablazo P783/784
Elbe Terminal, see Brunsbuttel, P237/239
also late plans LP15/16
Elbe Pilotage-Helicopter LP14
Emden P241
Ensted P159
Eregli P593
Erie P717
Esbjerg P159
Escravos P441
Esmeraldas P171
Esperance P30
Es Sider P383
Etajima P336
Eureka P717/718
Europoort/Rotterdam P417/420
Everett P719

F

Fateh Terminal P610/611
Fawley, see Southampton P668
Fecamp P203
Felixstowe P631
Felton, see Antilla, late plans LP2
Figueira da Foz P495
Finnart, see Clydeport P626/628
Fishguard P632
Fiumicino P317
Fleetwood P632
Floro P448
Flotta, see Scapa Flow P663
Flushing P414/415
Foca, see Nemrut Bay P599
Forcados P442
Fort de France P402
Fos, see Marseilles P211/214
Fowey P633
Foynes Island,
see Shannon Estuary P305/306
Frafjord P448
Fraser Port P97
Fray Bentos P778
Fredericia P160
Frederikshaven P160
Fredrikstad P449
Freeport, Bahamas P62
Freeport, Texas P720
Freetown P516
Fremantle P31/32
Fukuyama P337
Funchal P391

G

Gabes P590/591
Gaeta P317/318
Galeota Point P588
Galvan, see Bahia Blanca P4
Galveston P720
Galway P304
Gamba and Lucina P230/232
Ghannouche, see Gabes P591
Garrucha P541
Garston P633
Gaspe P97
Gavle P553/555
Gdansk P493
Gdynia P493
Gebe Island P277
Geelong P33/34
Gemlik P593
General San Martin,
see San Martin, Peru P477
General Santos City, see Dadiangas P481
Genoa P318/322
Georgetown P259
Ghent P71/72
Gijon P541
Giresun P594
Gisborne P430
Gladstone P35/36
Glasgow, see Clydeport P626/628
Gloucester and Sharpness P634
Golovasi P594/597
Gothenburg P556/557
Gove P37
Grangemouth P634/636
Granton P636
Granville P204
Grays Harbor P721
Green Bay P721
Greenock, see Clydeport P626/628
Grimsby P637
Groningen P415
Groote Eylandt P38
Guam P401/402
Guanta P784
Guantanamo, see late plans LP5
Guayabal, P153
also see late plans LP11/12
Guayacan P139
Guayanilla P498
Gulfhavn P161
Gulfport, Miss. P722

H

Hachinohe P337
Haines P722
Hakata P338
Halden P449
Haldia, see Calcutta P268
Halifax P98/99
Hallstavik P557
Halul Island P502/503
Hamble, see Southampton P668
Hamburg P241/242
Hamilton, Ontario P99
Hamina P178/179
Hammerfest P450
Hampton Roads P723/725
Hannan, see Sakai P357
Harstad P450
Hartlepool P637
Harwich P638

Havana, see late plans	LP6	K	Lakehead Harbour	P100
Hay Point	P38/39		Lake Charles	P734/735
Helsingborg	P558	Kahului	Landskrona	P563
Helsingor	P162	Kakogawa	Larne	P645
Helsinki	P179/181	Kalamata	La Guaira	P785
Heysham	P639	Kalmar	La Libertad, Ecuador	P171
Hibikinada, see late plans	LP17	Kalundborg	La Nouvelle	P205
Hilo	P726	Kamaishi	La Pallice/La Rochelle	P206/207
Himeji	P338/339	Kanokawa	La Plata	P7
Hobart	P39/40	Kardeljevo	La Rochelle	P205
Hoganas	P559	Karlshamn	La Rochelle/La Pallice	P206/207
Holtenau	P243	Karlstad	La Salina	P786
Holyhead	P639	Karrebaeksminde, see Naestved	La Skhirra	P591
Homer	P726	Karwar	La Spezia	P322
Hong Kong	P261/262	Kashima	Larvik	P452
Honfleur	P204	Kasim Terminal, see Sorong	Las Palmas	P137
Honiara	P524	Katakolon	Las Mareas	P499
Honolulu	P727/728	Katsunan, see Chiba	Lattakia	P583
Hornefors	P559	Kavieng	Launceston	P41/44
Hornillo, see Aguilas	P530	Kawaihae	Lautoka	P177
Horsens	P162	Kawasaki	La Union	P175
Horta	P60	Keelung	Lavan Island	P295
Hound Point	P640	Kemi	Lavera, see Marseilles	P211/214
Houston	P729/730	Kharg Island	Lazaro Cardenas	P404
Hualien	P584	Khemco Terminal, see Kharg Island	Le Havre	P208/210
Huasco	P140/141	Kherson	Legazpi	P484
Hudiksvall	P560	Kholmsk	Leghorn, see Livorno	P323
Huelva	P542	Khor Fakkan	Leith	P646
Hueneme	P731	Kiel	Leixoes	P496
Hull	P641/642	Kiel Canal	Leningrad	P602
Hunterston, see Firth of Clyde	P626	Kieta	Lerwick	P646
Husnes	P451	Kiire	Levuka	P177
		Kijang	Limerick	P305
		Kilia	Limetree Bay	P792
I		Kikuma	Lisbon	P496/497
Ibiza	P542	Kimbe	Liverpool	P647/651
Igarka	P600	Kimitsu/Kisarazu	Livorno	P323
Ijmuiden,	P416	Kingstown, Windward Islands	Lome	P587
also see North Sea Canal	P416/417	King's Lynn	London	P651/652
Ilichevsk,	P600	Kingston, Jamaica	Londonderry	P653
also see late plans	LP22	Kinuura	Long Beach	P736
Iligan	P482	Kin Wan	Longview	P737
Ilo	P474	Kisarazu/Kimitsu	L.O.O.P. Terminal	P737/738
Iloilo	P483	Klaipeda	Lorengau	P469
Imabari	P339	Klakksvik	Los Angeles	P739
Imbituba	P78	Kobe	Louisiana Offshore Oil Port, see L.O.O.P. Terminal	P737/738
Immingham	P642	Kobe & Osaka Area	Lubeck	P245
India	P265	Kobe, Port Island	Lucina, see Gamba and Lucina	P230/232
Ingeniero White, see Bahia Blanca	P4	Kobe, Rokko Island	Lulea	P563
Inspection Head, see Launceston	P41/44	Koge	Lyttelton	P431
Invergordon	P643/644	Kokura	Lysekil	P564
Ipswich	P644	Kole		
Iquique	P142	Komatsushima	M	
Iraklion	P249	Koper	Maasin, see Tacloban	P491
Isabela de Sagua, see late plans	LP6	Koping	Macassar	P279
Iskenderun	P597	Kota Kinabalu	Mackay	P44
Isle of Grain, see Medway	P655/657	Kotka	Madang	P469
Italy	P310	Kpeme	Madras	P269
Izmail	P601	Kralendijk	Madre De Deus Terminal, see Salvador	P81
		Kristiansand	Madryn	P7
		Kuching	Mahon	P543
J		Kudat, see Sabah	Malaga	P543/544
Jacksonville	P731/732	Kunak	Malili/Mangkasa	P279/280
Jakarta,		Kure	Malmo	P564
see Tanjung Priok	P286	Kwinana, see Fremantle	Maloy	P452
Jakobstad	P181	Kymassi	Mamonal, see Cartagena	P148/149
Jebel Ali, see Mina Jebel Ali	P612		Manati, see Puerto Padre, late plans	LP11
Jebel Dhanna	P611	L	Manchester	P654
Jizan	P509	Labuan	Mangkasa/Malili	P279/280
Jolo	P483	Lacustre Terminal, see La Salina	Manila, Rosario	P484/485
Jose Panganiban	P484	Lae	Manta	P172
Ju'aymah/Ras Tanura	P510/515	Laem Chabang, see Bangkok		
Jubail	P509	Lahad Datu, see Sabah		

PLAN INDEX

Mantyluoto P183/184
 Manzanillo, see late plans LP7
 Maracaibo Lake P787
 Mar del Plata P7
 Mariehamn P184
 Mariel, see late plans LP8
 Marmorilik P257
 Marsa al Hariga P384/385
 Marsa el Brega P386
 Marsden Point,
 see Whangerei P438/439
 Marseilles P211/214
 Maryborough P45
 Masao P486
 Masbate P487
 Matadi P797
 Matanzas, Cuba, see late plans LP9
 Matanzas, Venezuela P787
 Matarani P474
 Matsuyama P349
 McDuffie Terminal,
 see Mobile P740/741
 Media Luna,
 see Manzanillo, late plans LP7
 Medway P655/657
 Megara P251
 Melbourne P46/48
 Mena Abdulla P376
 Mersin P598
 Miami P739
 Middlesbrough, see Tees P674
 Milazzo P323
 Milford Haven P657/659
 Milos Island P252/253
 Milwaukee P740
 Minamata P350
 Mina al Ahmadi P375
 Mina-al-Fahal P458
 Mina Jebel Ali P612
 Mina Qaboos P458
 Mina Raysut P459
 Mina Sulman P64
 Mina Saud P377
 Mina Saqr P613
 Mina Zayed P613
 Misumi P351
 Misurata, see Qasr Ahmed P387
 Miyako P352
 Mizushima P351
 Moa, see Baracoa, late plans LP3
 Mobile P740/741
 Mocamedes P2
 Mohammedia P409/410
 Mombasa P370/371
Monaco P407
 Monrovia P383
 Montego Bay P333
 Montevideo P779
 Montoir, see St. Nazaire P215/218
 Montreal P100/102
 Montrose P659
 Morehead City P741
 Mormugao P269
 Morro Redondo P404
 Mossel Bay P527
 Mosjoen P453
 Motril P544
 Mount Maunganui, see Tauranga P435
 Mourilyan P49
 Muara P86
 Mubarek Terminal P614
 Mubarras Terminal P614/615
 Mukho P373
 Multedo Oil Terminal,
 see Genoa P318/322
 Murmansk P603
 My Khe, see Danang P791/792

N

Naantali P185/186
 Naestved P164
 Nagapattinam P270
 Nagoya P353
 Naha P352
 Nakhodka P603
 Nakskov P164
 Nampo P372
 Nanaimo P102
 Nantes/St. Nazaire P215/218
 Nanisivik P103
 Napier P431
 Naples P324
 Narvik,
 also see late plans LP19/20
 Nassau P63
 Nawiliwili P742
 Nelson P432
 Nemrut Bay P598/599
 Nevelsk P602
 Newcastle, N.S.W. P49
 Newcastle, U.K., see Tyne P675/677
 New Haven, Conn. P742/743
 Newhaven, U.K. P660
 New London P744
 New Mangalore P270
 New Orleans P744
 New Plymouth P432
 New Richmond P103/104
 Newport, Gwent, U.K. P660
 Newport News,
 see Hampton Roads P723/725
 New Westminster, B.C.,
 see Fraser Port P97
 New York/New Jersey P745/746
 Nicaro, see Antilla, late plans LP3
 Nice P219
 Nipe Bay, see Antilla, late plans LP2
 Niquero, see Manzanillo, late plans LP7
 Nishihara P354
 Niihama P343
 Norfolk, see Hampton Roads P723/725
 Nordenham P246
 Norrkoping P565
 Norrsundet P566
 North Sea Canal P416/417
 Northville, see Riverhead P761
 Nouakchott P403
 Noumea P429
 Novorossiysk P603
 Nueva Palmira P779
 Nueva Gerona, see late plans LP9
 Nuevitas, see late plans LP10
 Nuku'Alofa P588
 Nykobing P165
 Nykoping P566
 Nynashamn P567

O

Oakland P747
 Odense P165
 Odessa P603
 Ofunato P355
 Ogdensburg P747/748
 Oita P355
 Olympia P748
 Onega P604
 Onehunga P433
 Opua P433
 Orange P749
 Oranjestad P426
 Oristano P324

Ornskoldsvik P567
 Oro Bay P469
 Osaka,
 also see Kobe P346/348
 Oshawa Harbour P104
 Oskarshamn P568
 Oslo P454
 Ostend P72
 Ostermoor, see Brunsbuttel P237/239
 also see late plans LP16
 Oswego P750
 Otago P434
 Otaru P356
 Otterbacken P568
 Oulu P186/187
 Ovendo P232
 Oxelosund P569

P

Paita P475
 Palermo P325
 Palma P545
 Palm Beach P750/751
 Pampus Harbour,
 see Norrkoping P565
Panama Canal P463
 Panama Canal, Pilot Shelter P464
 Panama City, U.S.A. P751
 Panjang P280
 Papeete P524
Papua New Guinea P466
 Para, see Belem P75
 Parana and Uruguay Rivers P3
 Paradip P271
 Pargas P188
 Pasajes P545
 Pascagoula P752
 Pasir Gudang P395
 Patras P253
 Pateniemi P188
 Pauillac St. Estephe,
 see Bordeaux P194/197
 Paysandu P780
 Penang P396/397
 Pennington Terminal P442/443
 Pensacola P752
Persian Gulf P287
 Philadelphia P753/755
 Phillipsburg P427
 Pictou P435
 Pilon, see Manzanillo, late plans LP7
 Pimentel P475
 Piney Point P756
 Piraeus P254
 Pitea P570
 Ploce, see Kardeljevo P796
 Plymouth P661
 Pohang P373/374
 Point Comfort/Port Lavaca P758
 Point Fortin P589
 Pointe a Pitre P228
 Pointe Clairette,
 see Cape Lopez P229/230
 Pointe des Galets P505
 Pointe Noire P151
 Point Tupper P107
 Pomalaa, P281/282
 Ponce P500
 Ponta Delgada P61
 Poole P661
 Pori, see Mantyluoto P183/184
 Porkkala P189
 Port Alberni P105
 Port Alfred P105

Port Alma, see Rockhampton	P54	Punta de Palmas	P791	St. Lawrence Seaway	P506
Port Angeles	P756	Punta Umbria, see Huelva	P542	St. Lawrence –	
Port Arthur	P757			Vessel Traffic Management	P89
Port Canaveral	P757			St. Louis du Rhone	P223
Port Cartier	P106			St. Malo	P224
Port Chalmers, see Otago	P434	Q		St. Nazaire,	
Port Dalhousie	P107			see Nantes/St. Nazaire	P215/218
Port Dampier, see Dampier	P26/28	Qasr Ahmed	P387	St. Pierre, St. Pierre and Miquelon	P507
Port Elizabeth	P527	Qua Iboe Terminal	P444	St. Thomas	P793
Port Esquivel	P334	Quebec	P110	St. Vincent	P138
Port Everglades	P758	Quequen	P9	Sakai	P357/358
Port Hawkesbury/Point Tupper	P107	Quiliano Terminal	P326	Sakaide	P358
Port Hedland	P50	Quinquena	P3	Sakata	P359
Port Irene, see Aparri	P479			Salaverry	P476
Port Jerome, see Rouen	P220/223			Salawati	P283
Port Kamsar	P258	R		Saldanha Bay	P529
Port Kelang	P397			Salerno	P327
Port Kembla	P50	Raahe	P190	Salvador	P81
Port Kennedy, see Thursday Island	P56	Rabaul	P470	Samarai	P471
Port Khalid, see Sharjah	P616	Ramallo	P9	Sandakan	P399/400
Port Lavaca/Point Comfort	P758	Randers	P166	San Carlos	P406
Port Lincoln	P51	Ras Bahregan	P296	San Ciprian	P547
Port Louis	P403	Ras Lanuf	P387/389	San Diego	P763
Port Moresby	P470	Ras Shukheir	P173	San Fernando	P488
Port-of-Spain	P589	Ras Tanura/Ju'aymah	P510/515	San Francisco	P763/764
Port Pirie	P51	Rautaruukki, see Raahe	P190	San Jose, see Tacloban	P491
Port Qaboos, see Mina Qaboos	P458	Ravena	P326	San Juan, Peru	P476
Port Rashid	P615	Recife	P79	San Juan, Puerto Rico	P500/501
Port Raysut, see Mina Raysut	P459	Redcar, see Tees	P674	San Lorenzo, Argentina	P10
Port Rhoades	P334	Redwood City	P759	San Martin, Argentina	P10
Port Stanley	P530	Reni	P604	San Martin, Peru	P477
Port Stanvac	P52	Reposaari, see Mantyluoto	P183/184	San Nicolas, Argentina	P11
Port St. Louis du Rhone,		Reykjavik	P263	San Nicolas, Aruba,	
see Marseilles	P211/214	Richards Bay	P528	Netherlands Antilles	P427/428
Port Sulphur	P759	Richmond, California	P760	San Nicolas, Peru	P477
Port Talbot	P662	Richmond, Virginia	P761	San Pedro	P11
Port Taranaki	P432	Riga	P605	San Sebastian, see Sao Sebastiao	P83
Port Walcott	P53	Rio de Janeiro,		San Vicente, Philippines, see Aparri	P480
Porto Empedocle	P325	Petrobras Terminal,	P79/81	San Vicente, Chile	P143
Porto Grande, see St. Vincent	P138	also see late plans	LP1	Santa Ana, see Davao	P481
Porto Marghera, see Venice	P332	Rio Haina	P170	Santa Cruz, Argentina, see Punta Quilla	P8
Portland, Australia	P53	Rijeka	P797	Santa Cruz del Sur,	
Portsmouth, U.K.	P662	Riverhead	P761	see late plans	LP11/12
Portsmouth, U.S.A.,		Rochester, U.K., see Medway	P655/657	Santa Cruz de Tenerife	P137
see Hampton Roads	P723/725	Rochester, U.S.A.	P762	Santa Fe	P12
Portsmouth, Dominica,		Rockhampton	P54	Santa Marta	P150
Windward Islands	P794	Rodby	P166	Santan Terminal	P284
Porvoo	P189	Rodney Terminal, see Saint John	P111/112	Santana	P82
Poti	P604	Ronne	P167	Santander	P547
Powell River	P108	Ronneby	P570	Santiago de Cuba, see late plans	LP12
Prescott	P108	Rosario, Argentina	P10	Santo Domingo	P170
Preston, see Antilla, late plans	LP2	Rosario, Philippines, see Manila	P484/485	Santos	P82
Prince Rupert	P109	Rosarito	P405	Sao Sebastiao	P83
Propriano	P219	Rosas	P546	Sasa, see Davao	P481
Puerto Armuelles	P464/465	Roseau, Dominica,		Sasebo	P359
Puerto Cortes	P260	Windward Islands	P795	Sauda	P455
Puerto Galvan, see Bahia Blanca	P4	Rostock	P233	Sault Ste. Marie	P113
Puerto Ingeniero White,		Rotterdam/Europoort	P417/420	Savannah	P764/765
see Bahia Blanca	P4	Rouen	P220/223	Savona	P327/328
Puerto la Cruz	P788			Scalloway	P663
Puerto Limon	P152			Scapa Flow	P663
Puerto Madero	P405	S		Scheveningen	P421
Puerto Miranda	P789	Sabah	P398/399	Searsport	P766
Puerto Montt	P142	Sabang	P282	Seattle	P766/767
Puerto Nuevo, see Bata	P176	Sacramento	P762	Semporna, see Sabah	P399
Puerto Ordaz,		Sagunto	P546	Senipah	P284
see Punta Cuchillo	P790	Saimaa Canal	P191	Senboku, see Sakai	P357/358
Puerto Padre, see late plans	LP10/11	St. Andrews, N.B.	P109	Sepeiba Terminal,	P83
Puerto Princessa	P487	St. George's, Bermuda	P74	also see late plans	LP2
Puerto Sucre	P786	Saint John, N.B.	P111/112	Sept Iles	P113/115
Pulupandan	P488	St. Johns, Antigua,		Seria	P87
Punta Arenas, Chile	P143	Leeward Islands	P381	Sete	P225/226
Punta Colorado	P8	St. Johns, Newfoundland	P112	Seward	P767
Punta Cuchillo	P790			Shannon Estuary	P305/306
Punta Gorda, see Baracoa, late plans	LP3			Sharpness & Gloucester	P634
Punta Quilla	P8			Sharjah	P616
Puntarenas, Costa Rica	P152			Sheerness, see Medway	P655/657

PLAN INDEX

Shimizu	P360
Shimonoseki	P360/361
Shippegan	P116
Shoreham	P664/665
Shuaiba	P377
Shuwaikh	P378
Sidi Kerir	P172
Sidon	P378/380
Sines	P497
Singapore	P516/523
Sirtica Terminal, see Ras Lanuf	P387/389
Sirri Island	P296
Sitka	P768
Sitra Anchorage	P65
Sitra	P65/67
Sitra, Alba Marine Facilities	P66
Skaerbaek	P167
Skikda	P2
Slagen	P455/456
Sochi	P605
Soderhamn	P571
Sola, see Stavanger	P457
Solvesborg	P571
Sorel	P116
Sorong	P285
Southampton	P666/668
South Riding Point	P63
Spring Bay	P54
Stavanger	P457
Stephenville	P117
Stenungsund	P572
Stockholm	P573/576
Stockton, California	P768/769
Stornoway	P668
Storugns	P576
Stralsund	P234
Stranraer	P669
Strasbourg	P226
Suez Canal	P174
Sukhumi	P605
Sunderland	P672
Sundsvall	P577
Surabaya	P285
Sullom Voe	P669/672
Suva	P178
Svendborg	P168
Swale, see Medway	P655/657
Swansea	P673
Swinoujscie, see Szczecin	P494
Sydney, N.S.W.	P55
Szczecin	P494

T

Tabaco	P489
Tacloban	P489/491
Tacoma	P769
Tagonoura	P361
Tahkoluoto, see Mantyluoto	P183/184
Taichung	P585
Takoradi	P248
Tallaboa Bay, see San Juan	P500/501
Tallinn	P605
Tamatave	P392
Tampa	P770/771
Tampico	P406
Tanamo, see late plans	LP13
Tandjong Lepee, see Pomalaa	P281/282
Tandjong Perak, see Surabaya	P285
Tangier	P410
Tanjung Priok	P286
Tanuan	P492
Tapis, see late plans	LP18
Taranaki, see Port Taranaki	P432
Taranto	P328

Tarawa	P372
Tarbert Island, see Limerick	P306
Tartous	P583
Tauranga	P435
Tawau	P400
Tees	P674
Tela	P260
Tema	P249
Terneuzen	P421/423
Texas City	P771
Thessaloniki	P254
Thevenard	P55
Three Rivers, see Trois Rivières	P118
Thursday Island	P56
Timaru	P436
Tijilatjap	P286
Tocopilla	P144
Tokyo	P362
Toledo	P772/773
Tomakomai	P363
Tonnay-Charente	P227
Tornio	P190
Toronto	P117
Tors Harbour, see Gothenburg	P556/557
Townsville	P57
Tramandai, Almirante Soares	P84
Dutra Terminal	P84
Tranmere, see Liverpool	P647/651
Travemunde, see Lubeck	P245
Trelleborg	P578
Trieste	P329/331
Tripoli, Lebanon	P380
Trois-Rivières	P118
Troon	P620
Trouville	P227
Tuapse	P606
Tunas de Zaza, see Cienfuegos, late plans	LP5
Tyne	P675/677

U

Ube	P363/364
Ubu	P85
Uddevala	P578
Ulsan	P374
Umea	P579
Umm al Qaiwain	P616
Umm Said	P504/505
Urangan, see Maryborough	P45

V

Vaasa	P192
Vacamonte	P465
Vado Figure, see Savona	P328
Vadso	P457
Valdez	P773/776
Valencia	P548
Vallvik	P579
Valparaíso	P144
Vancouver, Canada	P118/135
Vancouver, U.S.A.	P776
Vanimo	P471
Varberg	P580
Veitsiluoto	P192
Vejele	P168
Venice	P332
Ventspils	P606
Vera Cruz	P407
Verdon, see Bordeaux	P194/197
Vestmannaeyjar	P264
Viana do Castelo	P498

Victoria	P136
Vigo	P548/549
Villa Constitucion	P12
Villa Ramallo, see Ramallo	P9
Villanueva, see late plans	LP21/22
Visakhapatnam	P271
Visby	P580
Vita, see late plans	LP13
Volos	P255
Voltri, see Genoa	P318/322
Vordingborg	P169
Voudhia Bay, see Milos Island	P252/253
Vyborg	P607

W

Wakayama	P364/365
Wallaroo	P57
Wallhamn	P581
Walvis Bay	P411
Wanganui	P436
Warrenpoint	P677
Warri, see Burutu	P441
Watchet	P678
Waterford	P306/307
Weipa	P58
Wellington	P437
Westernport	P58
Wewak	P471
Whangerei	P438/439
Whitehaven	P678
Whyalla	P59
Wilhelmshaven	P246/248
Willemstad	P428
Wilmington, N.C.	P777
Windsor, Ontario	P136
Wismar	P234
Wrangell	P777
Wyndham	P60

Y

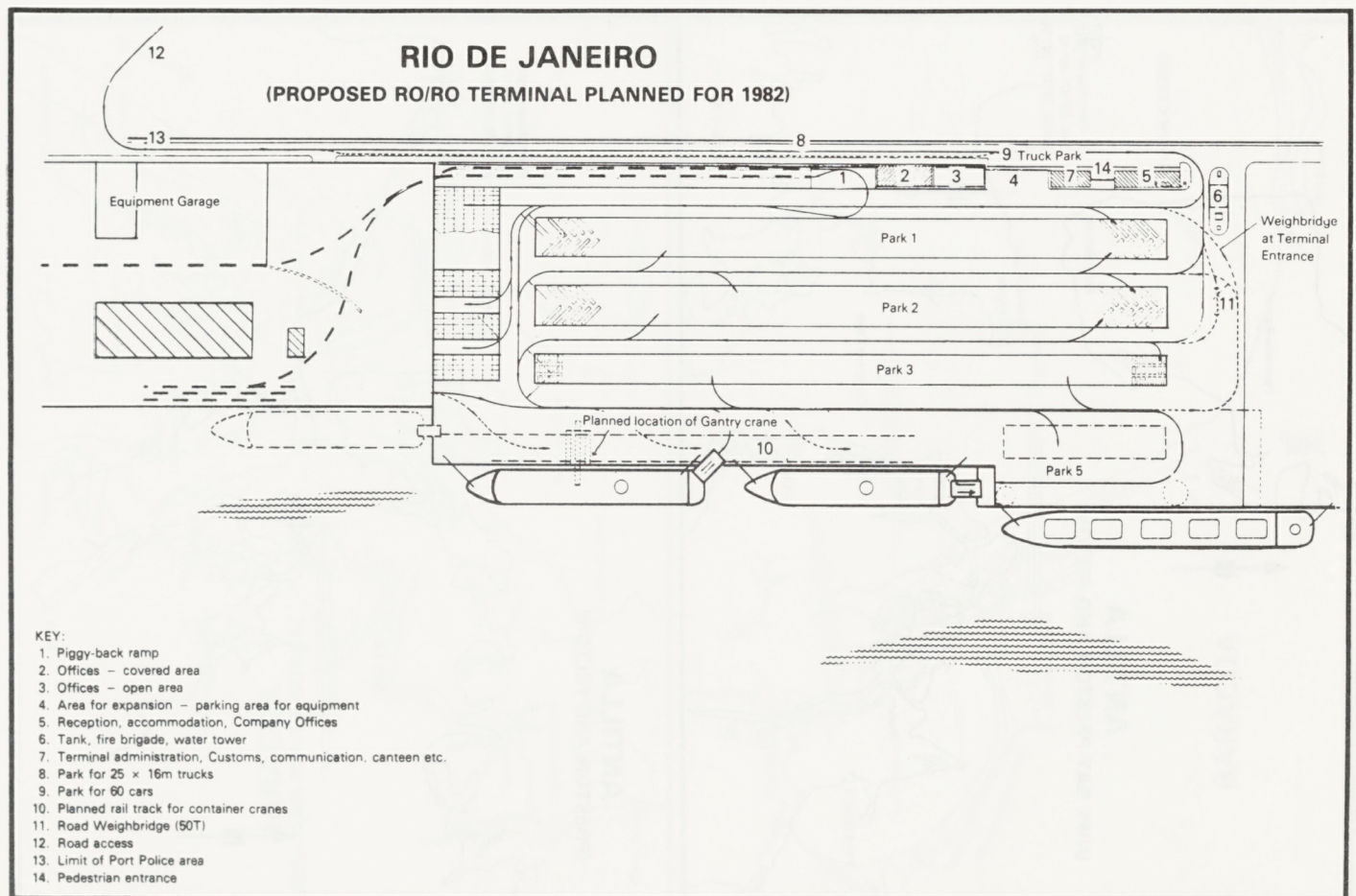
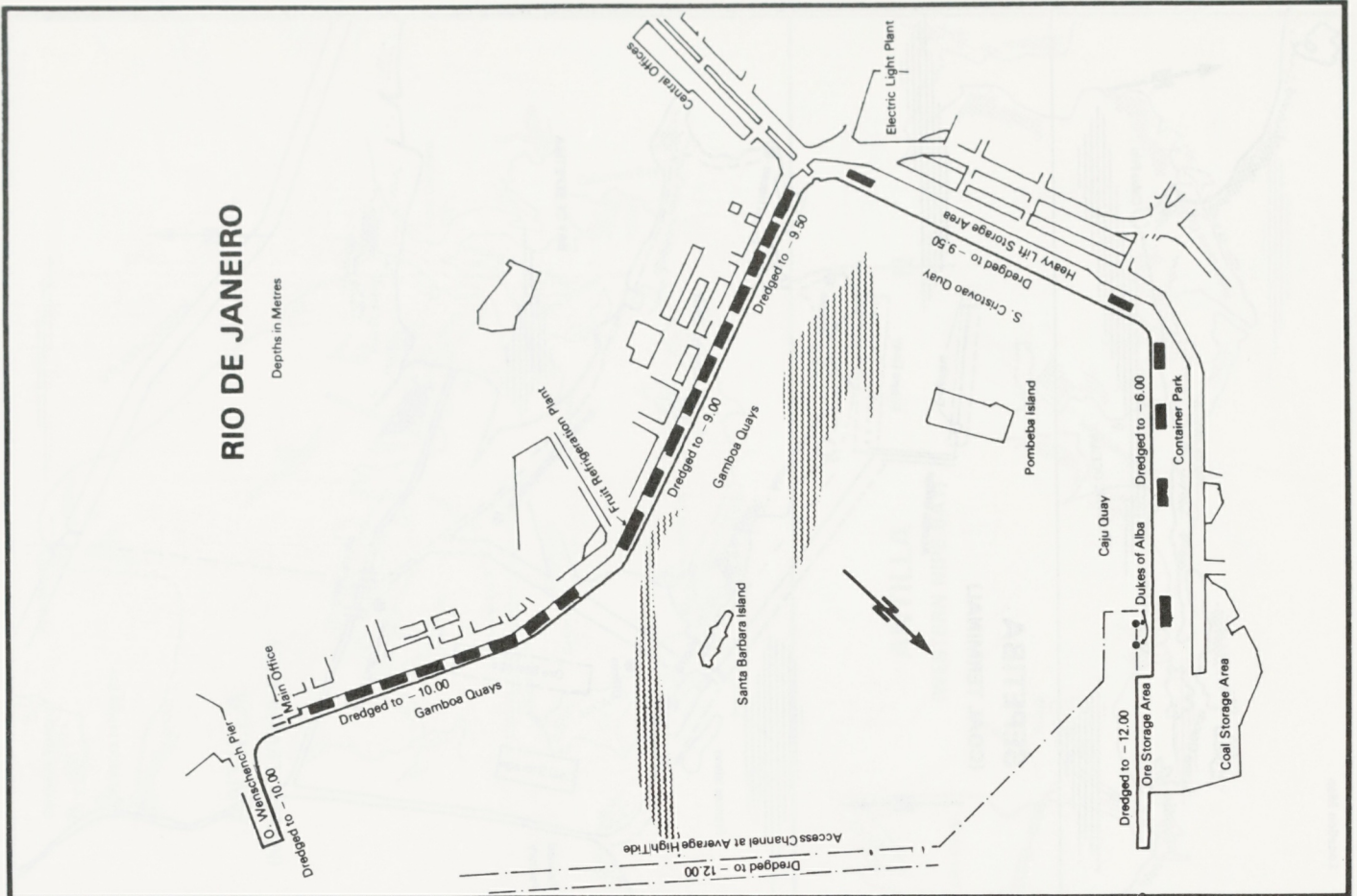
Yabucoa	P502
Yali	P255/256
Yalta	P607
Yatsushiro	P366
Ymuiden, see Ijmuiden	P416
Yokkaichi	P366
Yokohama	P367
Yokosuka	P367
Yosu	P375
Ystad	P581
Yuzhnyy	P607

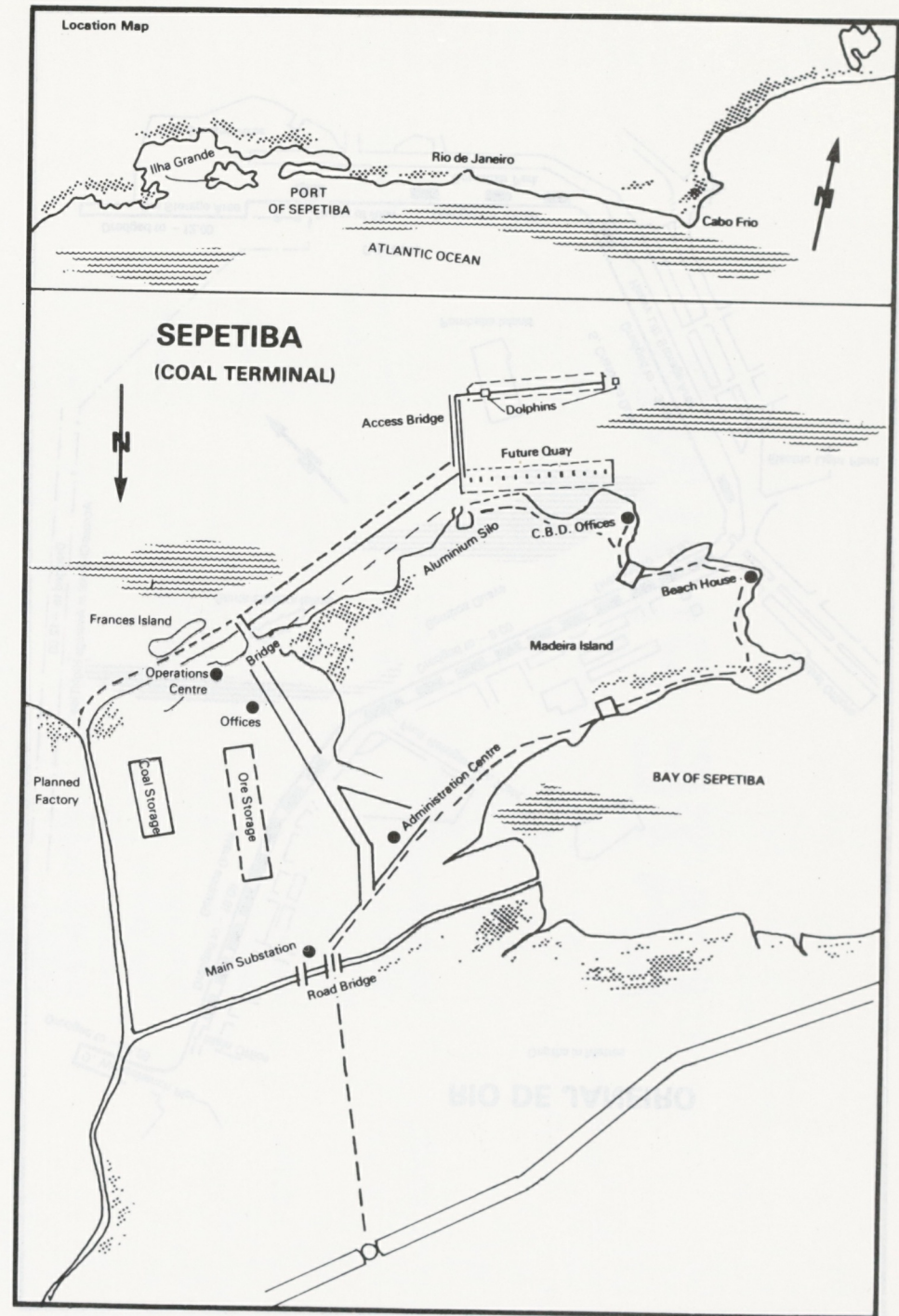
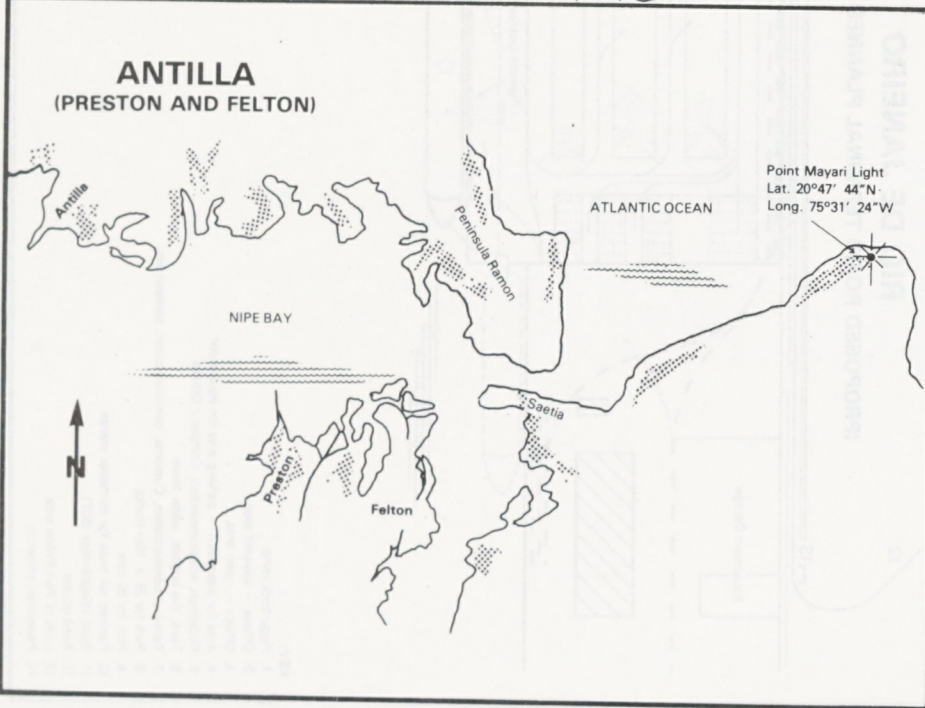
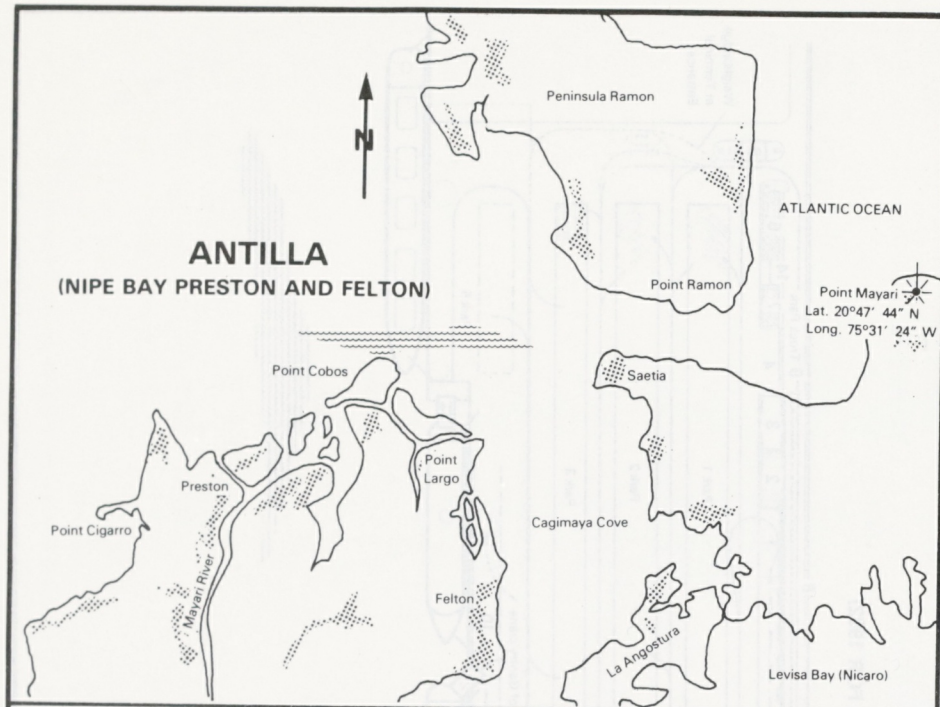
Z

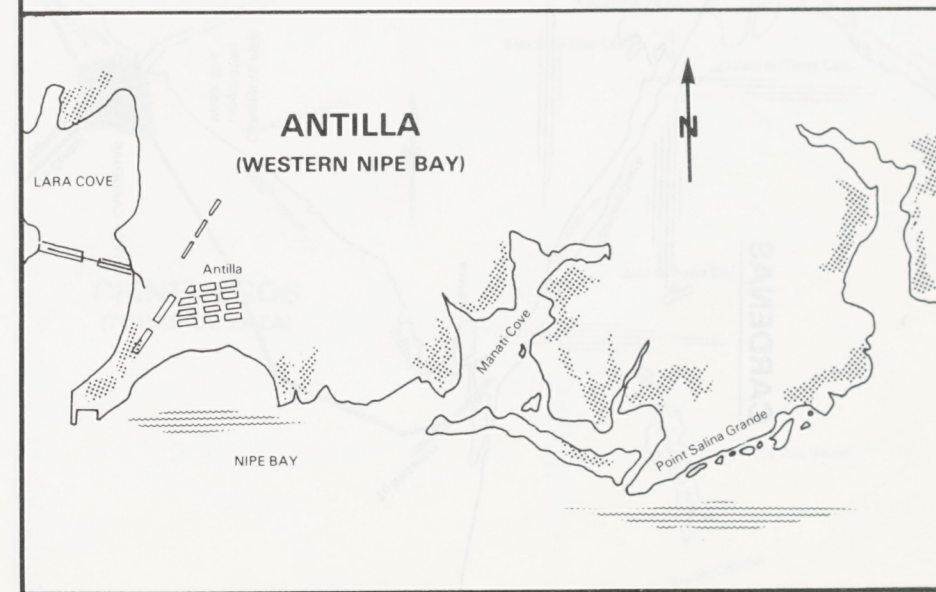
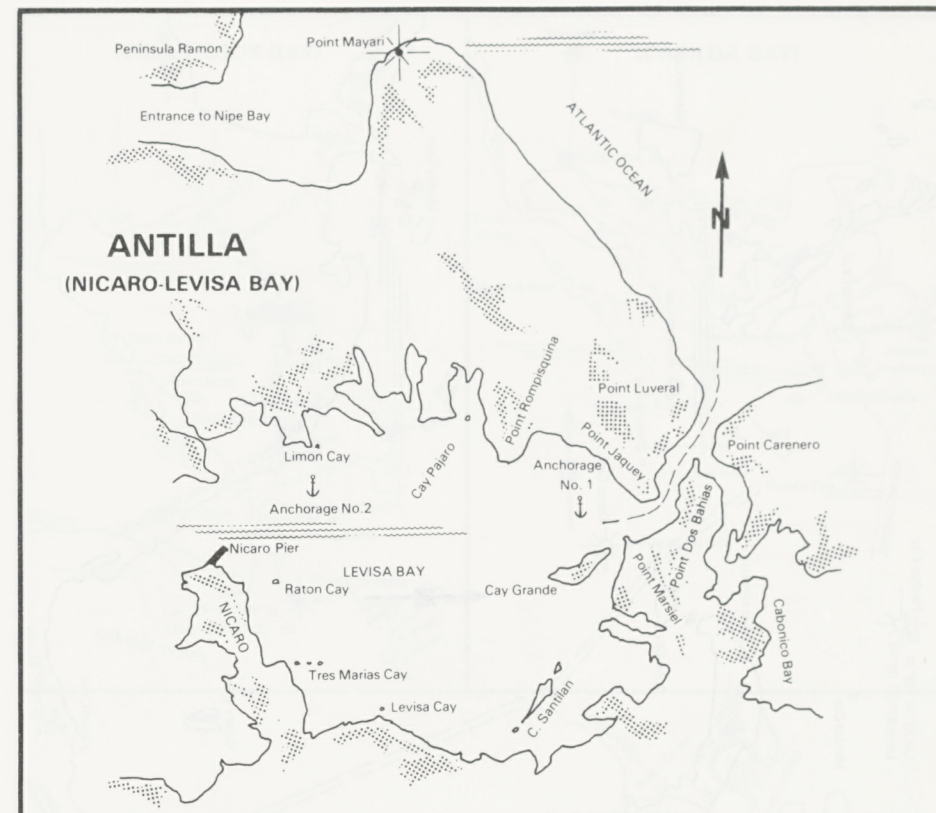
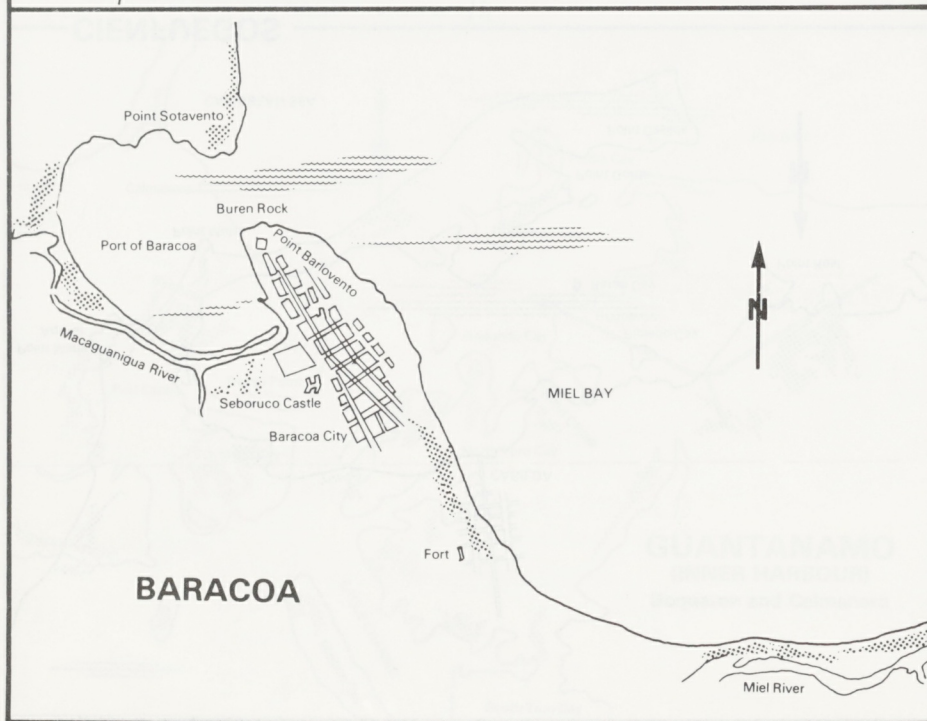
Zamboanga	P492
Zarate	P13
Zeebrugge	P73
Zhdanov	P608
Zirku Island	P617/618
Zuetina	P390

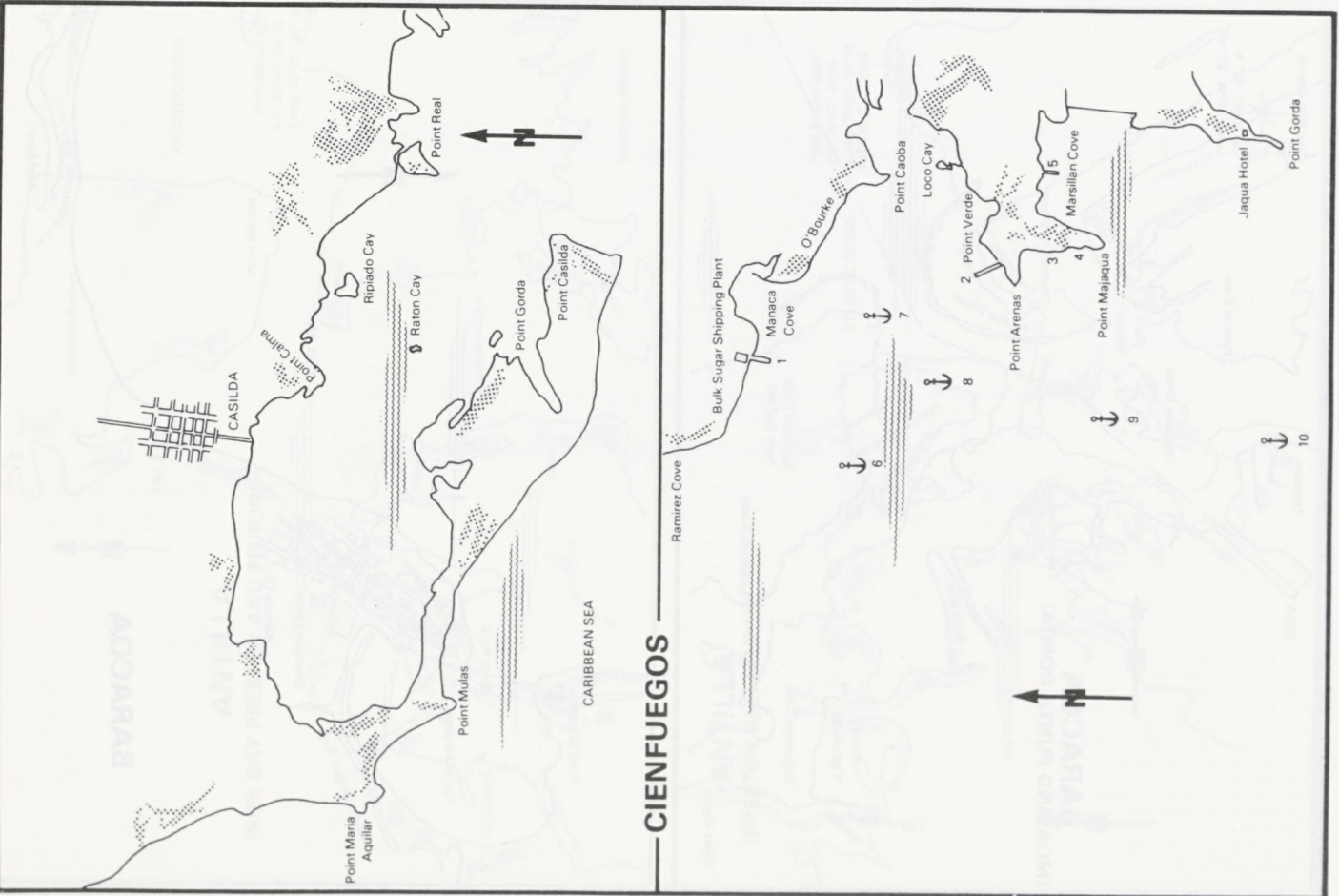
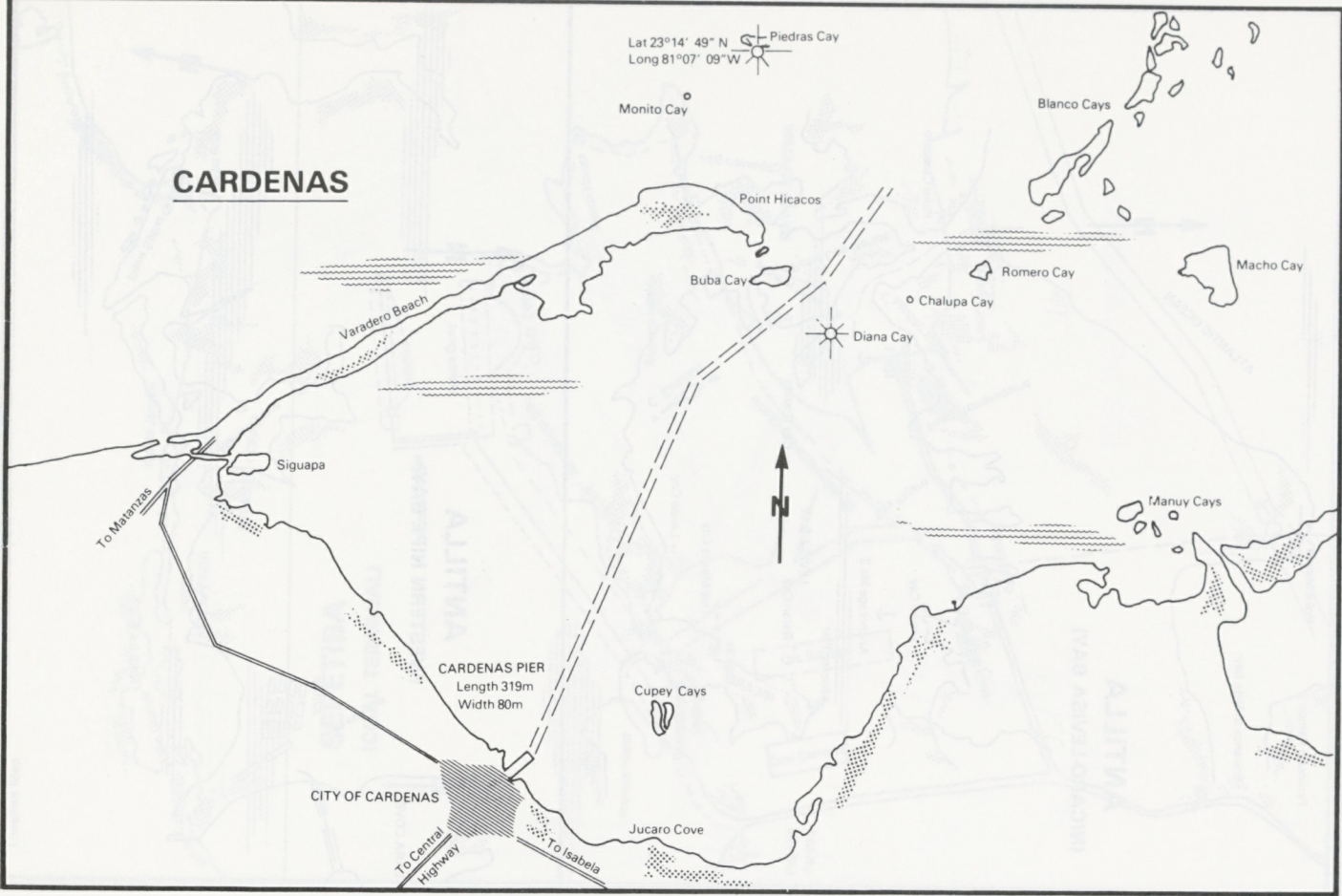
LATE PLANS

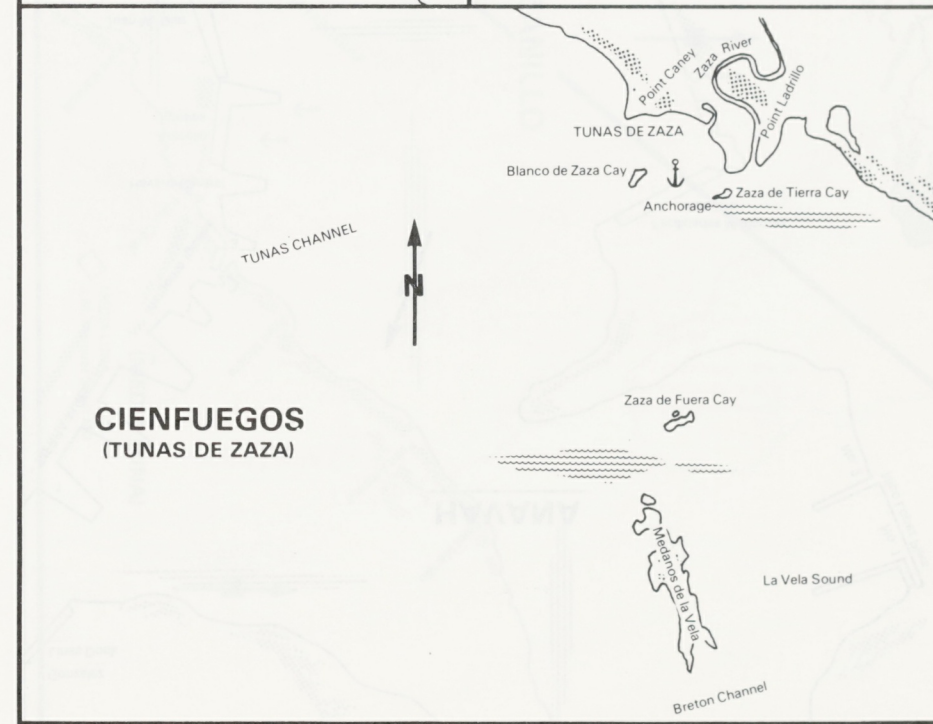
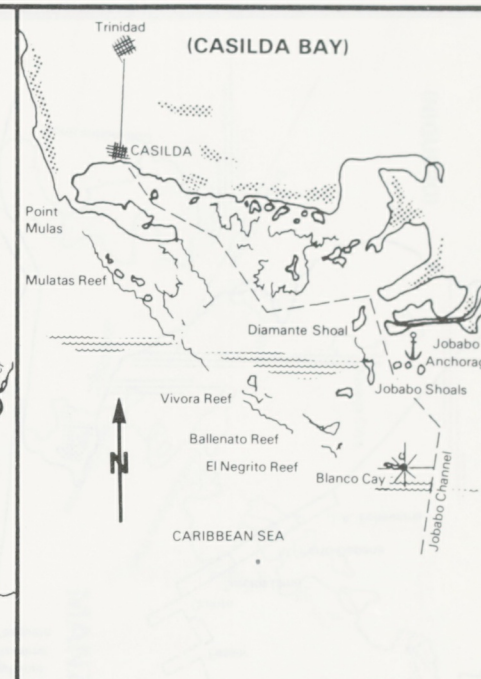
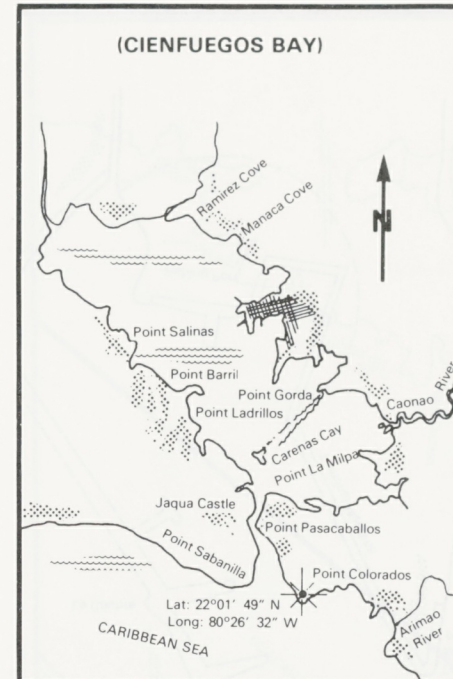
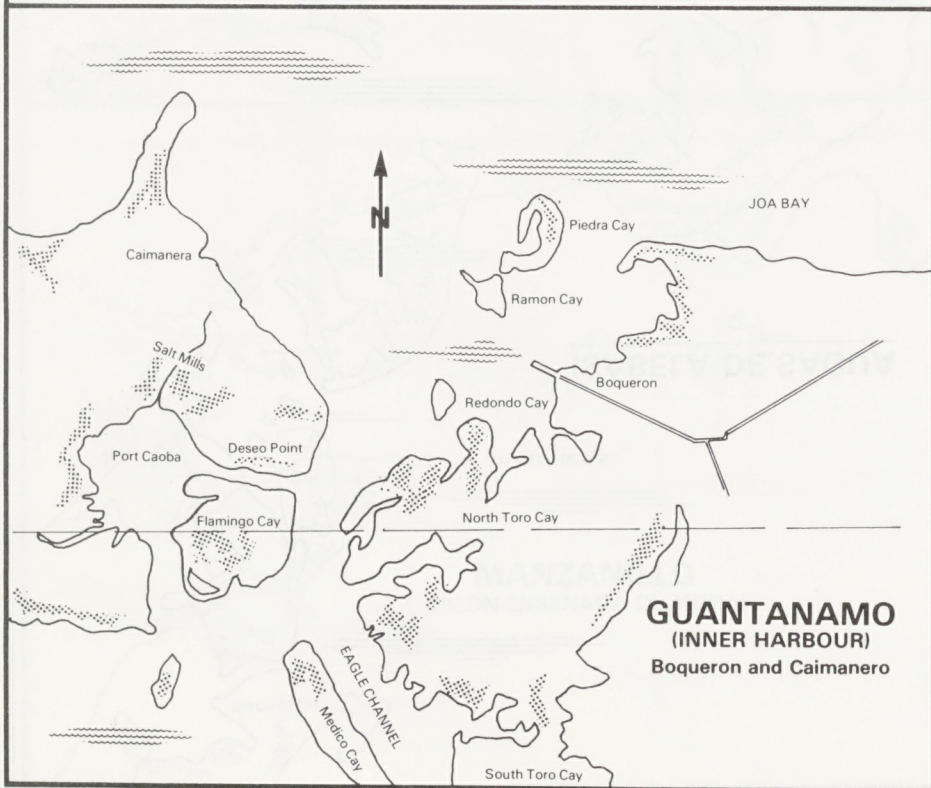
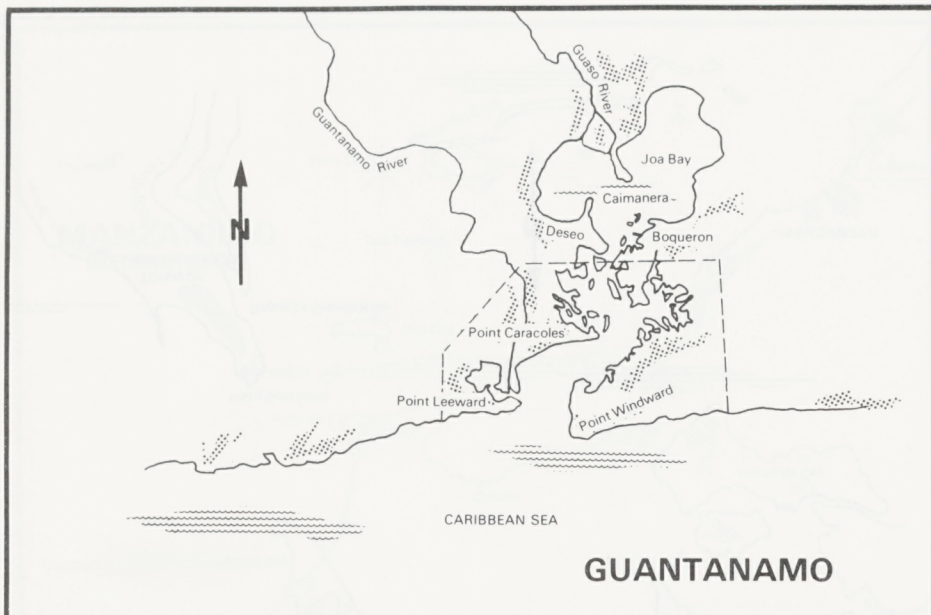
BRAZIL	Rio de Janeiro Sepetiba	GERMANY (FED. REP.)	Elbe (Helicopter Pilotage) Brunsbuttel
CUBA	Antilla Baracoa Cardenas Cienfuegos Guantanamo Havana Isabela de Sagua Manzanillo Mariel Matanzas Nueva Gerona Nuevitas Puerto Padre Santa Cruz del Sur Santiago de Cuba Tanamo Vita	JAPAN KOREA (NORTH) MALAYSIA MOROCCO NORWAY PHILIPPINES U.S.S.R.	Hibikinada Chungjin Tapis Agadir Narvik Villanueva Ilichevsk

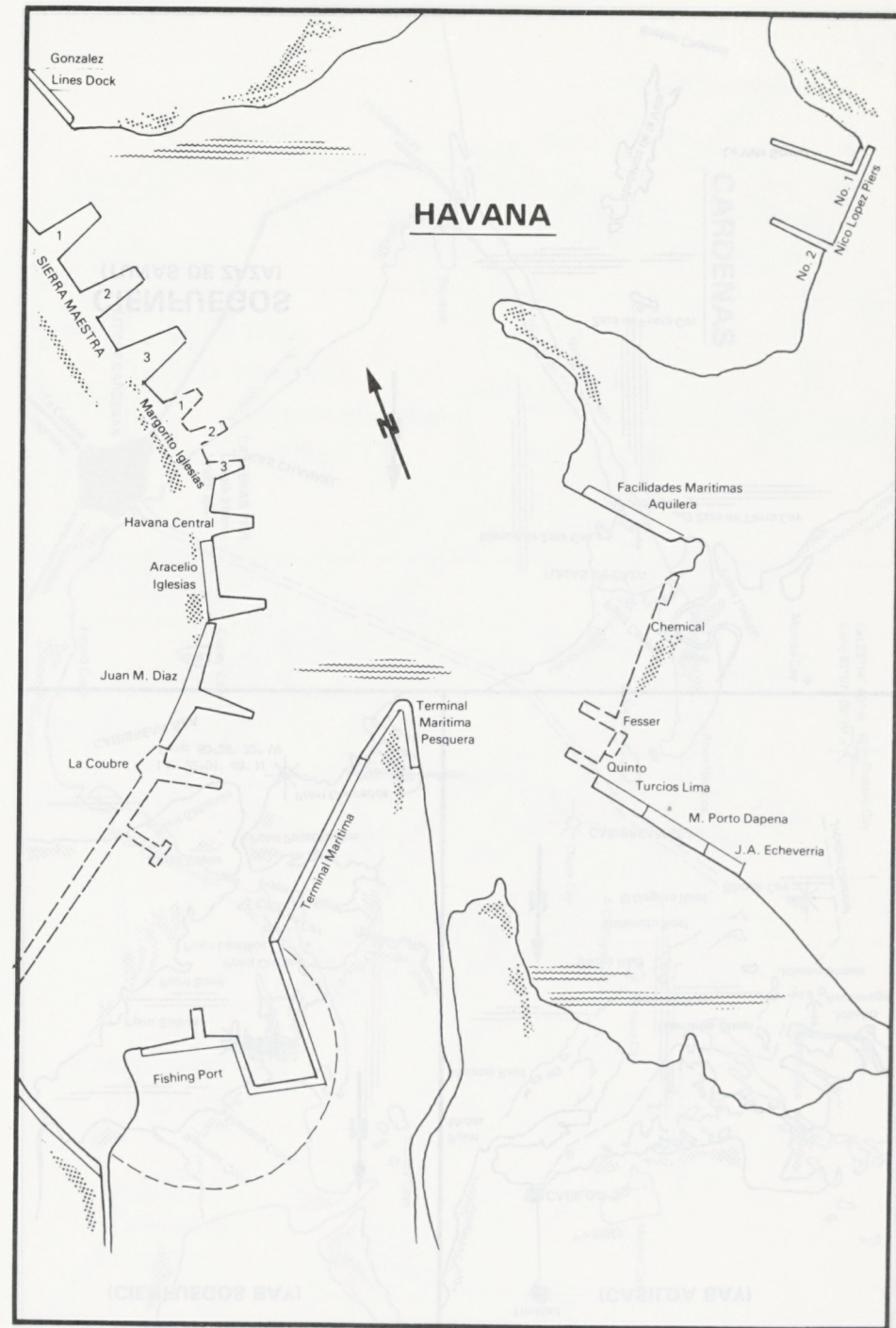
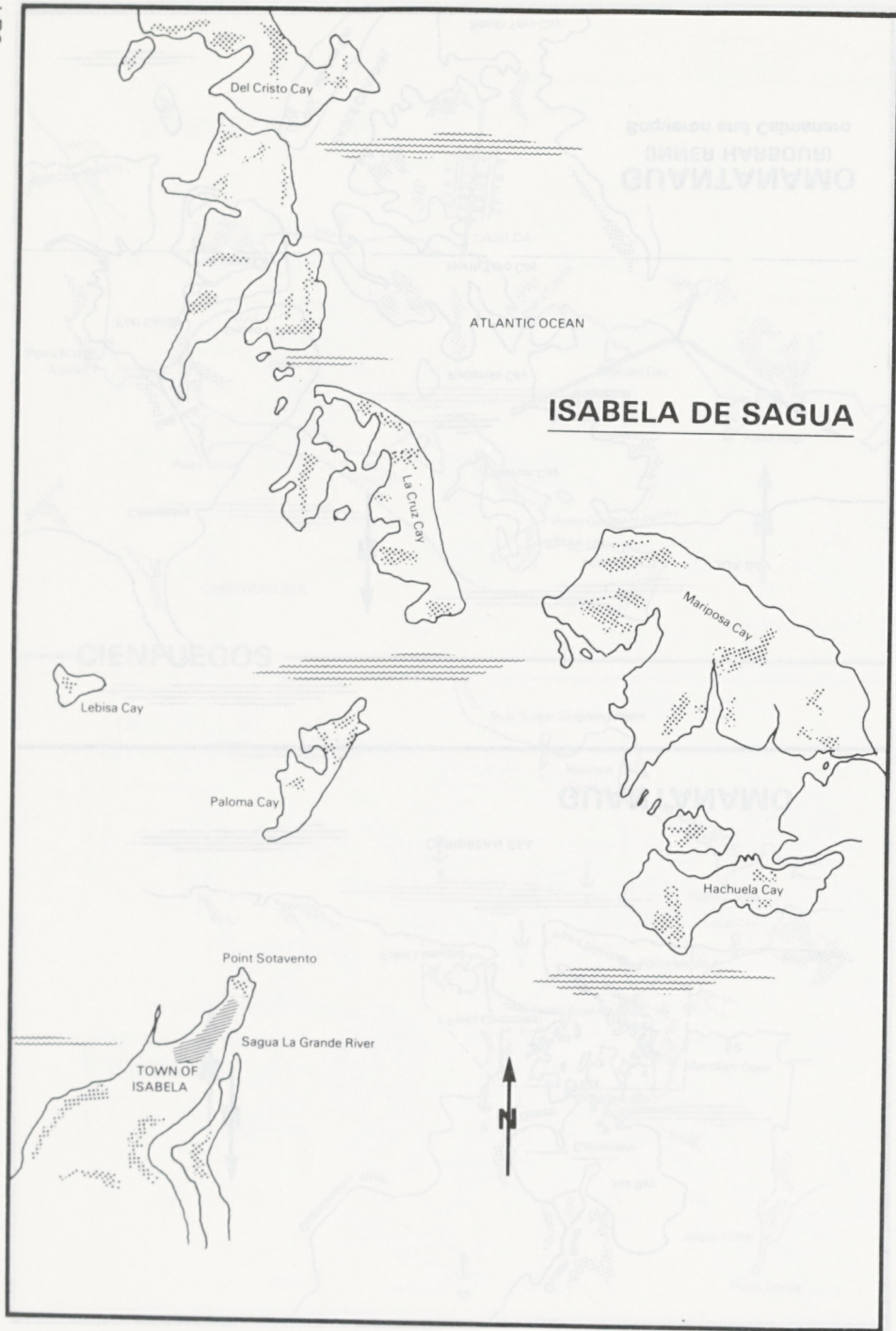


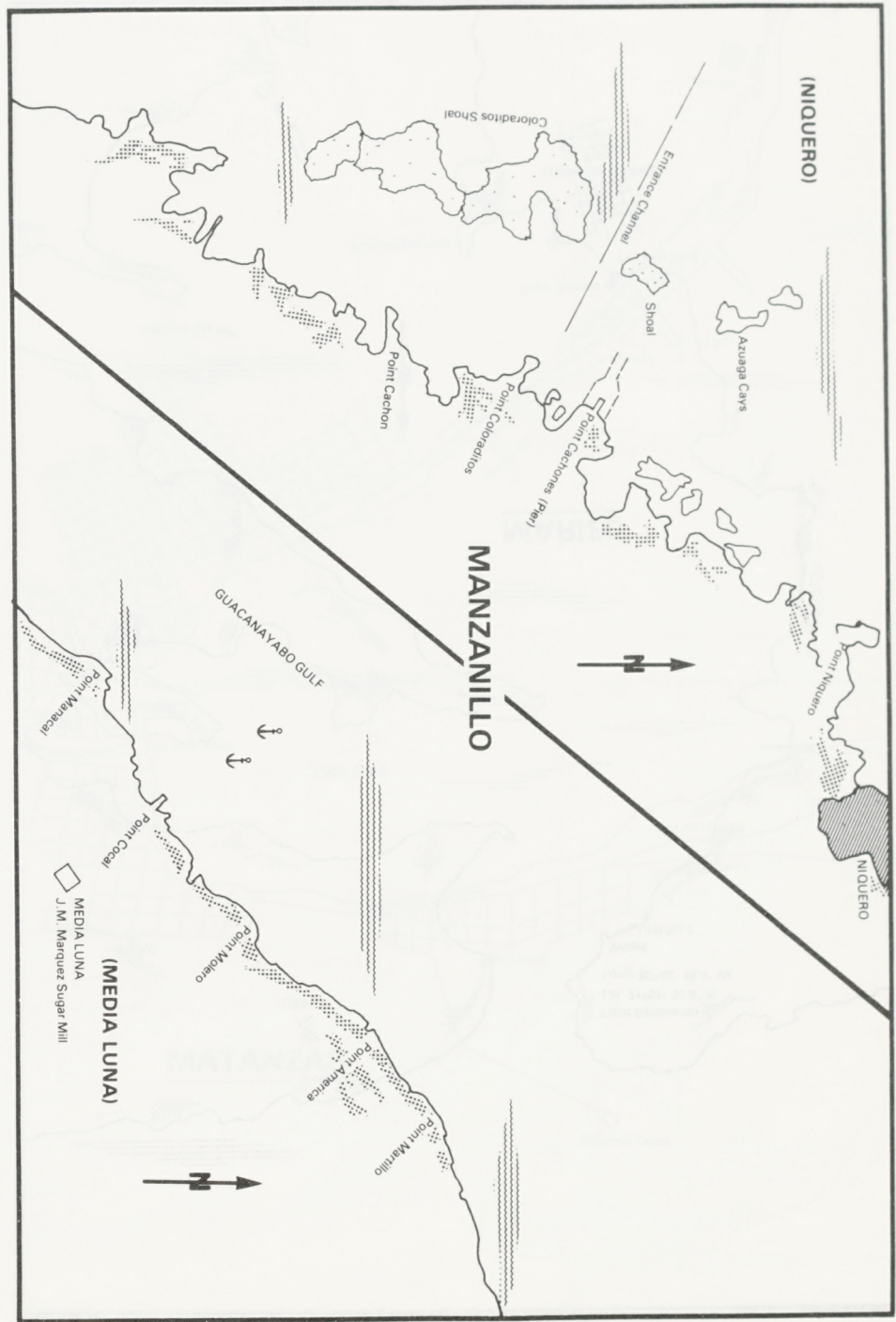
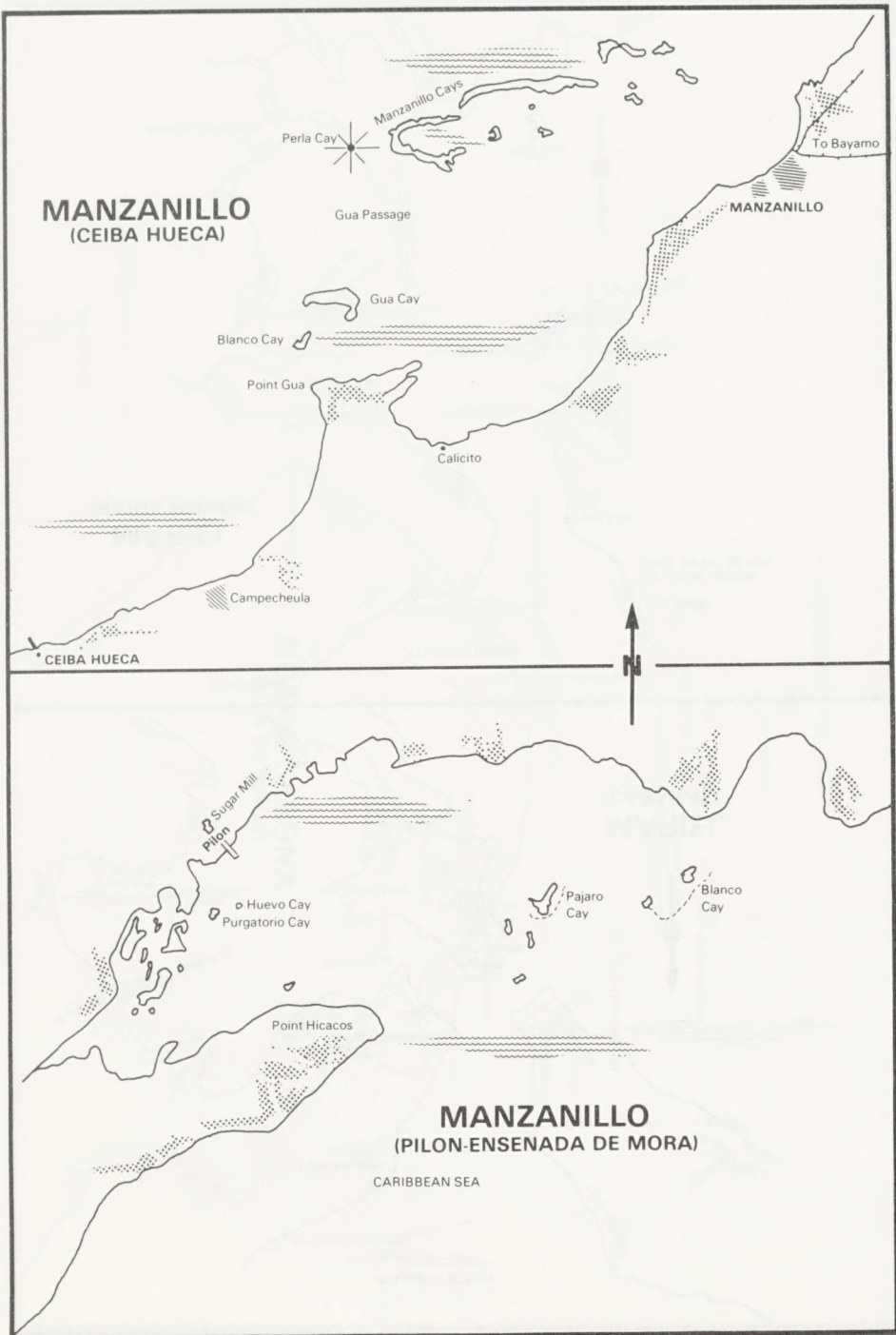


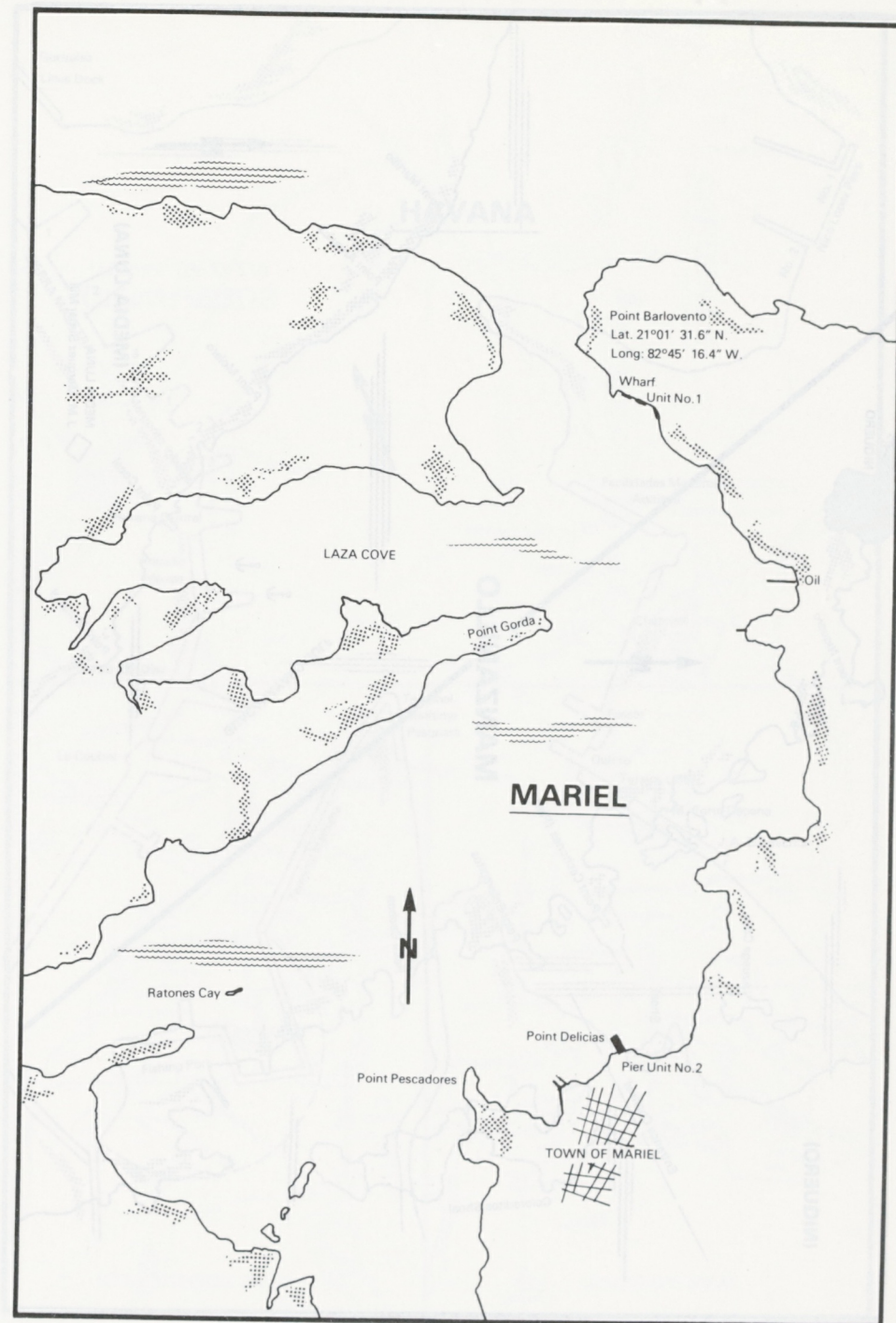
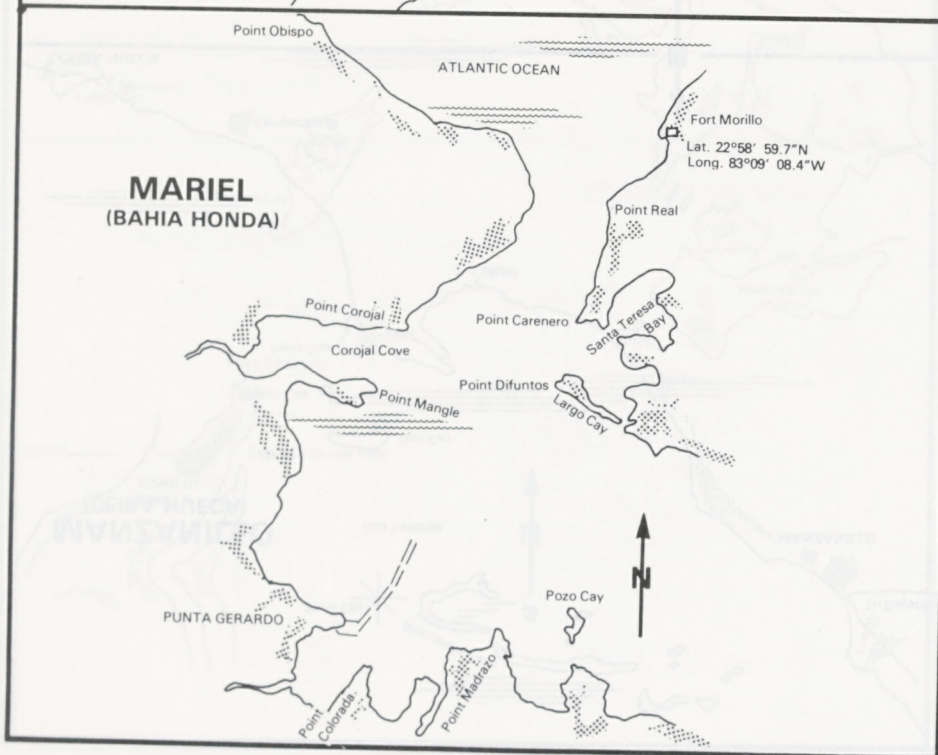
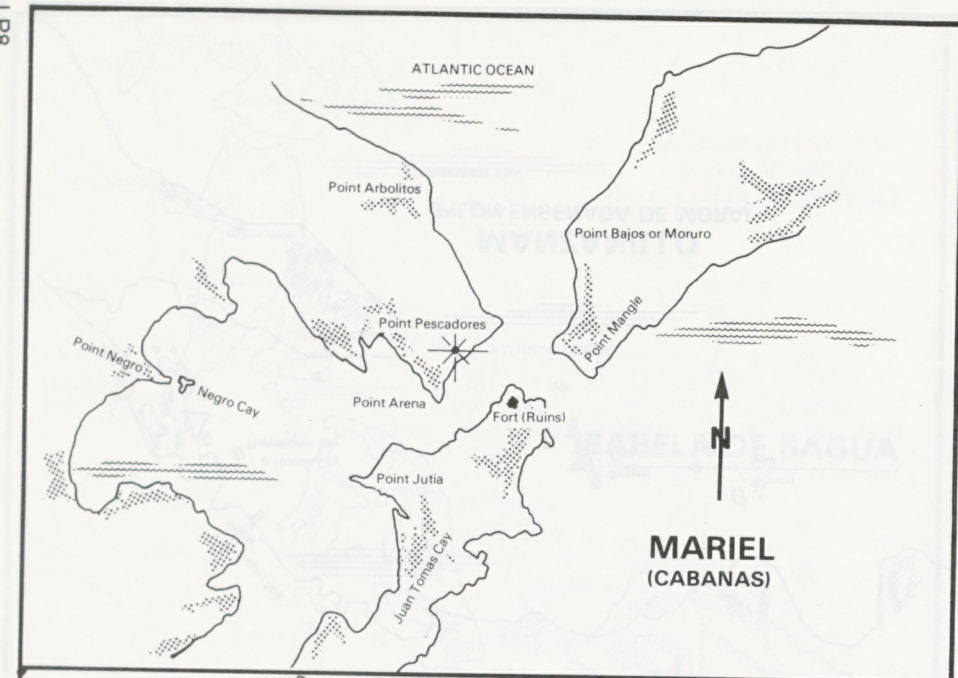


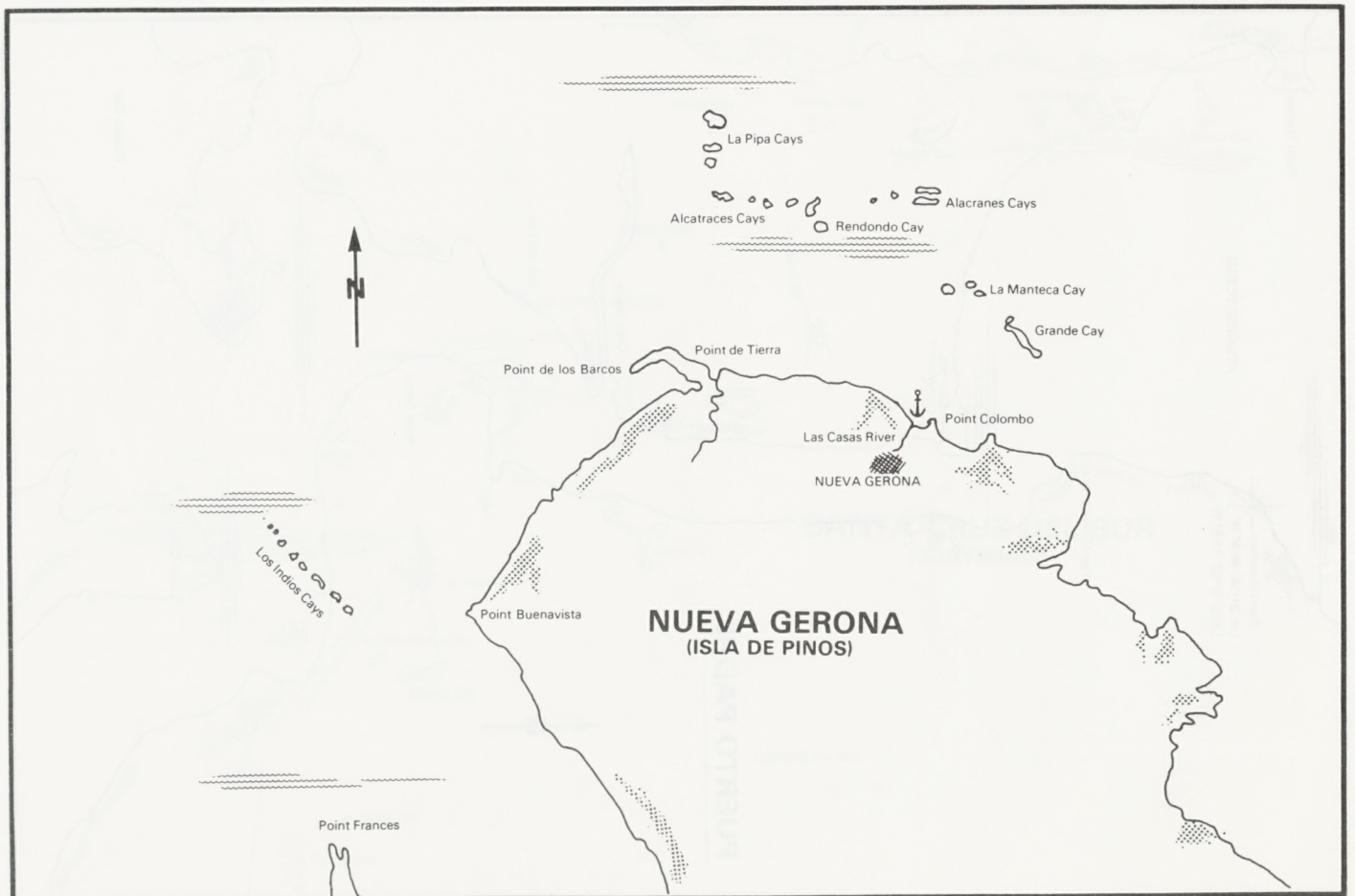
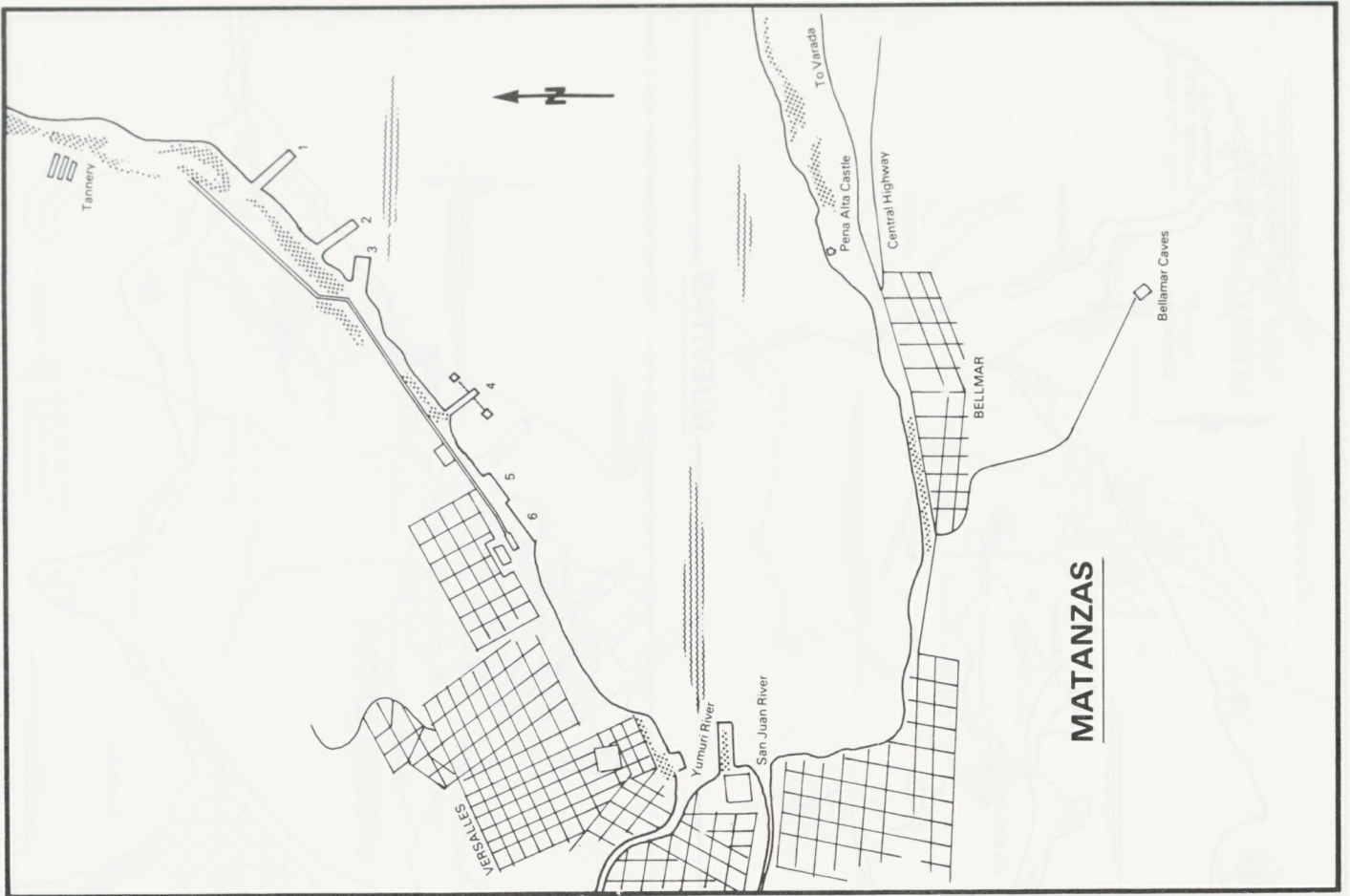


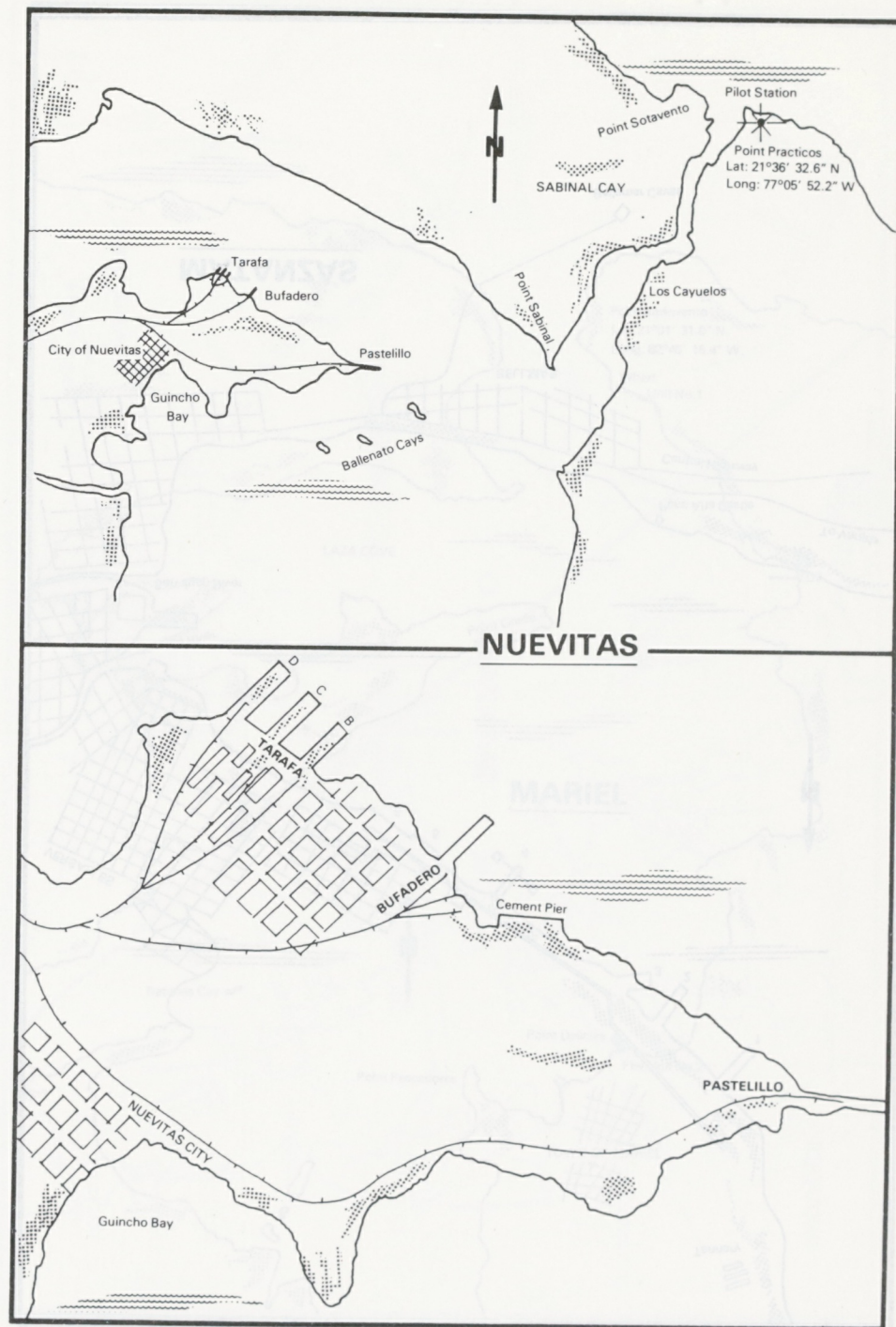
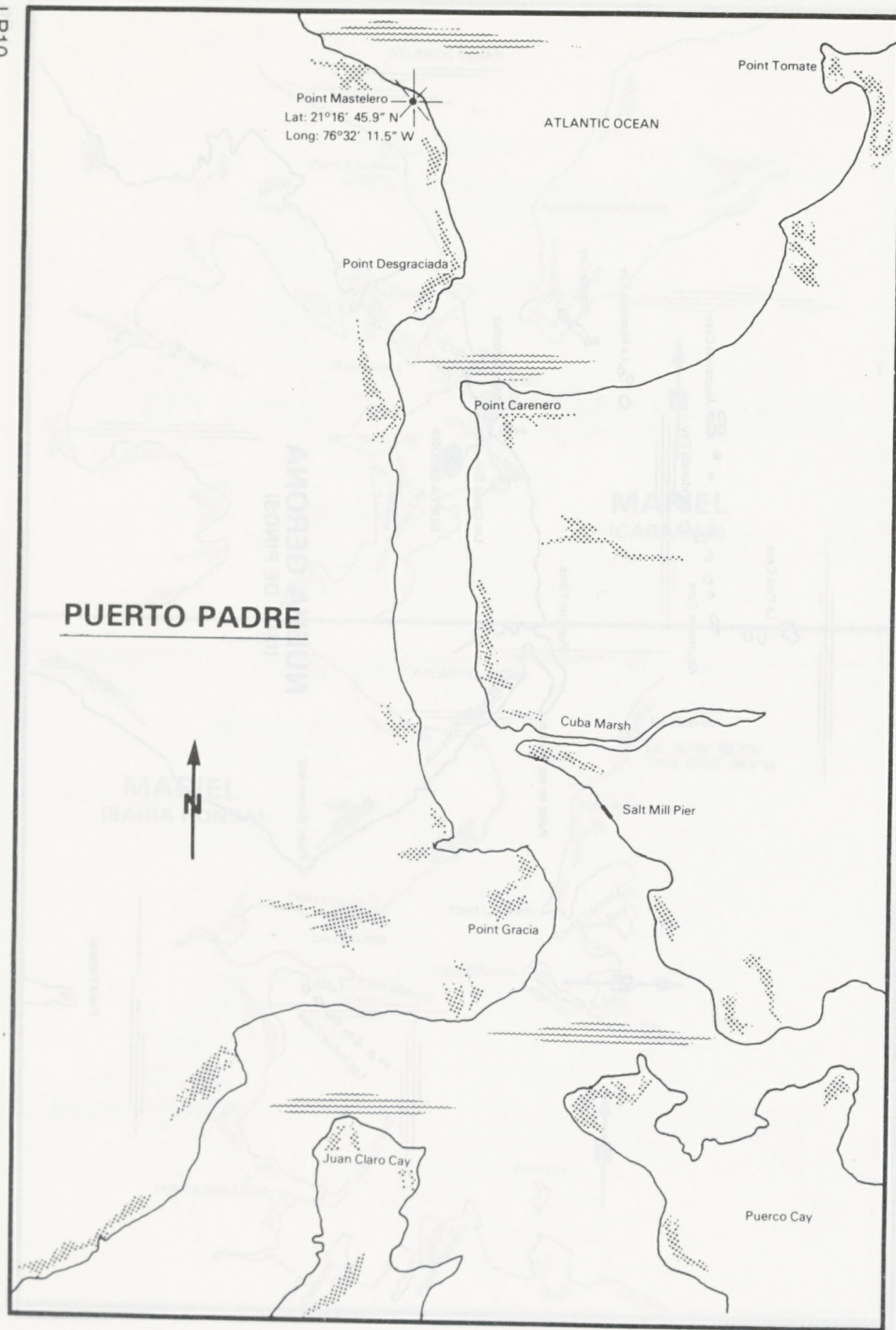


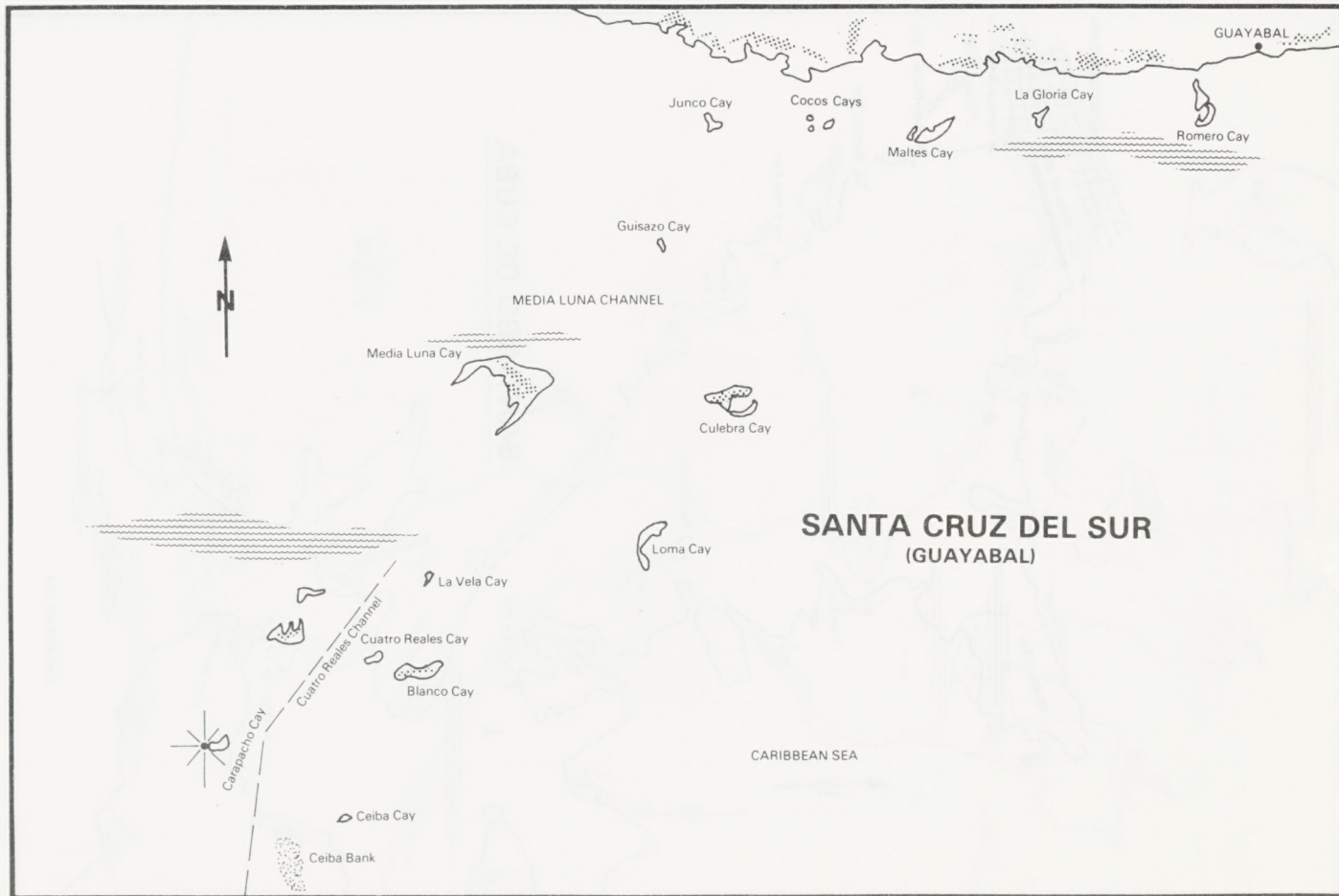
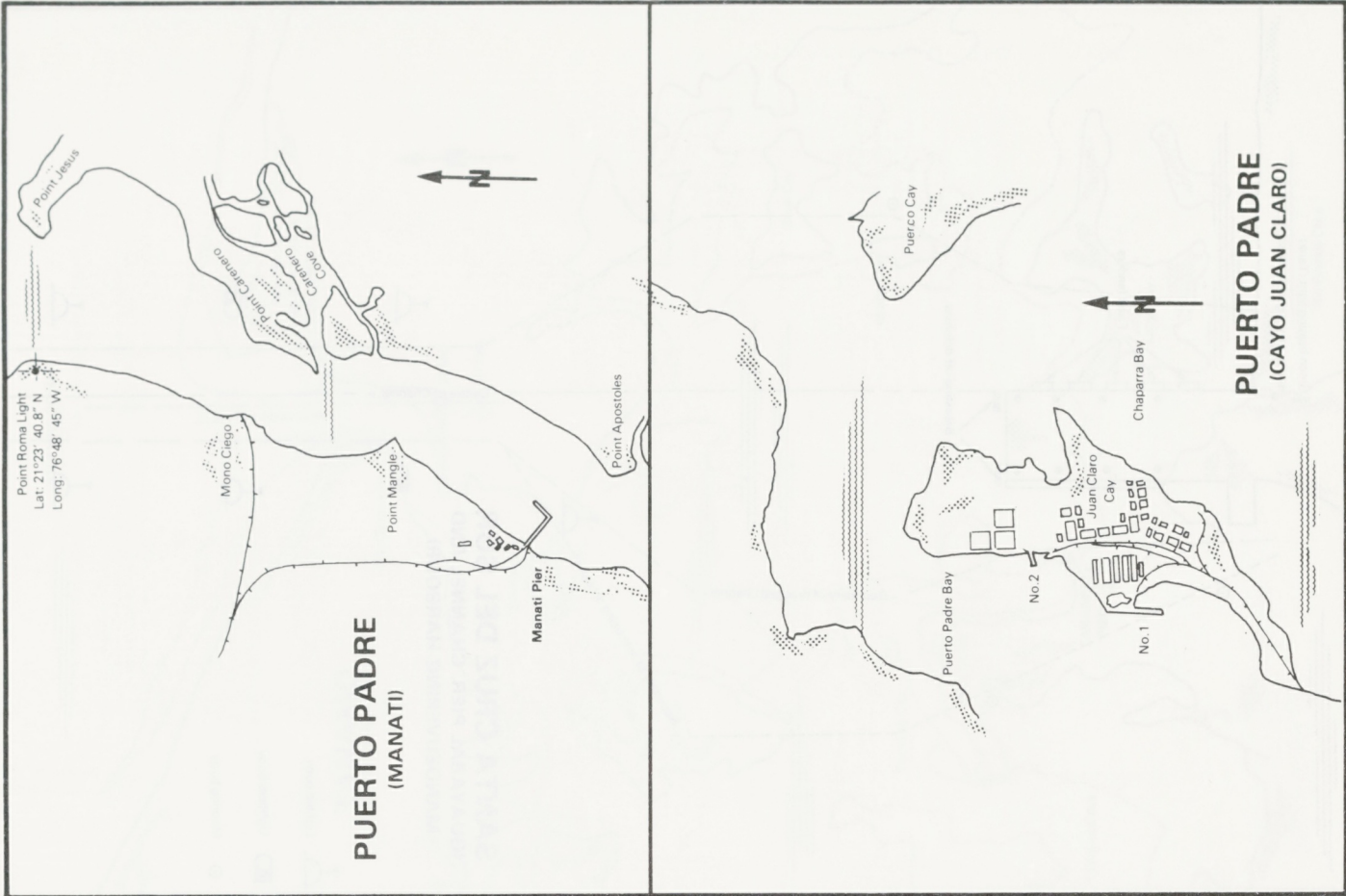


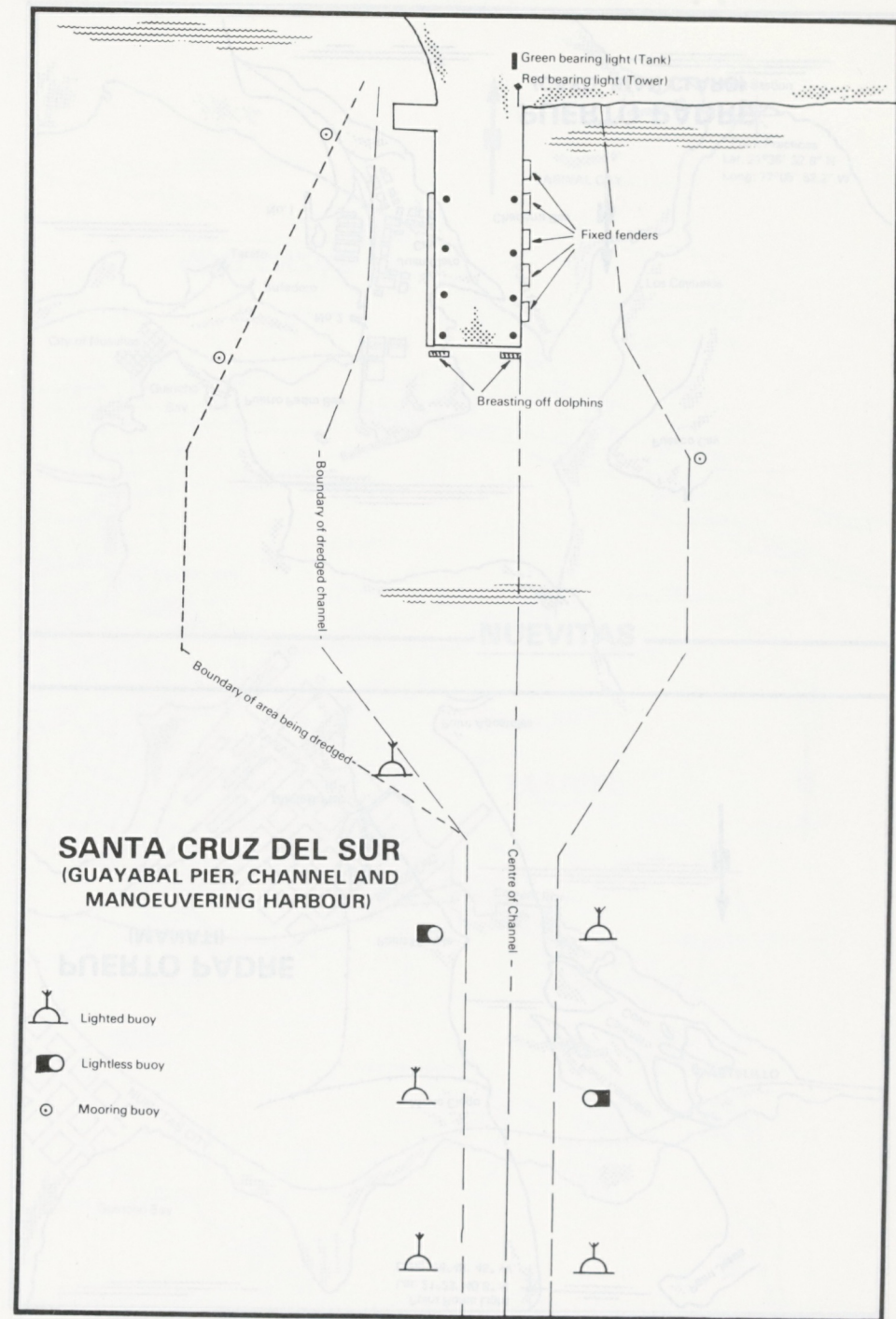


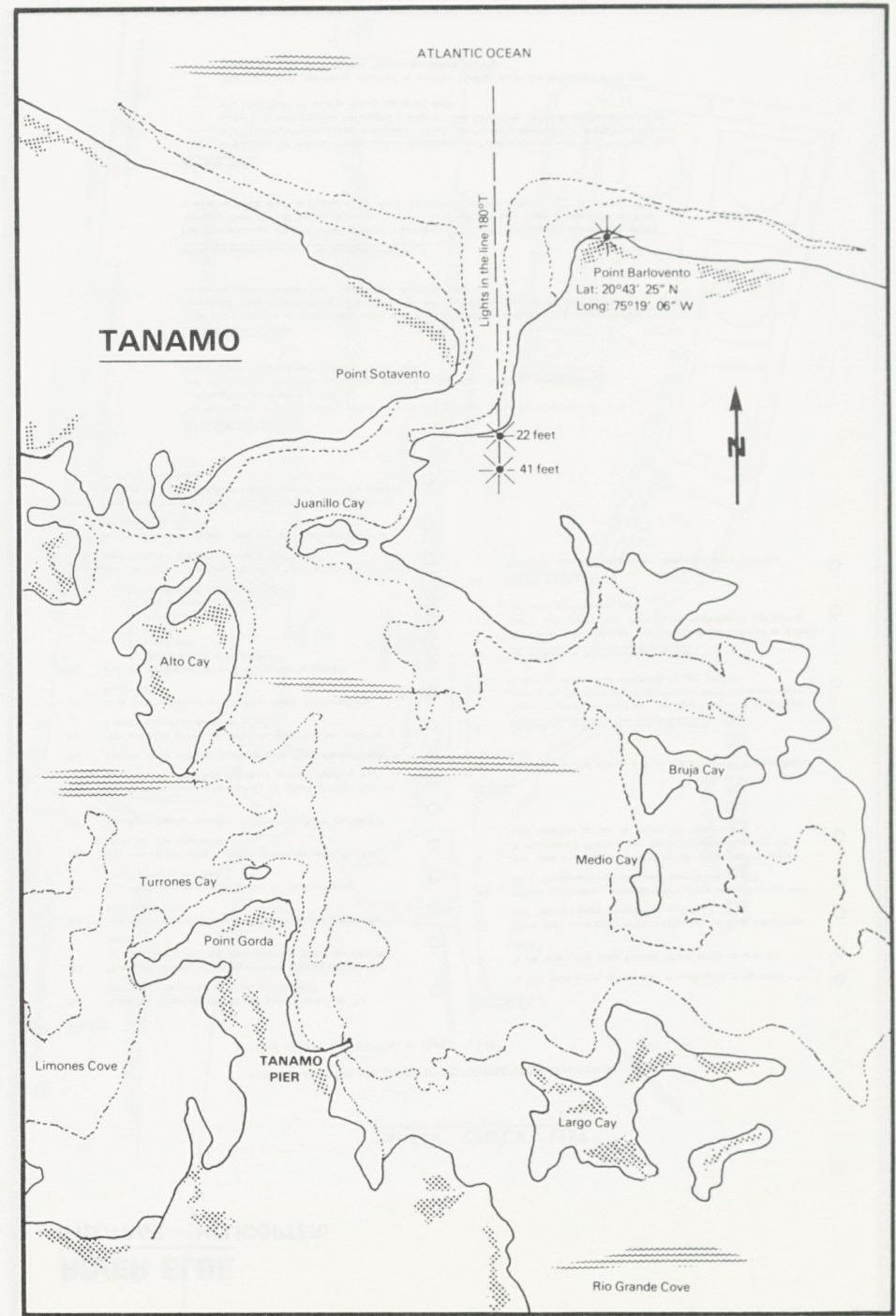
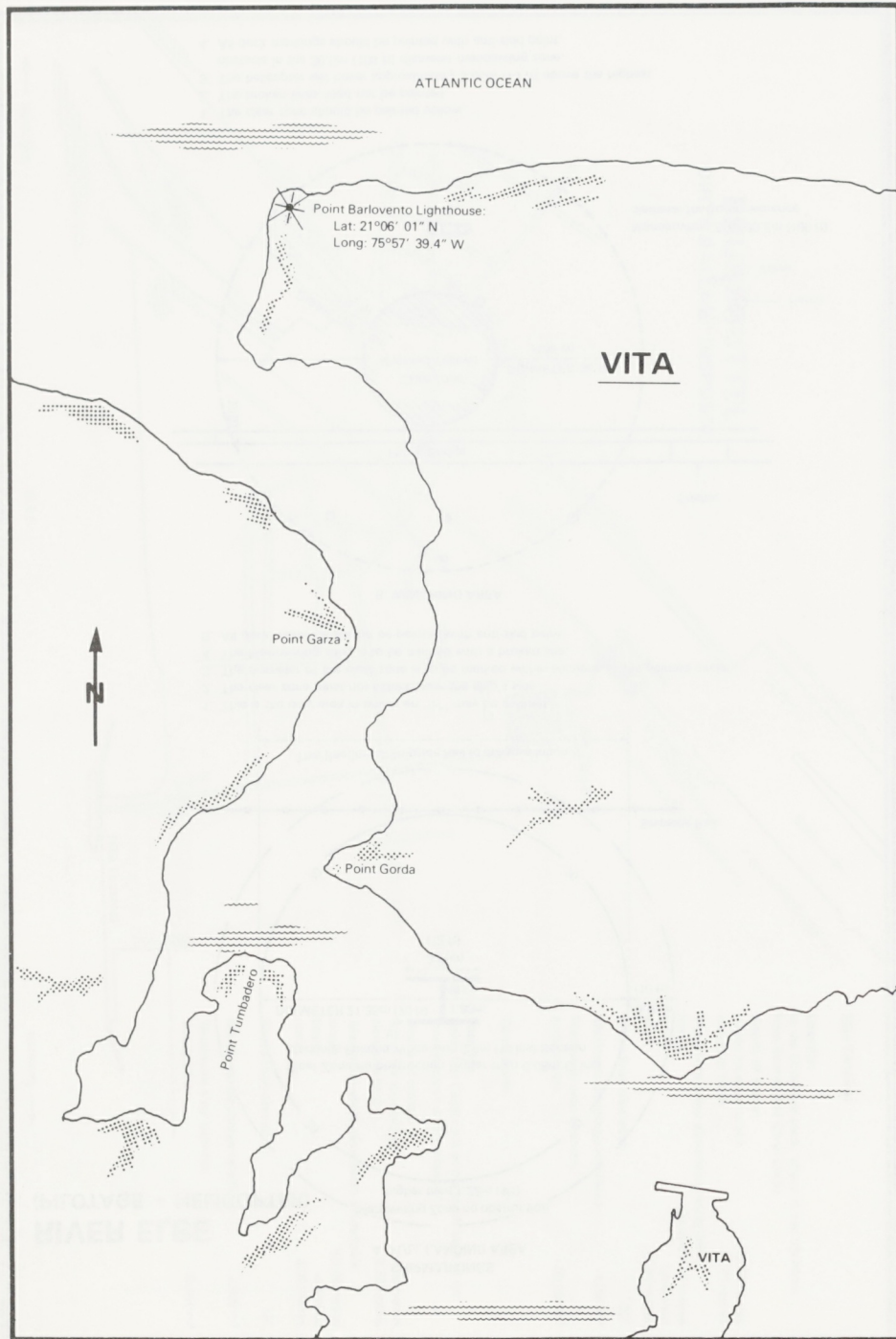




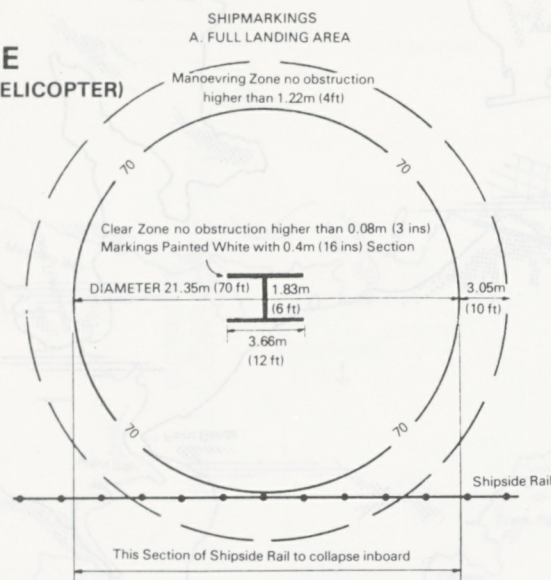




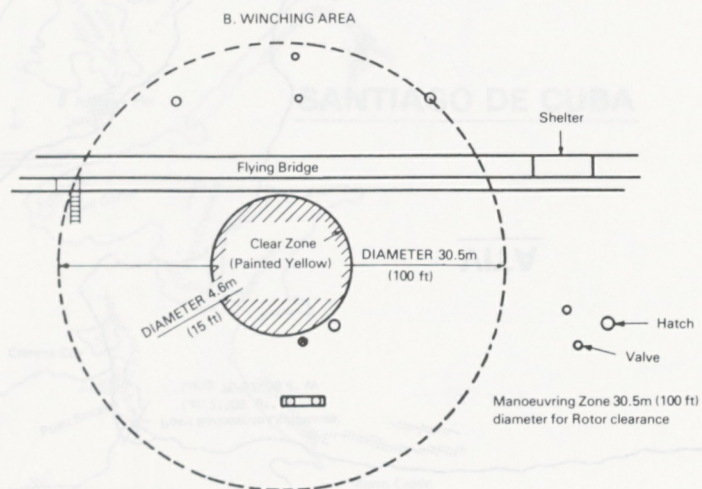




RIVER ELBE (PILOTAGE – HELICOPTER)



1. This is the only area in which an "H" may be painted.
2. The clear zone must not extend over the ship's side.
3. The diameter of the clear zone is to be marked within sections of the painted circle.
4. The Manoeuvring zone is to be marked with a broken line.
5. All deck markings should be painted with anti-skid paint.



1. The clear zone should be painted yellow.
2. The broken lines need not be painted.
3. The helicopter will hover approximately 3.05m (10 ft) above the highest obstacle in the 30.5m (100 ft) diameter manoeuvring zone.
4. All deck markings should be painted with anti-skid paint.

RIVER ELBE (PILOTAGE – HELICOPTER)

SAFETY CHECK LIST

FOR USE WITH THE ICS GUIDE TO HELICOPTER/SHIP OPERATIONS

To be checked by the officer in charge

General

- (a) Have all loose objects within and adjacent to the operating area been secured or removed?
- (b) Have all aerials, standing or running gear above, and in the vicinity of, the operating area been lowered or secured?
- (c) Has the officer of the watch been consulted about the ship's readiness?
- (d) Are the fire pumps running and is there adequate water pressure on deck?
- (e) Are fire hoses ready? (Hoses should be near to, but clear of, the operating area).
- (f) Are foam hoses, monitors and portable foam equipment ready?
- (g) Are foam equipment operators, of whom at least two are wearing the prescribed firemen's outfits, standing by?
- (h) Are the foam nozzles pointing away from the helicopter?
- (i) Has a rescue party, of whom at least two are wearing firemen's outfits, been detailed?
- (j) Is a man overboard rescue boat ready for immediate lowering?
- (k) Are the following items of equipment to hand?
 1. Portable fire extinguishers
 2. Large axe
 3. Crowbar
 4. Wire cutters
 5. Red emergency signal/torch
 6. Marshalling batons (at night)
- (l) Has the correct lighting (including special navigation lights) been switched on prior to night operations?
- (m) Is the deck party ready, and are all passengers clear of the operating area?
- (n) Have hook handlers been equipped with strong rubber or suitable gloves and rubber soled shoes to avoid the danger of static discharge?

Landing On

- (a) Is the deck party aware that a landing is to be made?
- (b) Is the operating area free of heavy spray or seas on deck?
- (c) Have side rails and, where necessary, awning stanchions and derricks been lowered or removed?
- (d) Where applicable, have portable pipes been removed and have the remaining open ends been blanked off?
- (e) Are rope messengers to hand for securing the helicopter if necessary? (Note: only the helicopter pilot may decide whether or not to secure the helicopter).

Tankers

Before carrying out the above checks the officer in charge should check that:

- (a) For tankers without an inert gas system
Tanks in, and adjacent to, the operating area have been vented to the atmosphere 30 minutes before the operation is due to start, thus releasing all gas pressure.
- (b) For tankers with an inert gas system
The cargo tank internal pressure has been reduced to a level which will ensure that there is no discharge of gas during the helicopter operation.
- (c) For all tankers
The tank openings have been resecured after venting.

Radio Communication

The helicopter will contact the vessel on VHF-FM channel 16 and will request the ship to change to channel 9 or 70.
The vessel shall advise the helicopter pilot of its position, heading, speed and the actual wind direction and speed over the deck.

Bearing Transmissions

After radio contact is established, until the helicopter is over the ship, it is essential that the vessel transmit direction finding signals on 410 kcs. On request of the helicopter pilot an uninterrupted (locked key) transmission should be given.

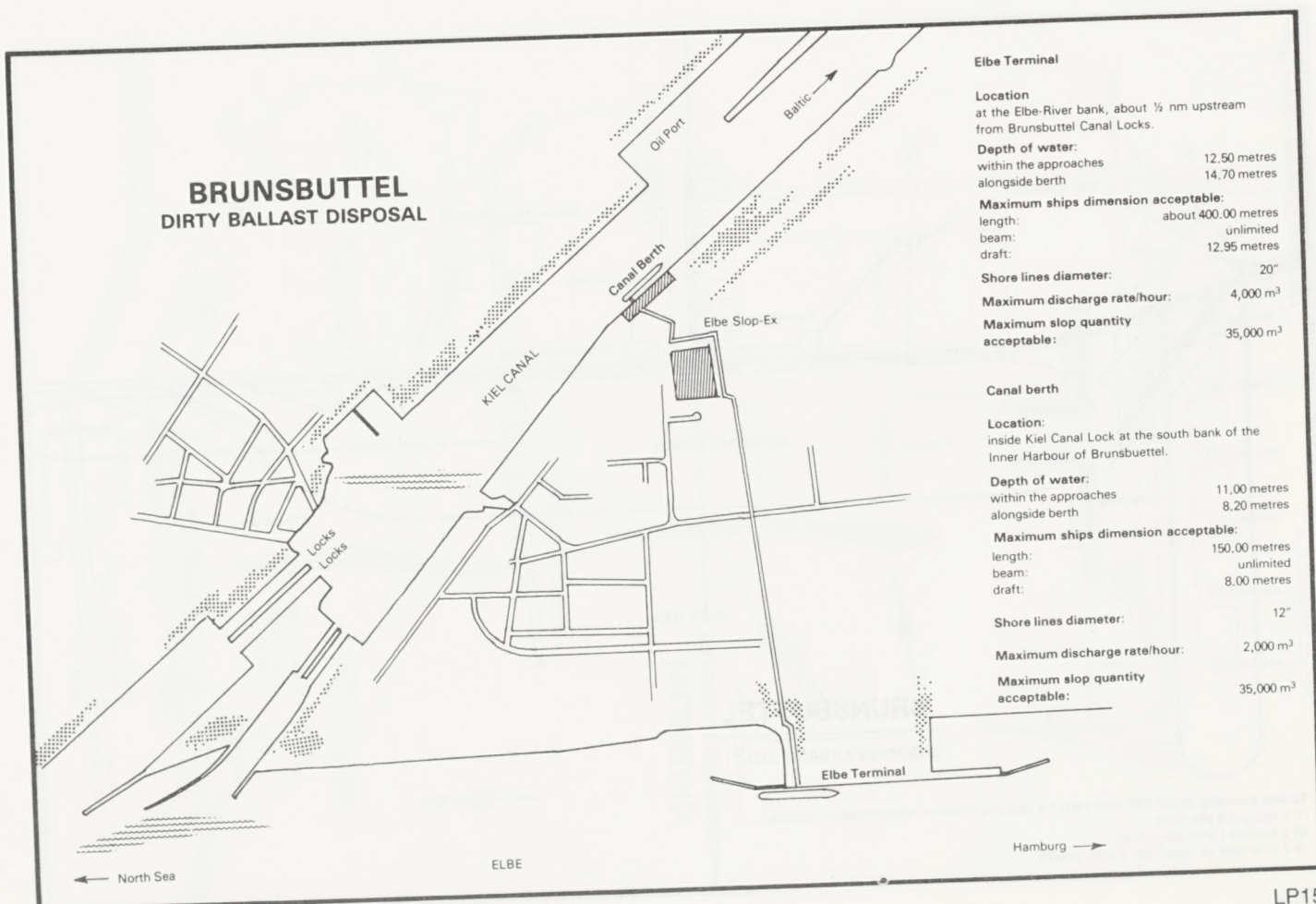
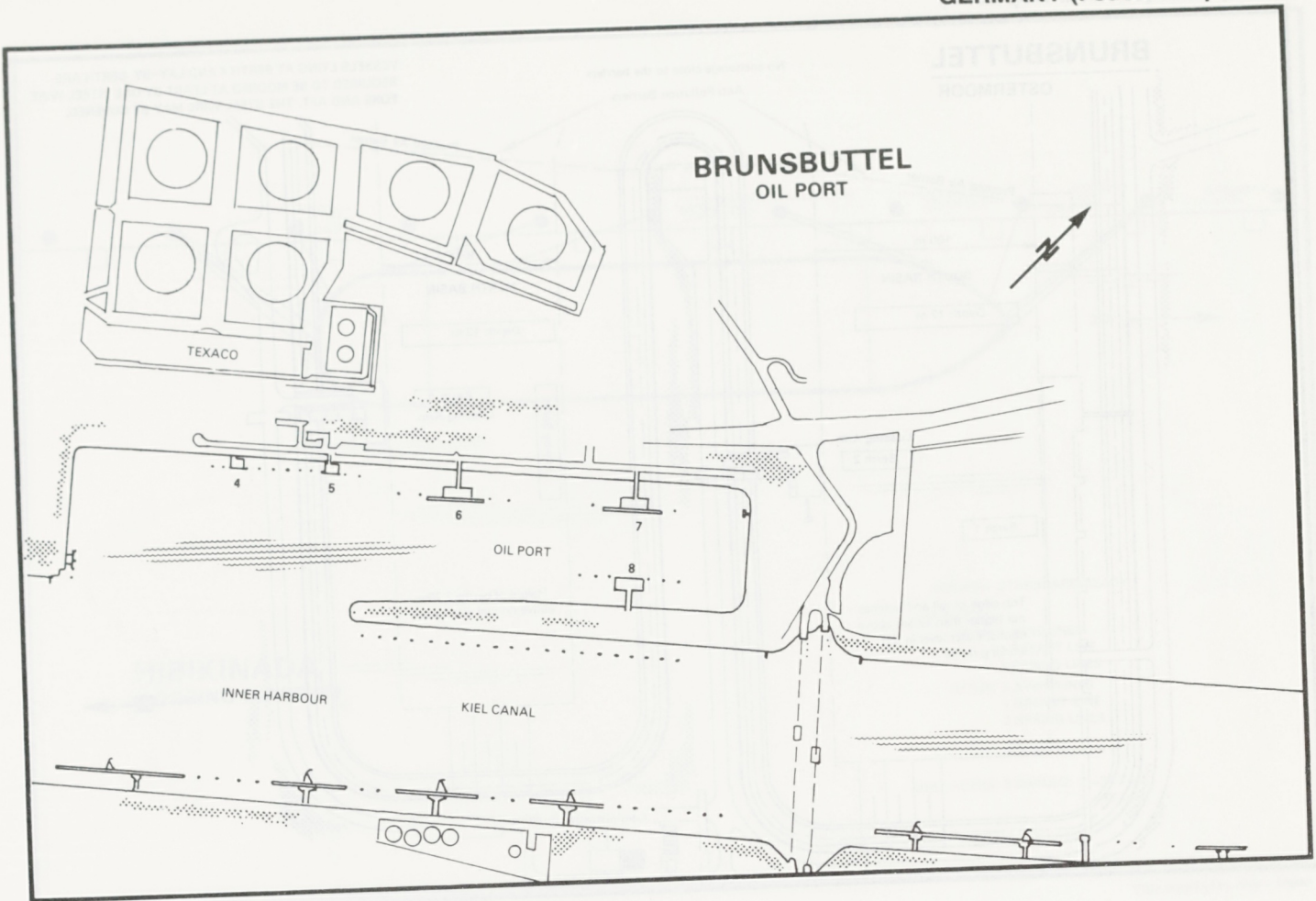
Wind Conditions Limiting Helicopter Operations

For most purposes the best relative wind is between 35° abait the beam and ahead with speeds normally from 10 – 50 knots. However, certain sea conditions may make it necessary to obtain a relative wind which is between 35° abait the beam and dead astern.

Sea and Swell

If possible the master should ensure that spray, roll and pitch are kept to a minimum by selecting a suitable course and speed. This is particularly important in preventing sea and spray from entering the helicopter's engine. The helicopter pilot should be informed of any likelihood of seas or heavy spray on deck.

When personnel are being winched to or from smaller ships the helicopter pilot may request the ship to head into the sea to reduce rolling.

**Elbe Terminal**

Location
at the Elbe-River bank, about ½ nm upstream from Brunsbüttel Canal Locks.

Depth of water:
within the approaches 12.50 metres
alongside berth 14.70 metres

Maximum ships dimension acceptable:
length: about 400.00 metres
beam: unlimited
draft: 12.95 metres

Shore lines diameter: 20"

Maximum discharge rate/hour: 4,000 m³

Maximum slop quantity acceptable: 35,000 m³

Canal berth

Location:
inside Kiel Canal Lock at the south bank of the Inner Harbour of Brunsbüttel.

Depth of water:
within the approaches 11.00 metres
alongside berth 8.20 metres

Maximum ships dimension acceptable:
length: 150.00 metres
beam: unlimited
draft: 8.00 metres

Shore lines diameter: 12"

Maximum discharge rate/hour: 2,000 m³

Maximum slop quantity acceptable: 35,000 m³

BRUNSBUTTEL

OSTERMOOR

No anchorage close to the barriers

Anti Pollution Barriers

VESSELS LYING AT BERTH 4 AND LAY-BY BERTH ARE REQUIRED TO BE MOORED AT LEAST BY ONE STEEL WIRE FORE AND AFT. THE STEEL WIRE MAY BE COVERED.

Pressed Air Barrier

100 m

SOUTH BASIN

Depth 12 m

Loading Arm
Berth 2

Berth 1

Top edge of rail and hatches
not higher than 12.5m above
normal water level in the
working range

Pressed Air Barrier

80 m

NORTH BASIN

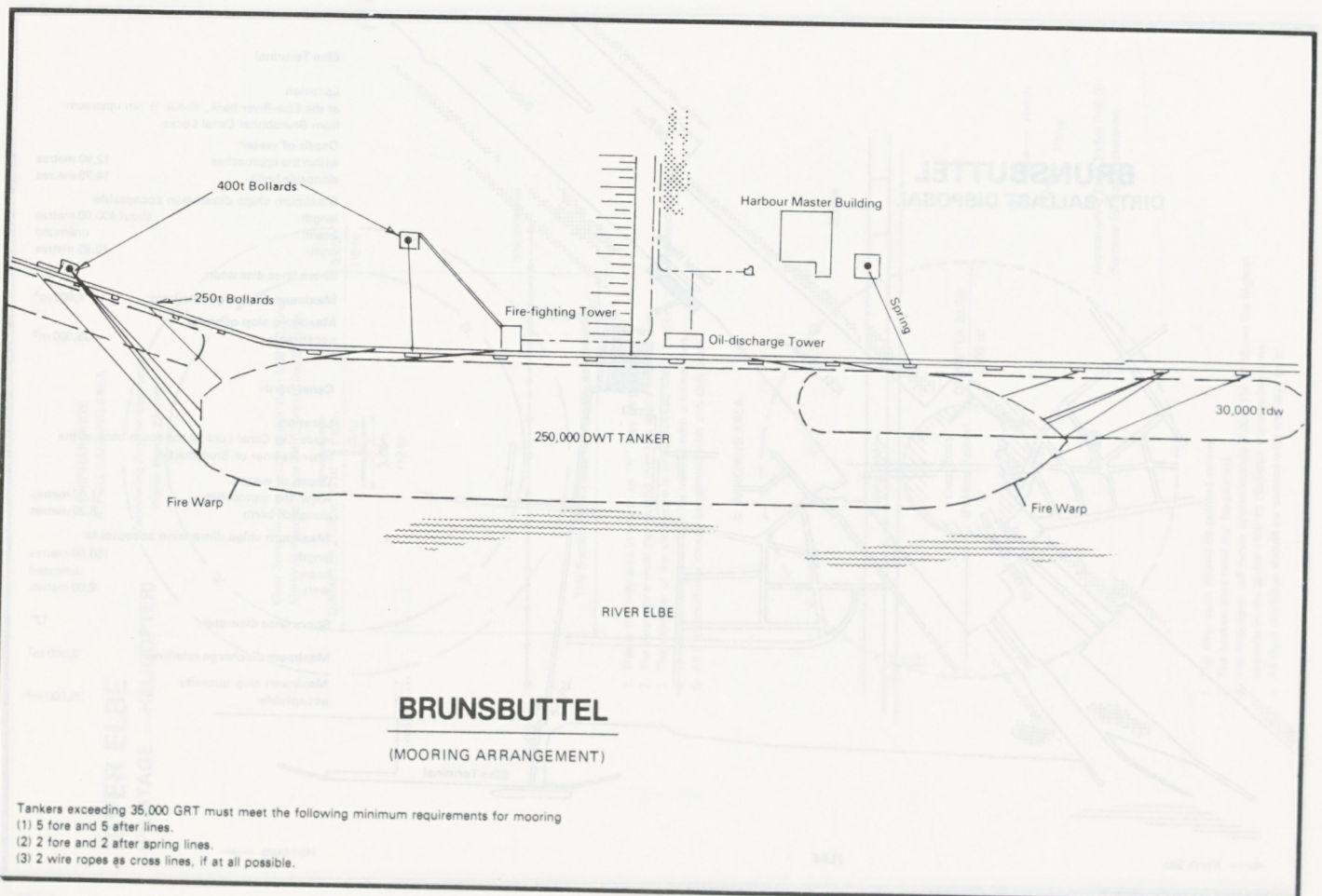
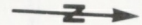
Depth 12 m

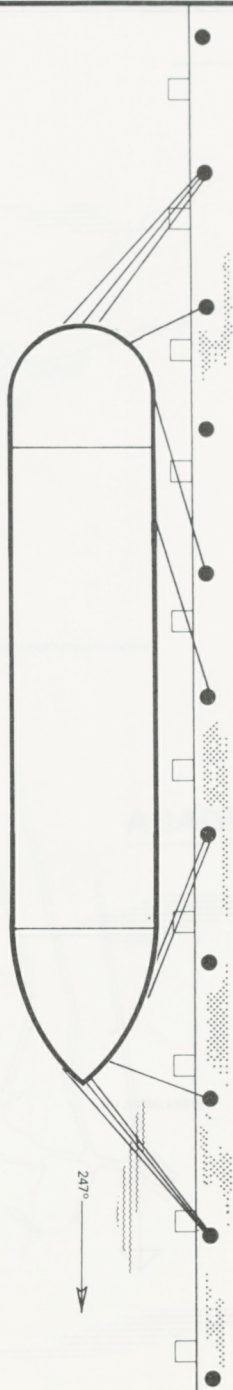
Lay-by Berth

Berth 4
Loading Arm

Height of berths 2.70m
above normal water level

Administrative Building

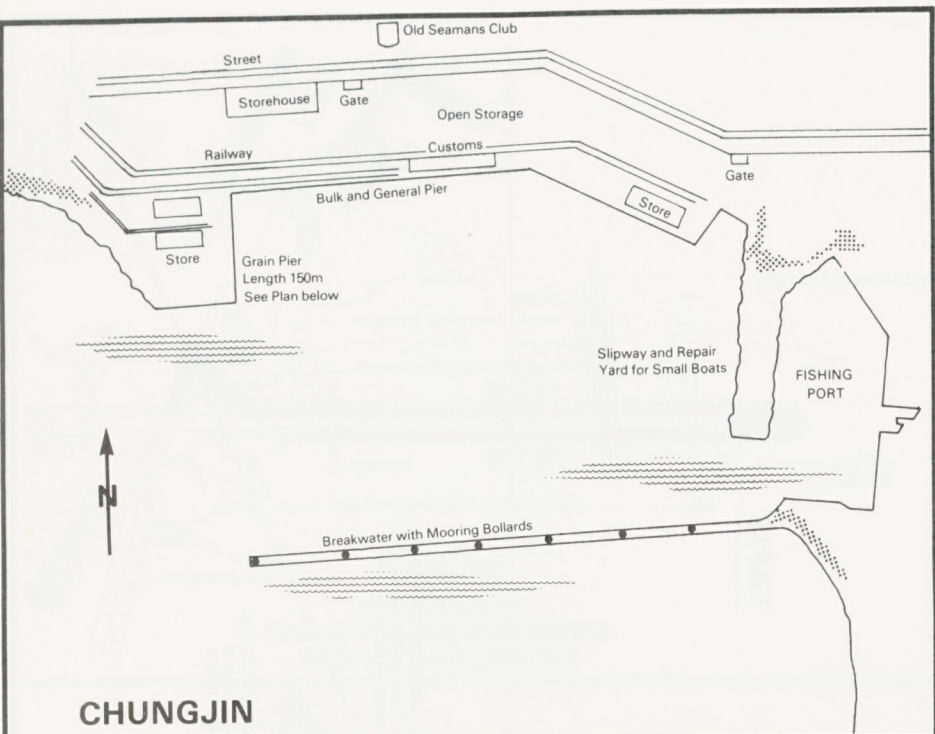




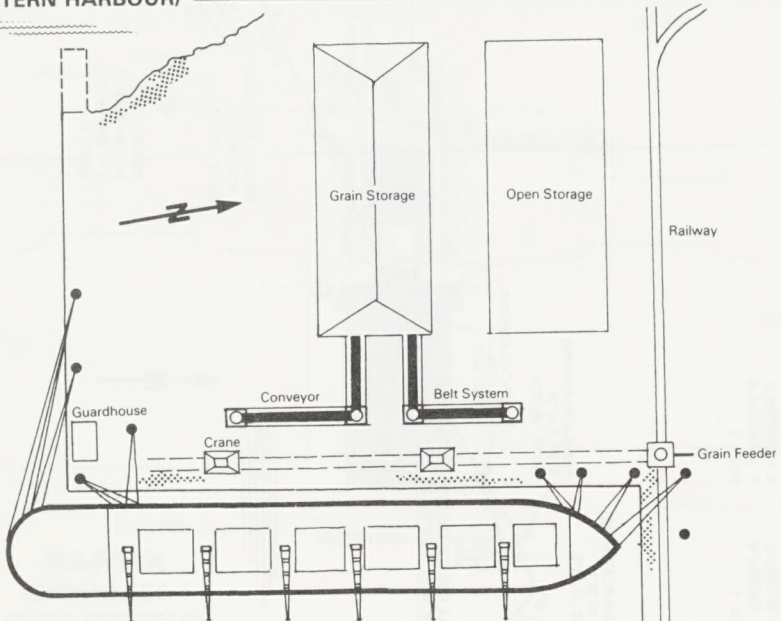
HIBIKINADA MOORING DIAGRAM

- ANCHOR: STARBOARD READY
- HAWERS:
- FORE: 3 HEADLINES
1 BREAST LINE
2 SPRING LINES
- AFTER: 3 STERNLINES
1 BREAST LINE
2 SPRING LINES
- FENDERS: SPRING ROLLER
- UNLOADERS: 3 CRANES: 2 - 34 Tons
1 - 45 Tons

"Plan supplied by Ship's Master"



CHUNGJIN (EASTERN HARBOUR)



Mooring Diagram-Grain Pier

"Plan supplied by Ship's Master"

